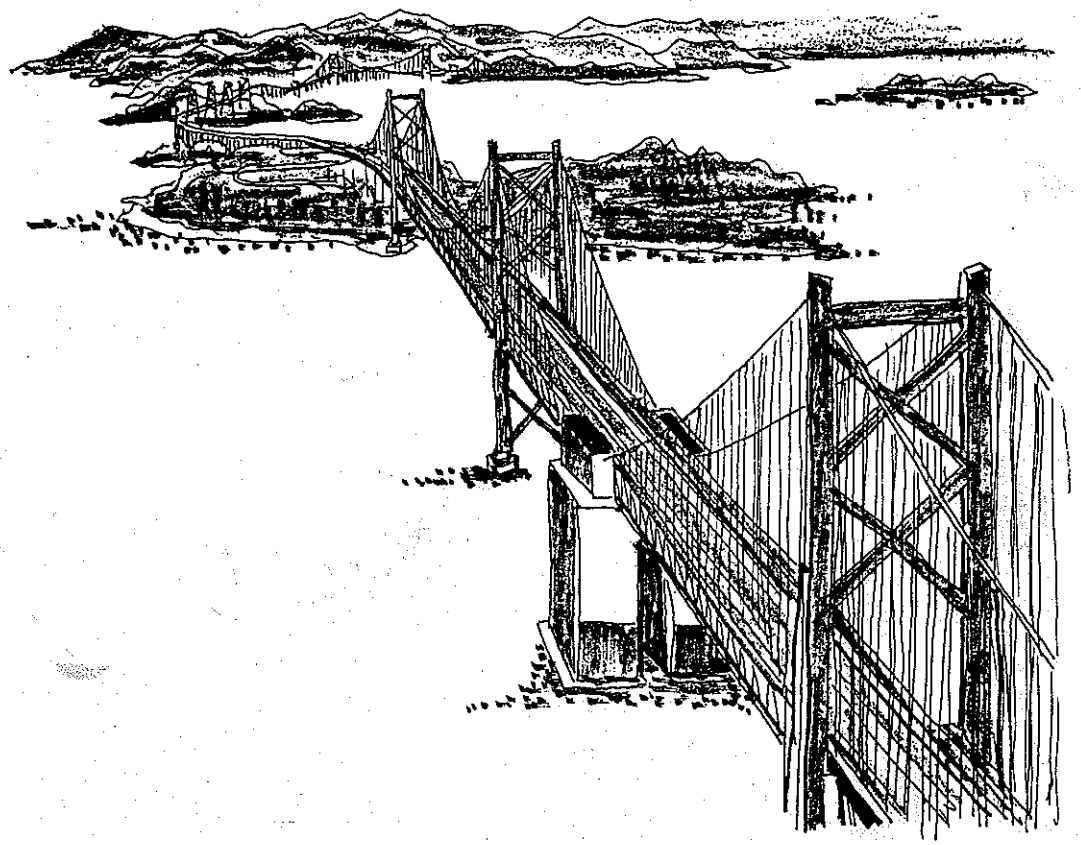
PACIFIC
INDUSTRIAL PROPERTY ASSOCIATION
太平洋工業所有権協会

PRESENTATIONS

PIPA 23rd Congress

Okayama

October 14-16, 1992



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A16
1992

P R O G R A M (1992) - (Sept. 17)

WEDNESDAY, OCTOBER 14, 1992

7:50 a.m. REGISTRATION - Room Zuiko 1st Fl., Okayama Kokusai Hotel

8:30 a.m. OPENING CEREMONIES
- Opening the Congress - Takami Aoyama
- Report of 1991 Activities - J. Jeffrey Hawley
- Installation of PIPA Officers for 1992
- Keynote Address - Mamoru Takada

Guest Address:
- Honorary Chairman Tadasu Tachi. President Kaneka Corporation
- Honorable Shingo Tsuji, Deputy Commissioner, Japanese Patent Office

9:45 a.m. COFFEE BREAK

10:05 a.m. REPORTS OF COMMITTEE NO.1
J. Wesley Blumenshine and Takashi Sawai, Chairmen
- Joint Panel Discussion -
What would be the Best Cooperative Activities Between Patent Function and R&D Function
Louis J. Wille, David H. Fifield, Karl F. Jorda, Richard B. Megley, Kiyoshi Natori, Hiroshi Kobayashi Yasutoshi Umemura, Hiroshi Kuranaga, Tetsuo Yamaoka

11:25 a.m. Changes in U.S. Patent Practice Since October, 1991
J. Wesley Blumenshine

11:40 a.m. Policy and Management of Filing Patent Application for Multiple Related Inventions
Osamu Kitagawa

11:55 a.m. The Proper Organization and Content of the "Description" Portion of a U.S. Patent Specification
Jack E. Haken

12:10 p.m. Examination Practice Concerning "Functional Expressions in Patent Claim" in Japan
Kazuhiro Kanéro

12:25 p.m. LUNCH at Room Zuiko (Compartment 1, 2)

1:30 p.m. Observations and Synopsis of Major Legislative Changes in U.S. Trademark and Copyright Laws Since 1987
Brian E. Banner

1:45 p.m. Protection of Well-known Marks
Kiyoshi Tanabe

2:00 p.m. Protection of a Well-Known Mark
Dee Ann Weldon-Wilson

2:15 p.m. REPORTS OF COMMITTEE NO.2
Charles C. Krawczyk and Katsuhiko Shimizu, Chairmen
- Joint Panel Discussion -
Selected Aspects of Licensing Software Patents
Paul D. Carmichael, Katsuhiko Shimizu, Kiyohide Okamoto, Sachio Matsubara, Masaya Otsuka

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3:35 p.m. COFFEE BREAK

3:55 p.m. Standardization and Intellectual Properties
W. Joseph Shanley

4:15 p.m. Licensing of Intellectual Property Right in the Course of Technical Standardization
Kozo Hirase

4:35 p.m. Presentation of PIPA Award to Dr. Akira Mifune

6:30 p.m. GRAND RECEPTION at Room Zuiko (Compartment 1, 2)
Welcome Address: Honored Guest Mitsuo Takahashi
President, Japan Patent Association

THURSDAY OCTOBER 15, 1992

8:30 a.m. U.S. Law of Latches & Estoppel
Craig E. Larson

8:55 a.m. Practice and Laws with Respect to Patent Infringement Litigation in Japan
Masataka Kiritani

9:15 a.m. REPORTS OF COMMITTEE NO.3
Richard B. Megley and Kikuo Takehana, Chairmen
- Joint Panel Discussion -
Patent Infringement Litigation in European Countries and in Japan (Patent Litigation before the European National Courts: Today and Tomorrow ... M. J. Pantuliano)
Bernard J. Graves, Jr., Karl F. Jorda, Lawrence T. Welch, Maki Kamiya, Yoji Ito, Ryo Iwatani, Koiichi Ota, Yasumasa Sato

10:05 a.m. COFFEE BREAK
10:25 a.m. (Continuation of the above Panel Discussion)

11:15 a.m. Up-Date on GATT and Patent Harmonization
Gin-ichi Yamaji
U.S. Developments Concerning Patent Aspects of GATT, NAFTA and Harmonization
Donald W. Banner

12:30 p.m. BUS TOUR to Kurashiki, Okayama & Seto Ohashi Bridge

5:00 p.m. RECEPTION AND DINNER at Setouchi Kojima Hotel

FRIDAY OCTOBER 16, 1992

8:30 a.m. Filing Policy for Community Patent Convention
Makoto Kobayashi

8:50 a.m. Recent Trend of Patent System in the Former USSR and Eastern Europe
Takashi Kuboyama

9:10 a.m. REPORTS OF COMMITTEE NO.4
Peter W. Wilde and Toshihiro Tetsuka, Chairmen
- Joint Panel Discussion -
Evaluation and Maintenance of Intellectual Property Rights
Peter W. Wilde, Tsuneo Hayashi, Kazuhiro Nagamitsu, Katsunori Muto

10:30 a.m. COFFEE BREAK

10:50 a.m. Corporate Policy Statement-Alternative Dispute Resolution
J. Wesley Blumenshine

11:10 a.m. Arbitration in Dispute of Patent Matters and Famous International Arbitration Rules
Tetsuya Kondo

11:30 a.m.	Relation between Selection Invention and Dependent Invention Kazushi Takemoto
12:30 p.m.	LUNCHEON AND CLOSING CEREMONY at Room Zuiko
1:30 p.m.	Closing Address J. Jeffrey Hawley

(1) **Title:** What would be the best cooperative activities between Patent Functions and R&D Functions

(2) **Date:** October 1992 (The 23rd Congress at Okayama)

(3) **Source:**
1) Source: PIPA
2) Group: Japan
3) Committee: 1

(4) **Authors:**

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(5) **Key Words:** Disclosure of Invention, Invention Harvesting

(6) **Statutory Provision:** None

(7) **Abstract:**

A questionnaire survey was made within PIPA Japanese member companies, as to what would be the best cooperative activities between Patent Function and R&D Function in the course from the generation of an invention to patent filings. The results of the survey are reported herein.

As a result of the survey, it was found that Patent Staff positively attends meetings with R&D Staff, such as a meeting having the purposes of finding potential inventions, in order to understand the technology and to prevent oversight of necessary patent filings, as well as to make efforts to obtain appropriate patent rights by elaborating disclosure of invention received from inventors of R&D Function.

1. PREFACE - Reasons for choosing this topic -

Recently, the role of intellectual properties especially patents has been significantly enhanced among business activities. It is well recognized that patents have assumed a critical role in business strategies, although they were previously recognized as merely the results of research and development.

In general, a corporate R&D Function has a role to seek better technologies through research and development and to incorporate them into their own corporate products, in order to provide better business opportunities and results. On the other hand, the Patent Function intends to obtain rights advantageous to its own company based on deep knowledge of laws and practices. However, if both functions work independently, effective rights cannot be obtained even if good inventions are made. In this case, effective business strategies and activities cannot be implemented. For example, supposing that good technologies are invented in the R&D Function, it is impossible for the Patent Function to "file a patent application" leading to obtention of a patent right, if such technologies are not recognized as inventions in the R&D Function and not reported to the Patent Function. Therefore, to obtain patent rights for good inventions for effective implementation of business strategies, it is vital for the Patent Function and the R&D Function to closely collaborate together.

After all, an invention is one which exists in the activity of an inventor's brain and thus is invisible. In practice, the Patent Staff of each company has been making great efforts to effectively make such invisible inventions tangible, and to convert them to patent filings without overlooking important ones.

Under these circumstances, in this report, the results are reported which were obtained from the survey as to the best cooperative activities between Patent Functions and R&D Functions

to obtain better patent rights. More specifically, a questionnaire survey regarding such cooperative activities was made to the PIPA Japanese member companies. The analysis of results will be discussed. In addition, the same questionnaire survey was made to the PIPA US member companies also by the first committee of the US Group. In the panel discussions to be made at the International Congress, comparison of Japanese and US practices will be discussed.

2. SUMMARY OF SURVEY RESULTS:

On the Japanese side, the questionnaire as indicated in Appendix 2 was distributed to 84 Japanese PIPA member companies. Among these, the responses from 70 companies were received on time, and analyzed. The responses include those received from 17 Machinery/Metal related companies, 17 Electrical Appliance related companies and 36 Chemical companies. The analysis of results is indicated by the percentage of companies having checked a specific item from the total number of the respondents. The percentages are indicated by industry (i.e., Machinery/Metal Companies, Electrical Appliance companies and Chemical companies, separately) to clarify the tendency due to any difference in industry, as well as those percentages for all respondents. As used herein, Machinery/Metal related companies are referred to as Machinery companies, and Electrical Appliance related companies as Electronics companies. The results are shown in Appendix 3. In addition, in Q3-2 to Q3-12, the base of the calculation is the total number of responding companies having answered "YES" in Q3-1, and in Q3-14 to Q3-16 the base is the total number of responding companies having answered "YES" in Q3-13.

Initially, it was planned to analyze the survey results using, as an evaluation parameter, the number of patent applications filed each year and the number per each Patent Staff member. Such analysis, however, was not conducted since

dependency to such parameter was not remarkable in the survey results.

The companies responding to the survey widely vary from companies filing few patent applications to those filing a large number of patent applications, and also from companies having few staff members in the Patent Function (persons mainly in charge of patent filings) to those having a large number of staff members (Refer to Q2 and Q3). Accordingly, a wide range of Japanese companies are covered by this survey.

The questionnaire used in the survey is intended to examine the cooperative activities between the Patent Function and the R&D Function during the period from generation of inventions to patent filings with the Patent Office.

In general, in the period from generation of inventions to patent filings, the following steps may take place:

STEP 1: Planning, Trial Production, Development, Etc. of Certain Products
---> Possible Generation of a Potential Invention

STEP 2: Finding of a Potential Invention
---> Invention becomes tangible

STEP 3: Disclosure of technical information regarding the Invention in writing
---> Clarification of the Invention

STEP 4: Preparation of a Patent Specification based on the disclosed technical information

STEP 5: Filings of Patent Applications

In considering when the collaboration between the Patent Function and the R&D Function is initiated, the following two cases were considered.

(CASE 1)

CASE 1 is the case where an invention is found in the R&D Function and disclosed to the Patent Function in a given written form (hereinafter referred to as "INVENTION DISCLOSURE") by an inventor of the R&D Function.

- In this case, the Patent Function is first informed of the existence of the invention by the INVENTION DISCLOSURE.
- In the preparation of the specification, to better understand the contents of the INVENTION DISCLOSURE for obtaining more appropriate patent protection, cooperation takes place between the Patent Function and the R&D Function to provide more detailed technical information about the invention. In this case, the cooperation is initiated in the above STEP 4.

In CASE 1, there may be the following problems.

(1) If the R&D Function cannot uncover all inventions, an important invention may remain in the invisible state, resulting in the failure to file for such an important invention.

(2) Even if an invention becomes tangible, its relationship with other inventions or developed products and its relation to business cannot be sufficiently grasped since each invention is separately disclosed. Thus, patent filing strategies including related inventions cannot be appropriately discussed.

To avoid the above problems, the following CASE 2 may be considered.

(CASE 2)

CASE 2 is the case where, prior to submission of the INVENTION DISCLOSURE, an invention is indicated or found by means of an interview between the Patent Function and the R&D Function, a meeting with R&D Function or similar circumstances.

- In this case, there may be two separate cases, i.e., a case where an invention is made tangible in the R&D Function, and is further clarified by consultation with Patent Function in the stage of specific disclosure; and a case where the Patent Function takes a role in finding and making tangible an invention which could not be found by the R&D Function. In the former case, the initiation of the cooperation is in STEP 3, and in the latter case in STEP 2.

In a case where Patent Staff join a meeting with the R&D Function, organizational cooperation between the Patent Function and the R&D Function can be formed. Thus, it is expected that filing strategies organized for specific products can be planned since the technical background of the invention and the relation to the business can be grasped resulting in the appropriate evaluation of the significance of the invention.

In view of the both CASEs, the questionnaires are organized as follows.

(1) Ratio of CASE 1 to CASE 2 (Q1-1)
(2) CASE 1, i.e., actual circumstances of cooperative activities made in the period between submission of INVENTION DISCLOSURE and patent filing (Q2-1 to Q2-8)
(3) Actual circumstance of cooperative activities by

meetings with the R&D Function in CASE 2 (Q3-1 to Q3-16)

From the different view point, in Q2-1 to Q2-8 actual interactions between the Patent Function and inventors of the R&D Function are investigated, and in Q3-1 to Q3-16 actual circumstances of organizational cooperative activities between the Patent Function and the R&D Function are examined.

3. Analysis of Survey Results:

3-1. Beginning of Cooperation

A questionnaire survey was made as to the means by which inventions are first disclosed, i.e., a ratio of cases where inventions are first disclosed by means of INVENTION DISCLOSURE to the other methods (Refer to Q1-1).

As a result, it was found that a great majority of disclosure of invention is made by submission of an INVENTION DISCLOSURE, rather than by other methods. In particular, as shown in Fig. 1, 62 % of the respondents answered that the percentage of disclosure by INVENTION DISCLOSURE is more than 80 %, and 19 % of the respondents answered that is 100 %. Thus, in Japanese companies, INVENTION DISCLOSURE is used as a major way to disclose an invention. Next, in breakdown for industry, among companies having answered that the percentage of disclosure by INVENTION DISCLOSURE is more than 80 %, Machinery companies account for 65 % and Electronics companies account for 88 %. On the contrary to this, Chemical companies account for as low as 47%.

On the other hand, 81 % of the total respondents answered that some inventions are disclosed not by INVENTION DISCLOSURE, although it is rare case. Further, reviewing in more detail, 74 % of all the companies implement separate consultation with each inventor, and 60 % implement meetings with the R&D Function. Among these, Chemical companies showed a high

percentage of disclosure by consultation with inventors as compared with the other industries.

As is apparent from the above, it was found that in some cases collaborations between the Patent Function and the R&D Function are initiated prior to receipt of an INVENTION DISCLOSURE, although in the majority the collaboration is initiated at the time of receipt of an INVENTION DISCLOSURE.

In line with the contents of the questionnaire, the survey results as to the submission of an INVENTION DISCLOSURE which may be the major part in initiation of collaboration with the R&D Function, will be described. Thereafter, the survey results about meeting activities, such as an invention harvesting meeting which constitutes organizational collaboration, will be described.

3-2. In Case Where the Invention is disclosed by an INVENTION DISCLOSURE:

Cooperation between the Patent Function and the R&D Function is described as to cases where the invention is first disclosed by an INVENTION DISCLOSURE.

3-2-1. Description in INVENTION DISCLOSURE:

(1) Items of Description of INVENTION DISCLOSURE:

The questionnaire survey was made along with items described in INVENTION DISCLOSURE ("Title of Invention", "Claims", "Industrially Applicable Field", "Prior Art", "Problems To Be Solved By the Inventions", "Means For Solving the Problems", "Function", "Advantages", "Examples", "Experimental Data", "Brief Description of Drawings" and "Drawings").

As a result, as shown in Fig. 2, the seven items, i.e., "Title of Invention", "Prior Art", "Problems To Be Solved By the Invention", "Means For Solving the Problems", "Advantages", "Examples" and "Drawings" are required to be described in INVENTION DISCLOSURE in more than 80 % of the responding

companies. However, "Function" (67 %), "Industrial Applicable Field" (68 %), "Experimental Data" (68%) and "Brief Description of Drawings" (53 %) are not well disclosed in INVENTION DISCLOSURE.

In the breakdown by industry, Chemical companies showed less degree of disclosure as compared with the other companies (Refer to Q2-1-(1)). Maybe for this reason, the Chemical companies showed less satisfaction as to the item of description as compared with the other industries. More specifically, 40 % of the Chemical companies believe that the disclosure is insufficient and can be improved (Refer to Q2-1-(2)).

(2) Description of Related Information:

In an INVENTION DISCLOSURE, the survey was made as to whether the following items are included as related information other than the above: "Related Technical Documents (e.g., description of technology, design specification)", "Product Image/Product Concept", "Market Trend/Information", "Evaluation in R&D Function (e.g., commercial feasibility, significance, patentability)", "Results of Prior Art Search", "Schedule of Public Announcement", "Relation to Business (e.g., R&D project plan)", "Schedule for Commercialization" and "Own Related Patent Application".

As a result, as shown in Fig. 3, it was found that most companies (83%) describe "Evaluation in R&D Function". Further, approximately 50 to 60 % of the companies include, as items for description in INVENTION DISCLOSURE, the above items except for "Market Information" and "Product Concept".

The companies having answered that the current disclosure of related information is insufficient, account for about 39 % of the total respondents. It was found that a fairly large number of the respondents have dissatisfaction.

3-2-2. Cooperation between Patent Function and

R&D Function in the period of from invention disclosure to preparation of patent specification

(1) Degree of Contribution in the Preparation of a Specification By the Patent Function:

The volume of INVENTION DISCLOSUREs received from an inventor ranges from 2 to 5 pages in 30 to 40 % of the total responses, and ranges from 6 to 10 pages in 30 to 40 % of the total responses. However, the companies receiving INVENTION DISCLOSUREs having more than 11 pages account for about 15 %. Most of such companies are Chemical companies (in the Chemical companies 28 % receive INVENTION DISCLOSURE having more than 11 pages on average (Refer to Q2-3(1)). From this result, it is supposed that the amount of information per 1 case is greater in the Chemical companies than in the other companies. In particular, in a chemical INVENTION DISCLOSURE, it is possible that the large amount of experimental data affects the large volume of an INVENTION DISCLOSURE.

Next, the survey was made as to what percentage of specification to be filed with the Patent Office corresponds to the pages of an INVENTION DISCLOSURE. As a result, as shown in Fig. 5, in general, one-third of the respondents answered that 30 to 60 % of the specification correspond to the description in an INVENTION DISCLOSURE. Another one-third of the respondents answered that 60 to 90 % of the specification correspond to the description in an INVENTION DISCLOSURE. In other words, generally speaking, the Patent Function adds 10 to 70 % of description to the description of an INVENTION DISCLOSURE to complete the specification. In the Chemical companies, 14 % stated that the description in an INVENTION DISCLOSURE corresponds to 90 to 100 % of the specification to be filed with the Patent Office, and 11 % stated that it corresponds to less than 10 %. This shows a great disparity. In addition, please note that in this survey, the description of the INVENTION DISCLOSURE and that of the specification were not qualitatively

(improvement of description by amendment or modification of description in INVENTION DISCLOSURE) compared, but quantitatively compared. It would be appreciated if INVENTION DISCLOSURE procedures of each member company could be improved using comparison of own internal data and average companies' data obtained from this survey (Q2-3(2)).

(2) Patent Function's Efforts for Preparation of a Specification:

As to the time spent by each Patent Staff to prepare one specification, in general, in the case of in-house filings to the Patent Office, most Patent Staff members in the respondents (44 %) spend 2 to 3 days. Nineteen percent (19 %) spend 4 to 6 days and 11 % spend 1 to 2 weeks. On the other hand, in the case of using outside attorneys for patent filings, the time to be spent by the Patent Staff is drastically decreased, e.g., most Patent Staff members in the respondents (41 %) spend 0.5 to 1 day. Nineteen percent (19 %) spend less than 0.5 day and 19 % spend 2 to 3 days. This indicates that in the case of using outside attorneys, for preparation of patent specifications, heavy reliance is placed upon the outside attorneys. In the breakdown by industry, in Chemical companies, the percentage spending 1 to 2 weeks or 3 to 4 weeks is higher than that in Machinery or Electronics companies, in the case of in-house filings and also in the case of using outside attorneys. This is believed to imply that, generally speaking, chemical specifications have more claims and thus more pages per one case (Refer to Q2-4).

Next, in the preparation of the specification, the time spent with an inventor for discussions is considered. In general, in the case of in-house filings the responses of less than 4 hours occupy 70 % of the total responses. Of these, the majority of the responses was the response of 1 to 2 hours (27 %). On the other hand, in the case of using outside attorneys

for filings, the responses of less than 4 hours occupy 86 %. Further, the majority of the responses was the response of less than 1 hour (40 %). In this case, there is a tendency that the time spent with an inventor for discussions is decreased. In the breakdown by industry, the percentage of 4 to 8 hours is higher in Chemical companies again than in Machinery or Electronics companies. It is understood that more time with an inventor for discussions is used in Chemical companies. In contrast to this, in Electronics companies, 71 % responded that they spend less than 1 hour in the case of using outside attorneys. It is found that for review of the technical content, heavy reliance is placed upon the outside attorneys (Refer to Q2-5).

In addition, as to discussions with inventors, the percentage of communication by meeting and telephone conversation is higher than that by writing (Q2-6).

3-2-3. Additional Value/Additional Information Added to Specification by Patent Function:

The questionnaire survey was made as to what additional information is derived from an inventor by cooperation between a Patent Staff member and an inventor in the preparation of a specification (Refer to Q2-7).

As a result, more than one-half of the respondents selected the items "Explanation of Prior Art and the Present Invention", "Preferable Scope of Patent Right to obtain", and "Elements/Construction/Function/Operation of Invention/Embodiment". Thirty percent (30 %) of the respondents selected the item "Proof of Advantages". Twenty percent (20 %) of the respondents selected the items "Application/Modification/Improvement of the Invention" and "Relation to Business".

The item considered the most important information to be extracted from an inventor, is described as follows. As shown in Fig. 6, in all companies, "Preferable Scope of Patent Right",

"Explanation of Prior Art and the Present Invention", and "Elements/Construction/Function/Operation of Invention/Embodiment", are mentioned in the order of priority. The role of the Patent Function is to seek "What constitutes the invention/What is the essential feature of the invention" from the disclosure of invention, and to provide "the most effective scope of patent right or the strongest patent right". Thus, these results show what the Patent Function particularly pays attention to during the process. In other words, the results show the different approach for the same aim. In the breakdown by industry, in Chemical companies the ratio of responses suggests that the "preferable scope of patent right" is considered to be the most important item to hear from inventors. It is considered that Chemical companies have a relatively large number of cases in which substances or compositions are the subject matter for claim drafting and it is easier in such cases to determine the scope of claims since the function of the invention per se is not necessarily considered. On the other hand, Electronics/Machinery companies showed a high percentage of responses stating that "the detailed construction/function of the embodiments" is considered to be the most important item to hear from inventors to enrich the description. It is considered that in these fields more time is used to discuss the specific embodiments of the invention due to the complexity of the construction/function of modern day inventions. Further, it may be difficult to accurately grasp prior art due to the relatively large amount of prior art and the "preferable scope of patent right" will need to be changed in the future. Also, the life cycle of products and technologies in these fields is relatively short. Considering these factors, it may be considered that in Machinery/Electronic companies, a better understanding of the detailed construction/function of the embodiments" is the important factor to discuss for the preparation of the patent specification.

3-3. In case where invention is disclosed at a meeting with R&D Function:

It is quite difficult to find, without omission, all the inventions generated in the process of research and development without using any efforts. Therefore, it is necessary for the Patent Function and the R&D Function to collaborate to make a potential invention tangible in order to file a patent application therefor. Through this collaboration using individual efforts and organizational efforts, appropriate and effective patent filing becomes possible.

3-3-1. Meeting Having the Main Purpose of Finding Inventions:

The survey results will be described, as to cooperative activities between the Patent Function and the R&D Function when a meeting having the main purpose of finding inventions (hereinafter referred to as "Invention Harvesting Meeting"), is held.

Firstly, as shown in Fig. 7, 44 % of the total respondents answered that Invention Harvesting Meetings are held. In particular, 82 % of Machinery companies and 65 % of Electronics companies affirmatively answered. It was concluded that such Invention Harvesting Meeting is positively held. On the other hand, only 17 % of Chemical companies hold such an Invention Harvesting Meeting. It seems that such a meeting is not as popular in Chemical companies (Refer to Q3-1).

Next, the results of the detailed survey on the contents of the Invention Harvesting Meeting will be indicated.

(1) Number of Participants For Meetings:

In most companies, an Invention Harvesting Meeting is held only by the R&D Staff directly in charge and Patent Staff. However, some companies get R&D Staff from related fields involved in the meeting (7%), although the number is small. It is supposed that evaluation of inventions is conducted

considering comments from such other R&D technical sections. Further, some companies get outside patent attorneys involved (7%). It is supposed that quality of the specification is intended to be improved by allowing the outside patent attorney to better understand the technology (Refer to Q3-2).

As shown in Fig. 8, the number of attendees of the meeting is usually 3 to 6 (67 % of the total). However, as high as 10 % of the respondents answered that more than 9 persons attend the meeting, and sometimes a fairly large number of people join the meeting (Refer to Q3-3).

(2) Frequency of Attendance/Meeting Time:

As shown in Fig. 9, the frequency of Patent Staff's attendance on average is more than 5 times/man-year in 61 % of the responding companies. In particular, 26 % of the respondents answered that Patent Staff attend more than 10 meetings/man-year. From this result, it is recognized that many Patent Staff members in companies join meetings with the R&D Function once every 1 to 2 months to positively conduct collaborations (Refer to Q3-4).

Further, the average time allocated for one meeting is up to 1 day. In more detail, a meeting of less than one-half day is held in 71 % of the responding companies and a meeting of one-half to one day is held in 26 % of the responding companies (Refer to Q3-5).

(3) Timing of Meeting:

As for timing of the meeting, a time during performance of the R&D project is most frequent (65 %) and meetings at the time when an R&D topic is determined (when R&D Project started) showed a very low percentage (19 %). Accordingly, it was found that there is a tendency that such meeting is held when the results of the R&D (products, etc.) are exemplified based on the progress of the R&D project, that is, when many inventions are expected to be generated. In addition, many companies responded

that they hold the meeting when needed (61 %). It is considered that the meeting is held when inventions are likely to have been made (Refer to Q3-6).

(4) Contents of Meeting:

In an Invention Harvesting Meeting, many materials showing an invention or technical contents are used. These materials include a document describing invention/technology (100 %), reference materials for design/drawings/trial product (77 %), results of a prior art search (74 %) or the like (Refer to Q3-7). Then, based on these materials, in the meeting, as shown in Fig. 10, the activities mainly conducted are R&D Staff's proposal of inventive/patentable ideas (84 %), Patent Staff's pointing out of inventive/patentable ideas (87 %) and understanding of technical contents (87 %) (Refer to Q3-8). On the other hand, there were less responses answering that an R&D schedule report (35 %) or a market research report (19 %) is used in the meeting. It is concluded that there are not so many companies which make planning of patent filing strategies (e.g., international filing) in the meeting. Maybe for this reason, 45 % of the respondents indicated dissatisfaction with the materials used.

Among the respondents, novelty (42 %) and/or inventive step (48 %) are discussed in the meeting. It is supposed that filing decision may be made in the meeting.

As a result, as shown in Fig. 11, the percentage of the number of patent application finally filed from the number of inventions found in the meeting is lower than that to the number of INVENTION DISCLOSUREs (Refer to Q2-8 and Q3-9). In this case, the relation to business, patentability or the like for the invention extracted is considered at the meeting. Thus, strictly selected cases are finally filed as patent applications. It is supposed that by means of an Invention Harvesting Meeting the patent filings having improved quality become possible and at the

same time wasteful patent filings which never lead to business are decreased.

As an advantage of the meeting from the view point of the Patent Function, a large number of the respondents pointed out the prevention of missing or overlooking inventions (45 %), and efficient and appropriate filing decisions by obtention of sufficient technical information (39 %). Further, there were other responses such as upgrading of patent awareness in R&D Function (26 %), reduction of wasteful Invention Disclosure/Patent Staff's time by pre-review of patentability of proposed inventions (23 %) and preparation of better claims and specification which correspond to what is intended by an inventor (13 %) (Refer to Q3-10).

On the other hand, as answers for R&D Function's position, approximately 70 % of companies answered that they positively or extremely positively hold such a meeting (Refer to Q3-11). As advantages, timely filing decision (32 %), prevention of missing or overlooking patent filings (26 %) were mentioned. The Invention Harvesting Meeting is mainly intended to find inventions, and not intended to prepare a specification. Therefore, as an advantage for the R&D Function, only 10 % of the companies answered that the meeting is advantageous to be able to skip preparation of an Invention Disclosure (Refer to Q3-11).

In addition, the invention harvesting activities not only have advantages, but also have disadvantages such as an increase in workload of the Patent Function (Refer to Q3-10). As a reason why the R&D Function is not positive, some companies answered that Patent Staff and/or R&D Staff have no time and it is troublesome to be prepared for the meeting (maybe the same meaning expressed differently) (Refer to Q3-11). That is, increase in the workload is mentioned as the biggest problem. However, about one-half of the companies feel that the current invention harvesting activities are insufficient (Refer to Q3-6), and that the materials to be used are insufficient (Refer to

Q3-7). From these results, it is recognized that the awareness of such meeting's importance is high, with increase in workload being given definite attention (Refer to Q3-10).

3-3-2. Meeting not Having Purposes of Finding Inventions:

As shown in Fig. 12, Patent Staff members of 67 % of the responding companies join a meeting not having the purpose of finding inventions (e.g., presentation about R&D progress and product development meeting). Thus, it is understood that the Patent Staff members positively participate in such meetings to make an effort to grasp technical trends and to point out any inventive portion. In particular, in Chemical companies, the ratio of participation in meetings not having the purpose of finding inventions is high (72%), although the percentage of participation in the Invention Harvesting meeting is low (Refer to Q3-13, 14 and 15).

Further, the frequency of the Patent Staff's attendance is, as shown in Fig. 13, 2 to 4 times/one man-year on average in about 50 % of the respondents and 5 to 10 times/one man-year on average in about 25 % of the respondents. Accordingly, it is recognized that each Patent Staff attends such meetings once every 2 to 3 months. This means that Patent Staff members attend some kind of meeting with the R&D Function (including Invention Harvesting meetings) at least once a month. It can be concluded that the cooperative activities between Patent Function and R&D Function have gone very well.

4. CONCLUSION:

With respect to cooperative activities between Patent Functions and R&D Functions in Japan, it was generally found that a Patent Function does not only wait for disclosures of inventions from an R&D Function to simply treat them for patent filings, but also positively organizes cooperative activities

with the R&D Function for comprehensive patent filings. More specifically, the following conclusions were obtained.

(1) After receipt of an INVENTION DISCLOSURE from an inventor, the Patent Staff makes efforts to enrich the invention and the specification therefor and to improve the level or quality of patent filings, by way of a meeting with the inventor or the like.

(2) Patent Staff positively attend Invention Harvesting Meetings or other meetings with the R&D Function, to make efforts to better understand the technical contents and to avoid the mistaken omission of necessary patent filings.

Accordingly, it was concluded that a Patent Function conducts organizational collaborations with the R&D Function to form total patent filing strategies by grasping, as a bundle, inventions corresponding to certain products or technologies, in addition to collaborations with individual inventors to make each of the inventions disclosed by INVENTION DISCLOSUREs comprehensive. The former case has not penetrated into all the companies, but a fairly large number of companies implement such efforts.

Therefore, it is considered that in Japanese companies, more attention has been paid to improvement in quality of patent filings than that in quantity.

5. APPENDIXES:

Appendix 1: Analyzed Data (Figs. 1 to 13)

Appendix 2: Questionnaires Prepared and Distributed By PIPA Japanese Group

Appendix 3: Results of Questionnaire Survey

[APPENDIX 1]

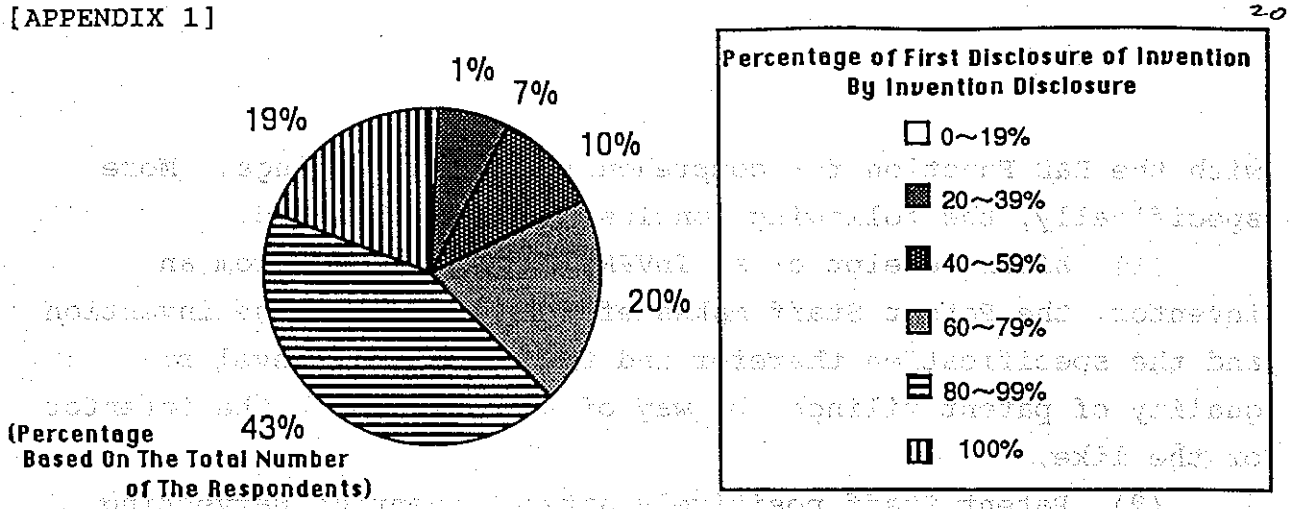


FIG.1
Percentage of First Disclosure of Invention By Invention Disclosure (Q1-1)

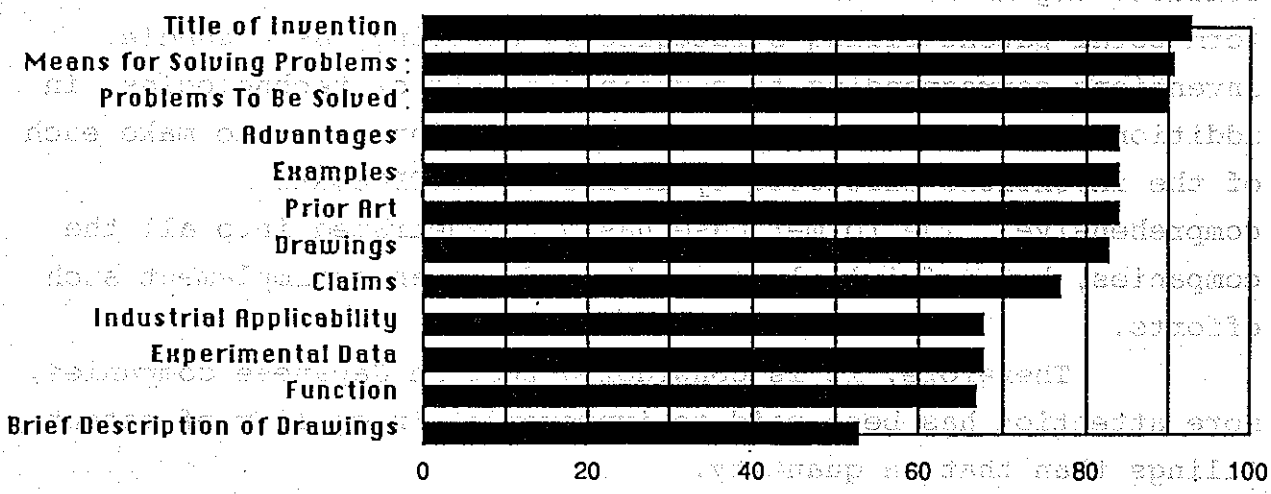


FIG.2
Items For Description of Invention in Invention Disclosure (Q2-1)

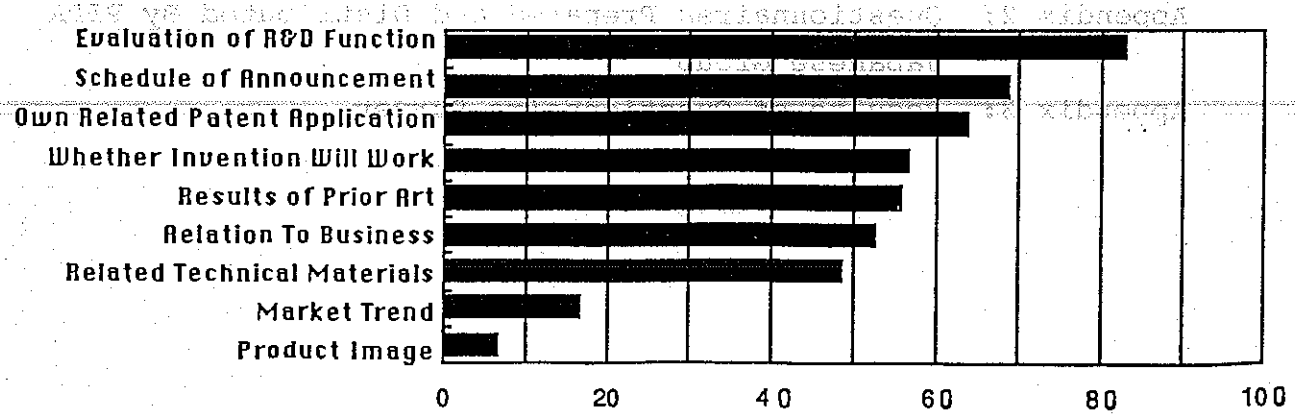


FIG.3
Related Information in Invention Desclosure (Q2-2)

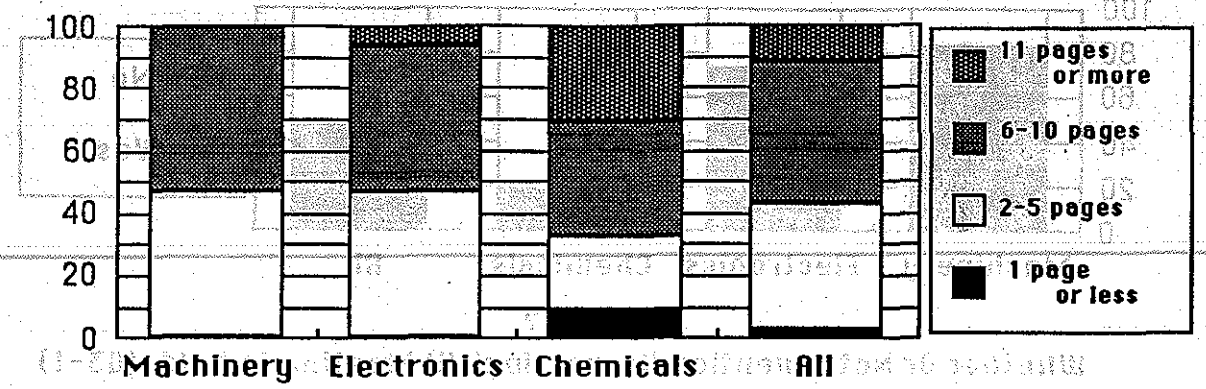


FIG.4
Number of Pages of Invention Disclosure (Q2-3①)

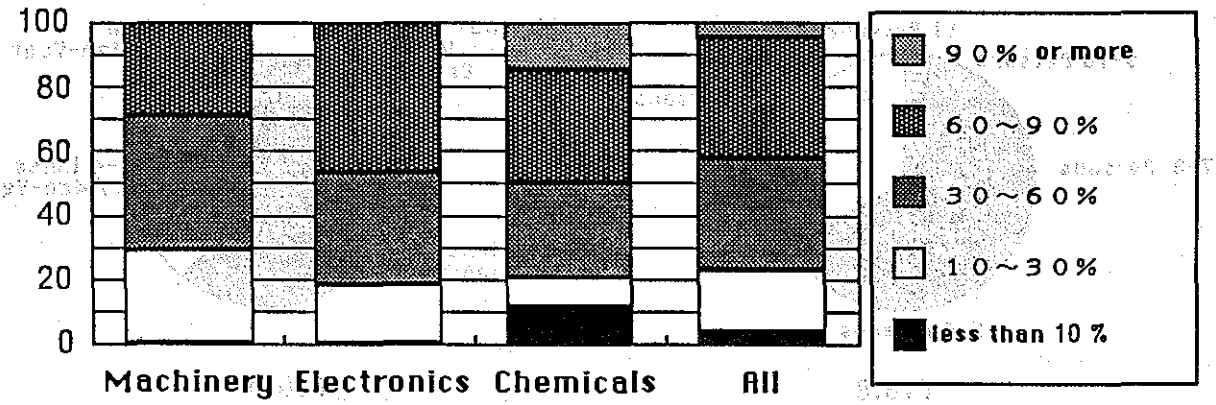


FIG.5
Ratio of Volume of Invention Disclosure To That of Specification To Be Filed in Patent Office (Q2-3②)

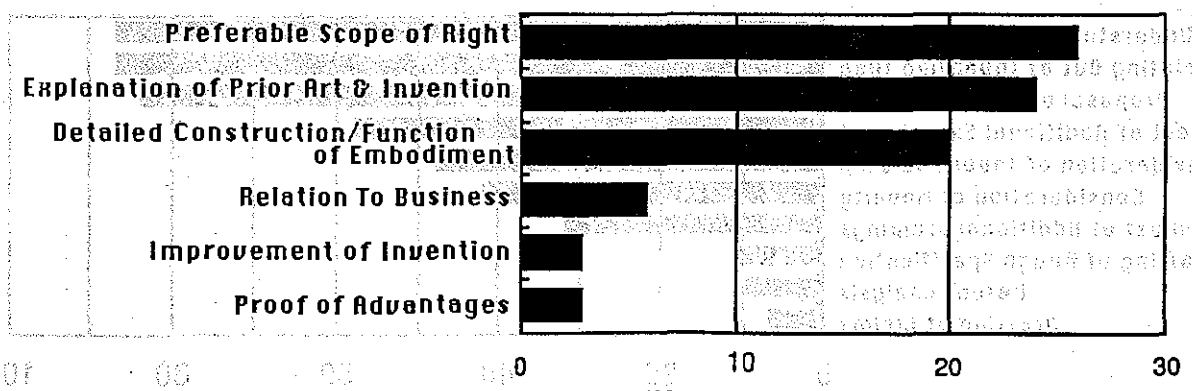


FIG.6
Important Points To Be Obtained From Inventor By Patent Staff in Preparation of Specification (Q2-7)

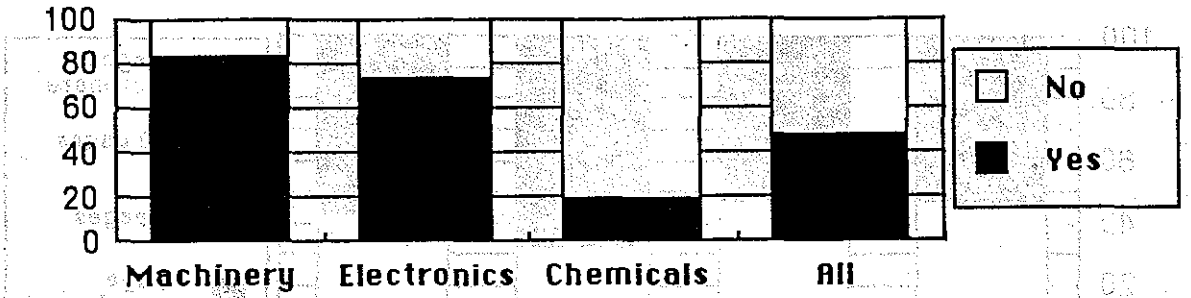


FIG.7

Whether Or Not Invention Harvesting(IH) Meeting Is Held (Q3-1)

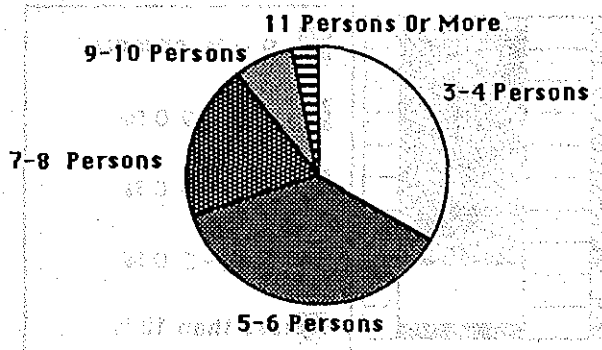


FIG.8

Number of Participants in IH Meeting (Q3-3)

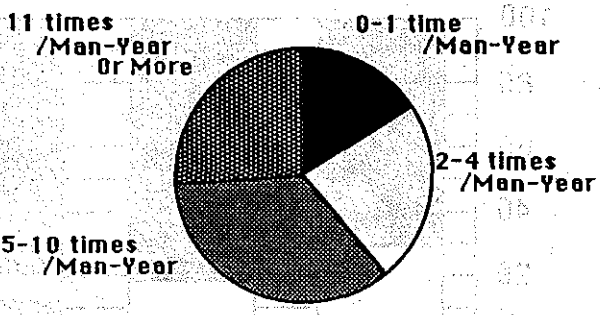


FIG.9

Frequency of Patent Staff's Attendance To IH Meeting (Q3-4)

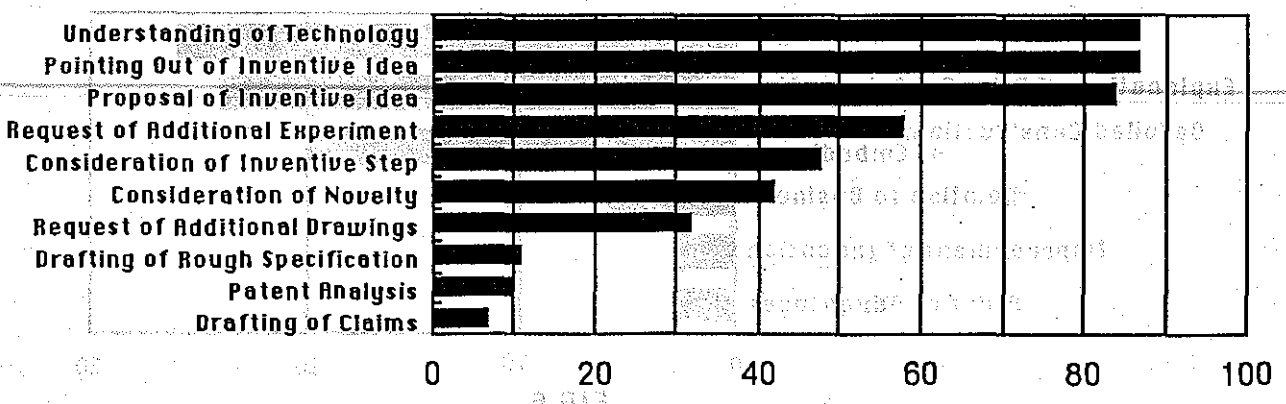


FIG.10

Contents of IH Meeting (Q3-8)

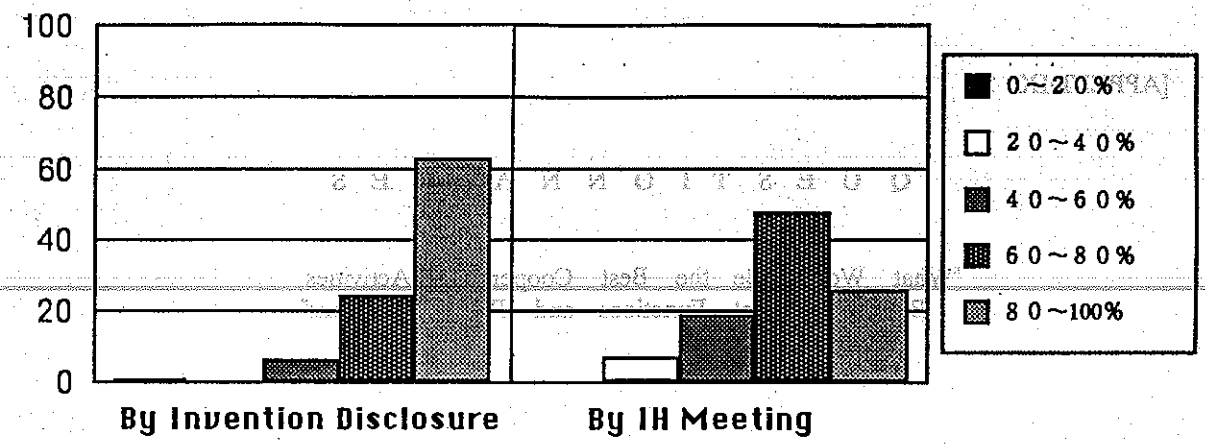


FIG.11
Rate of Patent Filings To Number of Inventions Disclosed By Invention Disclosure Or Discoverd By IH Meeting (Q2-8,Q3-9)

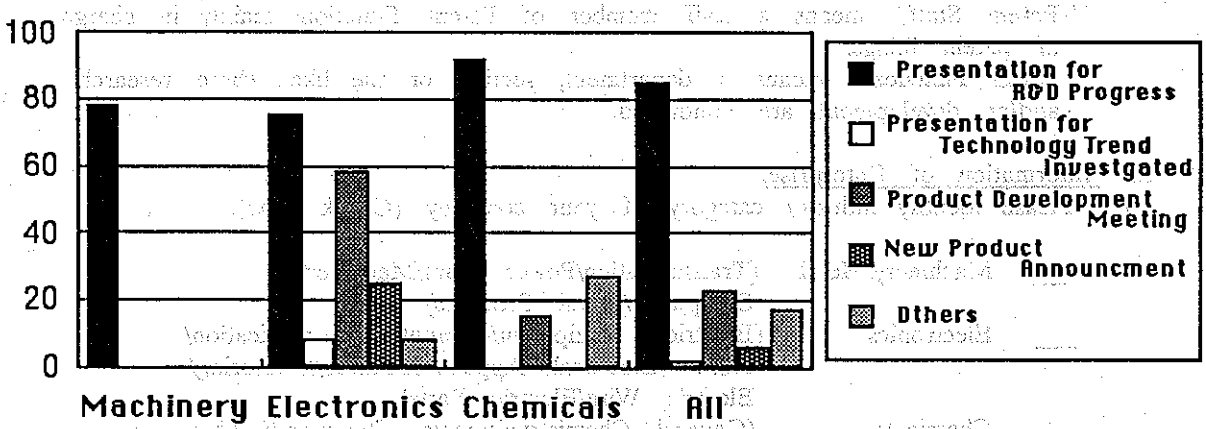


FIG.12
Whether Or Not Meeting
Not Having Purpose of Finding Invention Is Held (Q3-14)

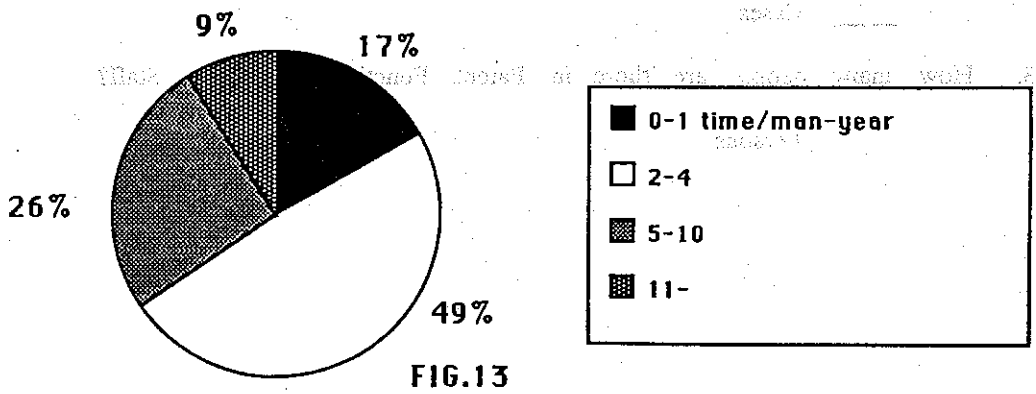


FIG.13
Frequency of Patent Staff's Attendance To Meeting
Not Having Purpose of Finding Invention (Q3-16)

[APPENDIX 2]

Q U E S T I O N N A I R E S

"What Would Be the Best Cooperative Activities Between Patent Functions and R&D Functions"

I. Definition of Terms:

"**Invention**" means an invention or a utility model.

"**Application**" means a domestic application for patent or utility model registration.

"**Patent Function**" means a department, section or the like where intellectual properties such as a patent are handled.

"**Patent Staff**" means a staff member of Patent Function mainly in charge of patent filings.

"**R&D Function**" means a department, section or the like where research and/or development are conducted.

II. Information of Enterprise:

Q1. Please identify industry category of your company (Check One).

___ Machinery/Metal (Transportation/Power Plant/Machinery Equipment/Metal Products)

___ Electronics (Electrical Equipment/Computer/Communication/ Home Electrical Appliances/Audio/Measuring/ Electric Wire/Electric Parts)

___ Chemicals (General Chemistry/Organic Chemistry/Rubber and Plastics Products/Paints/Petroleum/Petroleum Refining/Fiber/Pharmacy/Food/Cosmetics)

___ Others (Specify: _____)

Q2. How many domestic applications were filed by your company in 1991?

_____ Cases

Q3. How many people are there in Patent Function as Patent Staff?

___ Persons

III. What Would Be The Best Cooperative Activities Between Patent Function and R&D Function:

1. Initial Stage of the Joint Activities

Q1-1. How does R&D Staff first disclose Invention to Patent Staff? (Please indicate in percentage based on the total number of Inventions (100%). "Invention Disclosure" means a given form used for R&D Staff to disclose Invention in writing to Patent Function.)

- By Submission of Invention Disclosure: ___%
- Not by Submission of Invention Disclosure
  - Through consulting for inventor: (e.g., meeting, phone/fax communication) ___%
  - Through a specific meeting with R&D Staff (e.g., meeting to find inventions) ___%

2. In the case where Invention is first disclosed by Invention Disclosure:

(The following questions are directed to cases where Invention is first disclosed by Invention Disclosure to Patent Staff and then an application is prepared based on the Invention Disclosure.)

Q2-1. The following questions are directed to contents/information to be disclosed in Invention Disclosure.

(1) How does an inventor disclose Invention in Invention Disclosure? (Check all applicable items.)

___ Title of Invention
___ Field of Invention
___ Summary
___ Advantages of Invention
___ Experimental Data
___ Brief Description of Drawings
___ Drawings
___ Others (Specify: _____)
___ Claims
___ Prior Art
___ Description of Invention
___ Examples/Embodiments

(2) Do you think the above information is sufficient or not?

___ Sufficient ___ Insufficient

Q2-2. The following questions are directed to related information to be disclosed in Invention Disclosure.

(1) What information, other than description as to invention, is generally included in Invention Disclosure? (Check all applicable items.)

___ Related Technical Documents (e.g., description of technology, design specification)
___ Product Image/Product Concept
___ Market Information

___ Evaluation in R&D Function (e.g., commercial feasibility, significance, patentability)
___ Results of Prior Art Search
___ Schedule of Public Announcement
___ Relation to Business (e.g., R&D project plan)
___ Schedule for Communization
___ Own Related Patent Application
___ Others (Specify: _____)

(2) Do you think the above information is sufficient or not?

___ Sufficient ___ Insufficient

Q2-3. The following questions are directed to the volume of each Invention Disclosure.

(1) How many pages in average does each Invention Disclosure contain?

___ 1 page or less ___ 2 to 5 pages ___ 6 to 10 pages
___ 11 pages or more

(2) What percentage, in average, of the description of the final patent specification is derived from Invention Disclosure? (If description of the invention in Invention Disclosure was 5 page long and Patent Staff modified the description, added other description and prepared 20 page long specification, the answer would be 25%.)

___ Less than 10% ___ 10 to 30% ___ 30 to 60%
___ 60 to 90% ___ 90 to 100%

Q2-4. After receipt of Invention Disclosure, how long does Patent Staff spend time, in average, to prepare a patent application? (Including time for discussion with inventor; 1 day=8 hours)

(1) In the case of In-house filing (no outside patent attorney involved):

___ Less than 0.5 day ___ 0.5 to 1 day ___ 2 to 3 days
___ 4 to 6 days ___ 1 to 2 Weeks ___ 3 to 4 Weeks
___ More than 1 month

(2) In the case of using outside patent attorney:

___ Less than 0.5 day ___ 0.5 to 1 day ___ 2 to 3 days
___ 4 to 6 days ___ 1 to 2 Weeks ___ 3 to 4 Weeks
___ More than 1 month

Q2-5. How long in average does Patent Staff spend with an inventor for discussions, meetings, telephone call, etc. to prepare a patent application? (1 Day=8 hours)

(1) In the case of In-house filing:

___ Less than 1 hour ___ 1 to 2 hours ___ 2 to 4 hours
___ 4 to 8 hours ___ 1 to 2 days ___ 3 days or more

(2) In the case of using outside patent attorney:

___ Less than 1 hour ___ 1 to 2 hours ___ 2 to 4 hours
___ 4 to 8 hours ___ 1 to 2 days ___ 3 days or more

Q2-6. How does Patent Staff contact an inventor in the process of drafting claims and specification? (Check all applicable items. Indicate most important item by "XX".)

___ Meeting/Interview ___ Telephone Conference
___ Communication in Writing
___ Others (Specify: _____)

Q2-7. What information does Patent Staff try to get from an inventor in the process of drafting claims and specification? (Check major three items. Indicate most important item by "XX".)

___ Explanation of Prior Art and the Present Invention
___ Preferable Scope of Patent Right
___ Elements/Construction/Function/Operation of Invention/Embodiment
___ Proof of Advantages
___ Application/Modification/Improvement of the Invention
___ Relation to Business (Relation to Commercial Products, etc.)

Q2-8. What percentage of Invention Disclosures was filed as applications?

___ 0 to 20 % ___ 20 to 40 % ___ 40 to 60 %
___ 60 to 80 % ___ 80 to 100 %

3. In the case where an invention is first disclosed to Patent Staff, or an invention is found at a specific meeting with R&D Staff:

The following questions are directed to cases where Invention is first disclosed to Patent Staff, or found during a specific meeting between Patent Staff and R&D Staff. (The cases where Invention is first disclosed by Invention Disclosure to Patent Function, are excluded.)

Q3-1. Is the meeting primary for harvesting inventions from technical information disclosed by R&D Function? (Such meeting is hereinafter referred to as "IH (Invention Harvesting) Meeting".)

___ YES ___ NO

If your answer was YES in Q3-1, then go to Q3-2, and if NO, go to Q3-13.

Q3-2. Who attends IH Meeting? (Check all applicable items.)

___ R&D Staff in charge
___ R&D Staff in Related Field
___ Patent Staff
___ Outside Patent Attorney
___ Others (e.g., sales representative, executive concerned; Specify: _____)

Q3-3. How many participants, in average, attend IH Meeting?

___ Persons

Q3-4. How frequent does each Patent Staff attend IH Meeting in average?

___ 0 to 1 /Year ___ 2 to 4 /Year ___ 5 to 10 /Year
___ More than 10 /Year

Q3-5. How long, in average, is IH Meeting held each time?

___ Less than 0.5 Day ___ 0.5 to 1 Day ___ More than 1 Day

Q3-6. The following questions are directed to the timing of IH Meeting.

(1) At which stage of the following is IH Meeting held?
(Check all applicable items.)

___ When R&D Project Started
___ During R&D Project
___ When R&D Project Completed
___ Periodically (e.g., at the end of year)
___ When Needed (e.g., when invention is or is likely to be found)

(2) Do you think the above timing is sufficient or not?

___ Sufficient ___ Insufficient

Q3-7. The following questions are directed to materials used at IH Meeting.

(1) What materials are used in IH Meeting by whom?
(Check all applicable items.)

	R&D Staff in Charge	Related R&D Staff	Patent Staff
___ Results of Prior Art Search	___	___	___
___ Document Describing Technology/ Invention	___	___	___
___ Reference Material for Design/ Drawings/Trial Product	___	___	___
___ R&D Schedule Report	___	___	___
___ Market Research Report	___	___	___
___ Others (Specify: _____)			

(2) Do you think the above materials are sufficient or not?

___ Sufficient ___ Insufficient

Q3-8. What activities are conducted at IH Meeting?
(Check all applicable items.)

___ R&D Staff to talk about progress of R&D project, to propose

inventive/patentable ideas came up through the project, etc.
___ Patent Staff or Others to point out inventive/patentable ideas through presentations by R&D Staff
___ Patent Staff to understand technology developed or being developed
___ Consideration of novelty
___ Consideration of inventive step
___ Drafting of rough patent specification
___ Drafting of patent specification
___ Drafting of claims
___ Request of additional experiments
___ Analysis of third parties' patents/applications
___ Request of additional drawings (e.g., flow charts)
___ Others (Specify: _____)

Q3-9. What percentage of the inventions disclosed or found at IH Meeting was filed as applications?

___ 0 to 20 % ___ 20 to 40 % ___ 40 to 60 %
___ 60 to 80 % ___ 80 to 100 %

Q3-10. From the view point of Patent Function, what are advantages and disadvantages of IH Meeting?

(1) Advantage:
___ Prevention of Oversight of inventions or patent applications for protecting own technology
___ Efficient and appropriate filing decision by obtention of sufficient technical information
___ Reduction of wasteful Invention Disclosures/Patent Staff's time by pre-review of patentability of proposed inventions
___ Preparation of better claims and specification which correspond to what is intended by an inventor
___ Upgrading of patent awareness in R&D Function
___ Quick filing (from conception to filing)
___ Other (Specify: _____)

(2) Disadvantage:
___ Increase of workload in Patent Function
___ Others (Specify: _____)

Q3-11. Do you think R&D Function is positive/active in holding IH Meeting?

___ Very Positive ___ Positive

Reasons:
___ Prevention of Oversight of inventions or patent applications for protecting own technology
___ Quick filings
___ Company policy
___ Able to skip preparation of Invention Disclosure
___ Timely filing decision

___ Not Positive ___ Conservative

Reasons:

___ Important inventions are automatically disclosed to Patent Function without holding IH Meetings.
___ Troublesome Preparation for IH Meeting
___ Patent Staff and/or R&D Staff have no time.

Q3-12. Do you have an internal guideline or the like to harvest inventions?

___ YES ___ NO

Q3-13. Does Patent Staff join any other meetings organized by R&D Function for the main purposes of finding inventions (e.g., presentation about R&D progress, meeting about research results of technology movement, product development meeting, new product announcement/ review meeting)?

___ YES ___ NO

The following questions are to be replied by those who answered YES in Q3-13.

Q3-14. What kind of meetings do you attend? (e.g., presentation about R&D progress, meeting about research results of technology movement, product development meeting, new product announcement/review meeting)?
(Specify: _____
_____)

Q3-15. What activities are made by Patent Staff in such meetings?

___ Pointing out of inventive/patentable ideas
___ Understanding of technology progress
___ Others (Specify: _____
_____
_____)

Q3-16. How often does each Patent Staff attend such meetings in average per year?

___ 0 to 1/Year ___ 2 to 4/Year ___ 5 to 10/Year
___ 10 or more/Year

[APPENDIX 3]

RESULT OF QUESTIONNAIRE SURVEY

"What Would Be The Best Cooperative Activities Between Patent Function and R&D Function"

II. Information of Enterprise:

Q1. Please identify industry category of your company

Machinery/Metal	Electronics	Chemicals	Total
17	17	36	70

Q2. How many domestic applications were filed by your company in 1991?

	Machinery/Metal	Electronics	Chemicals	Total (%)
1 to 100	6	6	28	16
101 to 1,000	53	12	64	49
1,001 or more	47	76	8	34

Q3. How many people are there in Patent Function as Patent Staff?

	Machinery/Metal	Electronics	Chemicals	Total (%)
1 to 10	50	12	22	24
11 to 30	24	35	61	46
31 to 50	12	18	11	13
51 to 70	6	3	3	6
71 or more	18	13	3	11

(Indicated in percentage by industry based on the total number of replied Questionnaires (100%))

III. What Would Be The Best Cooperative Activities Between Patent Function and R&D Function:

1. Initial Stage of the Joint Activities

Q1-1. How does R&D Staff first disclose Invention to Patent Staff? (Please indicate in percentage based on the total number of Inventions (100%). "Invention Disclosure" means a given form used for R&D Staff to disclose Invention in writing to Patent Function.)

- By Submission of Invention Disclosure

	Machinery/Metal	Electronics	Chemicals	Total (%)
0 %	0	0	0	0
1 to 19 %	0	0	3	1
20 to 39 %	12	0	8	7
40 to 59 %	12	0	14	10
60 to 79 %	12	12	28	20
80 to 99 %	47	59	33	43
100 %	18	29	14	19

- Not by Submission of Invention Disclosure
  - Through consulting for inventor:
    (e.g., meeting, phone/fax communication)

	Machinery/Metal	Electronics	Chemicals	Total (%)
0 %	29	35	0	16
1 to 19 %	47	59	36	44
20 to 39 %	6	6	25	16
40 to 59 %	0	0	17	9
60 to 79 %	18	0	3	6
80 to 99 %	0	0	0	0
100 %	0	0	0	0

  - Through a specific meeting with R&D Staff
    (e.g., meeting to find inventions)

	Machinery/Metal	Electronics	Chemicals	Total (%)
0 %	24	47	3	19
1 to 19 %	59	47	36	44
20 to 39 %	18	6	17	14
40 to 59 %	0	0	0	0
60 to 79 %	0	0	3	1
80 to 99 %	0	0	0	0
100 %	0	0	0	0

2. In the case where Invention is first disclosed by Invention Disclosure:
(The following questions are directed to cases where Invention is first disclosed by Invention Disclosure to Patent Staff and then an application is prepared based on the Invention Disclosure.)

Q2-1. The following questions are directed to contents/information to be disclosed in Invention Disclosure.

(1) How does an inventor disclose Invention in Invention Disclosure?
(Check all applicable items.)

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Title of Invention	94	100	89	93
- Claims	76	94	69	77
- Field of Invention	65	82	75	68
- Prior Art	94	100	89	84
- Problems To Be Solved by Invention	94	100	83	90
- Means for Solving the Problems	94	88	92	91
- Function	94	76	50	67
- Advantages of Invention	94	100	89	84
- Examples/Embodiments	94	100	89	84
- Experimental Data	71	76	64	68
- Brief Description of Drawings	59	53	56	53
- Drawings	94	100	69	83
- Others (Summary of Invention, Application, Abstract)				

(2) Do you think the above information is sufficient or not?

	Machinery/Metal	Electronics	Chemicals	Total (%)
- Sufficient	82	82	58	70
- Insufficient	18	18	39	29

Q2-2. The following questions are directed to related information to be disclosed in Invention Disclosure.

(1) What information, other than description as to invention, is generally included in Invention Disclosure? (Check all applicable items.)

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Related Technical Documents (e.g., description of technology, design specification)	53	41	50	49
- Product Image/Product Concept	0	12	8	7
- Market Information	6	18	19	17
- Evaluation in R&D Function (e.g., commercial feasibility, significance, patentability)	88	94	75	83
- Results of Prior Art Search	59	59	53	56
- Schedule of Public Announcement	82	82	56	69
- Relation to Business (e.g., R&D project plan)	47	65	50	53
- Schedule for Communization	65	82	42	57
- Own Related Patent Application	76	59	61	64
- Others (e.g., related contracts, necessity of joint applications, schedule of international filing, period from completion of invention to disclosure, evaluation from Patent Staff)				

(2) Do you think the above information is sufficient or not?

	Machinery/Metal	Electronics	Chemicals	Total (%)
- Sufficient	59	76	50	59
- Insufficient	41	24	44	39

Q2-3. The following questions are directed to the volume of each Invention Disclosure.

(1) How many pages in average does each Invention Disclosure contain?

	Machinery/Metal	Electronics	Chemicals	Total (%)
1 page	0	0	8	4
2 to 5	47	47	22	34
6 to 10	53	47	33	41
11 or more	0	6	28	16

(2) What percentage, in average, of the description of the final patent specification is derived from Invention Disclosure? (If description of the invention in Invention Disclosure was 5 page long and Patent Staff modified the description, added other description and prepared 20 page long specification, the answer would be 25%.)

	Machinery/Metal	Electronics	Chemicals	Total (%)
Less than 10%	0	0	11	6
10 to 30 %	29	18	8	16
30 to 60 %	41	35	28	33
60 to 90 %	29	47	33	36
90 to 100 %	0	0	14	7

Q2-4. After receipt of Invention Disclosure, how long does Patent Staff spend time, in average, to prepare a patent application? (Including time for discussion with inventor; 1 day=8 hours)

(1) In the case of In-house filing (no outside patent attorney involved):

	Machinery/Metal	Electronics	Chemicals	Total (%)
Less than 0.5 day	0	0	0	0
0.5 to 1 day	0	0	11	6
2 to 3 days	59	53	33	44
4 to 6 days	6	29	19	19
1 to 2 Weeks	12	6	14	11
3 to 4 Weeks	0	0	11	6
More than 1 month	0	6	0	1

(2) In the case of using outside patent attorney:

	Machinery/Metal	Electronics	Chemicals	Total (%)
Less than 0.5 day	29	24	11	19
0.5 to 1 day	47	53	33	41
2 to 3 days	24	24	14	19
4 to 6 days	0	0	8	4
1 to 2 Weeks	0	0	11	6
3 to 4 Weeks	0	0	11	6
More than 1 month	0	6	3	1

Q2-5. How long in average does Patent Staff spend with an inventor for discussions, meetings, telephone call, etc. to prepare a patent application? (1 Day=8 hours)

(1) In the case of In-house filing:

	Machinery/Metal	Electronics	Chemicals	Total (%)
Less than 1 hour	24	35	17	23
1 to 2 hours	29	29	25	27
2 to 4 hours	12	24	22	20
4 to 8 hours	6	0	19	11
1 to 2 days	0	6	0	1
3 days or more	0	0	0	0

(2) In the case of using outside patent attorney:

	Machinery/Metal	Electronics	Chemicals	Total (%)
Less than 1 hour	41	71	25	40
1 to 2 hours	41	18	31	30
2 to 4 hours	12	12	19	16
4 to 8 hours	6	0	14	9
1 to 2 days	0	6	3	1
3 days or more	0	0	0	0

Q2-6. How does Patent Staff contact an inventor in the process of drafting claims and specification? (Check all applicable items.)

	Machinery/Metal	Electronics	Chemicals	Total (%)
- Meeting/Interview	82	88	72	79
- Telephone Conference	82	71	78	77
- Communication in Writing	47	59	64	59

Q2-7. What information does Patent Staff try to get from an inventor in the process of drafting claims and specification? (Check major three items. Indicate most important item by "XX".)
(The numbers in the parentheses indicate the ratio of XX.)

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Explanation of Prior Art and the Present Invention	53(18)	76(18)	44(31)	54(24)
- Preferable Scope of Patent Right	53(18)	71(12)	39(36)	50(26)
- Elements/Construction/Function/ Operation of Invention/Embodiment	59(24)	94(47)	50(6)	63(20)
- Proof of Advantages	41(6)	29(6)	33(0)	34(3)
- Application/Modification/ Improvement of the Invention	12(6)	12(6)	8(0)	19(3)
- Relation to Business (Relation to Commercial Products, etc.)	18(12)	24(0)	14(0)	17(6)

Q2-8. What percentage of Invention Disclosures was filed as applications?

	Machinery/Metal	Electronics	Chemicals	Total (%)
0 to 20 %	0	6	0	1
20 to 40 %	0	0	0	0
40 to 60 %	6	18	0	6
60 to 80 %	47	41	6	24
80 to 100 %	41	35	86	63

3. In the case where an invention is first disclosed to Patent Staff, or an invention is found at a specific meeting with R&D Staff:

The following questions are directed to cases where Invention is first disclosed to Patent Staff, or found during a specific meeting between Patent Staff and R&D Staff. (The cases where Invention is first disclosed by Invention Disclosure to Patent Function, are excluded.)

Q3-1. Is the meeting primary for harvesting inventions from technical information disclosed by R&D Function? (Such meeting is hereinafter referred to as "IH (Invention Harvesting) Meeting".)

	Machinery/Metal	Electronics	Chemicals	Total (%)
- YES	82	65	17	44
- NO	18	24	81	51

If your answer was YES in Q3-1, then go to Q3-2, and if NO, go to Q3-13.

Q3-2. Who attends IH Meeting? (Check all applicable items.)

	Machinery/Metal	Electronics	Chemicals	Total (%)
- R&D Staff in charge	100	100	83	97
- R&D Staff in Related Field	7	9	0	7
- Patent Staff	100	91	83	94
- Outside Patent Attorney	7	9	0	7

Q3-3. How many participants, in average, attend IH Meeting?

	Machinery/Metal	Electronics	Chemicals	Total (%)
2 persons	0	0	0	0
3 to 4	50	9	33	32
5 to 6	36	36	33	35
7 to 8	14	27	17	19
9 to 10	7	9	0	7
11 or more	0	9	0	3

Q3-4. How frequent does each Patent Staff attend IH Meeting in average?

	Machinery/Metal	Electronics	Chemicals	Total (%)
0 to 1 /Year	21	18	0	16
2 to 4 /Year	14	27	33	23
5 to 10 /Year	43	27	33	35
More than 10 /Year	21	27	33	26

Q3-5. How long, in average, is IH Meeting held each time?

	Machinery/Metal	Electronics	Chemicals	Total (%)
Less than 0.5 Day	64	91	50	71
0.5 to 1 Day	36	9	33	26
More than 1 Day	0	0	0	0

Q3-6. The following questions are directed to the timing of IH Meeting.

(1) At which stage of the following is IH Meeting held?
(Check all applicable items.)

	Machinery/Metal	Electronics	Chemicals	Total (%)
- When R&D Project Started	21	18	17	19
- During R&D Project	64	73	50	65
- When R&D Project Completed	43	36	50	42
- Periodically (e.g., at the end of year)	21	18	33	23
- When Needed (e.g., when invention is or is likely to be found)	57	55	83	61

(2) Do you think the above timing is sufficient or not?

	Machinery/Metal	Electronics	Chemicals	Total (%)
- Sufficient	64	27	67	52
- Insufficient	36	73	33	48

Q3-7. The following questions are directed to materials used at IH Meeting.

(1) What materials are used in IH Meeting by whom?
(Check all applicable items.)

	Machinery/Metal	Electronics	Chemicals	Total (%)
- Results of Prior Art Search	93	64	50	74
- R&D Staff in Charge	57	64	50	58
- Related R&D Staff	0	0	0	0
- Patent Staff	57	36	0	38
- Document Describing Technology/Invention	100	100	100	100
- R&D Staff in Charge	100	91	83	94
- Related R&D Staff	7	0	0	0
- Patent Staff	0	9	0	3
- Reference Material for Design/Drawings/Trial Product*	93	82	33	77
- R&D Schedule Report*	50	36	0	35
- Market Research Report*	29	18	0	19

*: To be prepared by R&D Staff in charge

(2) Do you think the above materials are sufficient or not?

	Machinery/Metal	Electronics	Chemicals	Total (%)
- Sufficient	64	36	67	55
- Insufficient	36	64	33	45

Q3-8. What activities are conducted at IH Meeting?
(Check all applicable items.)

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Proposal of inventive ideas	100	82	50	84
- Point out of inventive ideas	86	91	83	87
- Understanding of technology	93	82	83	87
- Consideration of novelty	36	64	17	42
- Consideration of inventive step	50	64	17	48
- Drafting of rough pat. spec.	0	27	0	10
- Drafting of pat. spec.	50	27	33	39
- Drafting of claims	0	9	17	7
- Request for additional experiments	86	45	17	58
- Patent analysis	0	18	17	10
- Request for additional drawings (e.g., flow charts)	36	45	0	32

Q3-9. What percentage of the inventions disclosed or found at IH Meeting was filed as applications?

	Machinery/Metal	Electronics	Chemicals	Total (%)
0 to 20 %	0	0	0	0
20 to 40 %	7	9	0	7
40 to 60 %	21	27	0	19
60 to 80 %	50	27	83	48
80 to 100 %	21	36	17	26

Q3-10. From the view point of Patent Function, what are advantages and disadvantages of IH Meeting?

(1) Advantage:

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Prevention of Oversight of inventions or patent applications	57	36	33	45
- Efficient and appropriate filing decision by obtention of sufficient technical information	43	45	17	39
- Reduction of wasteful Invention Disclosures/Patent Staff's time by pre-review of patentability of proposed inventions	14	36	17	23
- Preparation of better claims and specification which correspond to what is intended by an inventor	14	18	0	13
- Upgrading of patent awareness in R&D Function	14	36	33	26
- Quick filing (from conception to filing)	7	9	0	7

(2) Disadvantage:

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Increase of workload in Patent Function	57	82	33	61
- Others (e.g., decrease in R&D Staff's incentive to write Invention Disclosure, decrease in Inventor's ability to draft applications)	0	0	0	0

Q3-11. Do you think R&D Function is positive/active in holding IH Meeting?

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Very Positive	29	0	50	23
- Positive	43	55	50	48
Reasons:				
- Prevention of Oversight of inventions/patent applications	28	18	33	26
- Quick filings	28	18	0	19
- Company policy	14	0	0	7
- Able to skip preparation of Invention Disclosure	14	9	0	10
- Timely filing decision	14	36	67	32
- Not Positive	29	45	0	29
- Conservative	0	0	0	0
Reasons:				
- Troublesome Preparation for IH Meeting	0	18	0	7
- Patent Staff and/or R&D Staff have no time.	7	27	0	13

Q3-12. Do you have an internal guideline or the like to harvest inventions?

	Machinery/Metal	Electronics	Chemicals	Total (%)
- YES	29	36	0	26
- NO	71	64	100	74

Q3-13. Does Patent Staff join any other meetings organized by R&D Function for the main purposes of finding inventions (e.g., presentation about R&D progress, meeting about research results of technology movement, product development meeting, new product announcement/ review meeting)?

	Machinery/Metal	Electronics	Chemicals	Total (%)
- YES	53	71	72	67
- NO	41	24	19	26

The following questions are to be replied by those who answered YES in Q3-13.

Q3-14. What kind of meetings do you attend?

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Presentation about R&D progress	78	75	92	85
- Meeting about research results of technology movement	0	8	0	2
- Product development meeting	0	58	15	23
- New product announcement/review meeting	0	25	0	6
- Others	0	8	27	17

Q3-15. What activities are made by Patent Staff in such meetings?

	Machinery/ Metal	Electronics	Chemicals	Total(%)
- Pointing out of inventive ideas	33	75	58	57
- Understanding of technology progress	78	83	85	83
- Others (e.g., checking of the existence of inventions, explanation of other companies' patents at issue)				

Q3-16. How often does each Patent Staff attend such meetings in average per year?

	Machinery/Metal	Electronics	Chemicals	Total (%)
0 to 1/Year	44	17	8	17
2 to 4/Year	33	58	50	49
5 to 10/Year	11	25	31	26
10 or more/Year	11	0	12	9

PIPA Database Coversheet

(1) Title: Changes in U.S. Patent Practice Since October, 1991

(2) Date: September 8, 1992

(3) Source:

1) Source: PIPA
2) Group: American
3) Committee: 1

(4) Author: J. Wesley Blumenshine, Caterpillar Inc.

(5) Keywords(s): 37 CFR 1.56, Rule 56, duty of disclosure, 37 CFR 1.97, information disclosure statements, 35 USC 112, means-plus-function, In Re Bond, assignments, latches, doctrine of equivalents, Morton International, Inc. v. Cardinal Chemical Co., 35 USC 101

(6) Statutory Provision(s): 37 CFR 1.56, 37 CFR 1.97-1.98, 35 USC 112, 35 USC 101

(7) Abstract: For the period of October 1, 1991 and September 4, 1992 this paper surveys United States patent legislation, changes in the rules of patent practice, and published decisions of the Court of Appeals for the Federal Circuit.

CHANGES IN UNITED STATES PATENT PRACTICE SINCE OCTOBER, 1991

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September 4, 1992

There have been a number of important changes in United States patent practice since October, 1992. Important changes have been made in both case law and in matters concerning Patent and Trademark Office (PTO) matters.

UNITED STATES PATENT AND TRADEMARK OFFICE MATTERS

Effective March 16, 1992, the PTO implemented its much anticipated and well debated changes to Rule 56. The PTO amended the rules of practice in patent cases to 1) clarify the duty of disclosure for information required to be submitted to the office; 2) provide flexible time limits for submitting information disclosure statements, including the requirement for a fee in certain cases; 3) eliminate consideration of duty of disclosure issues by the office except in disciplinary and

interference proceedings and under other limited circumstances; and 4) eliminate the striking of patent applications which are improperly executed.

The PTO further amended the PTO Code of Professional Responsibility to define as misconduct a failure to comply with the rules on duty of disclosure. The rules as adopted strike a balance between the need of the PTO to obtain and consider all known relevant information pertaining to patentability before a patent is granted and the desire to avoid or minimize unnecessary complications in the enforcement of patents.

Regarding the duty of disclosure, 37 CFR 1.56 (also known as "Rule 56") has been clarified to indicate that the duty of an individual to disclose information is based on the knowledge of that individual that the information is material to patentability. Section 1.56(a) has been amended to indicate that if all information material to the patentability of any claim issued in a patent is cited by the Office or submitted to the Office in the manner prescribed by the Information Disclosure Rules, 37 CFR 1.97(b)-(d) and 1.98, the Office will consider as satisfied the duty to disclose to the Office all information known to be material to patentability, as contrasted to the broader duty of candor and good faith. Thus, the duty will not be violated simply because the examiner cites a reference before it is submitted by the applicant. Section 1.56(b) has been amended to make it clear that information is not material to patentability if it is cumulative to either information already of record or contemporaneously being made of record by applicant.

Regarding the duty of disclosure, I have attached hereto as Appendix A, "Guidelines" and a "Worksheet" which codify the rule changes concerning the duty of disclosure and which our office at Caterpillar developed and uses since the rule changes became effective. Please feel free to use it as you see fit and I would be interested in any comments or suggestions you may have after studying it or implementing it on how we might better use it in our office to make our compliance with the duty of disclosure easier or more proper.

Continuing on to the next matter, one of the most interesting and controversial issues of the past year was the release of a position paper by the PTO in which it stated its position that the last clause of 35 USC 112 is not applicable in determining patentability/validity. The last paragraph of Section 112 reads as follows:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claims shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

In a lengthy and detailed statement issued December 13, 1991, the PTO stated that the "scope of a 'means' clause in a claim undergoing a patentability determination is a function of (I) whether Section 112's last clause ("and such claims shall be construed to cover...") applies and (II) if so, how. It is the position of the PTO that the clause does not apply."

The PTO's position is in conflict with at least two Federal Circuit decisions: In re Iwahashi, 888 F.2d 1370, 12 USPQ2d 1908 (Fed. Cir. 1989); and In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). The Court of Appeals' position, as stated in In re Bond, is that "while a 'means-plus-function' limitation may appear to include all means capable of achieving the desired function, the statute requires that it be 'construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof'". In other words, a claim should not be rejected as being overly broad simply because the means-plus-function clause is broad enough to cover prior art, so long as the exemplary structure, material, or acts described in the specification and equivalents thereof are not disclosed in the prior art. In refusing to apply the last clause of paragraph 6 of Section 112, the PTO has taken the position that limitations in the specification not included in the claim may not be relied upon to impart patentability to an otherwise unpatentable claim.

A number of scholarly commentaries have analyzed the conflict between the PTO and the Federal Circuit over Section 112, however, none have been able to explain away or resolve the conflict. Legislative change may ultimately be in order.

On September 4, 1992, new rules for recording Patent and Trademark assignments became effective. These rules were mentioned last year by John Sinnott, but at that time had only been published for comment. As enacted, they contain a few slight changes from the proposed rules. Prior to these new rules, it had been customary, but not obligatory to

submit a "cover letter" to the Patent and Trademark Office when submitting assignment documents for recording. These "cover letters" or "cover sheets" are now obligatory. The "cover letter" must refer to the patent applications, patents, trademark applications and trademark registrations against which the document is to be recorded. Separate sheets must be submitted for patents and trademarks. These sheets must contain:

1) the name of the party conveying the interest;
2) the name and address of the party receiving the interest;
3) a description of the interest conveyed or transaction to be recorded;
4) each application number, patent number or registration number against which the document is to be recorded, or an indication that the document is filed together with a patent application;
5) the name and address of the party to whom correspondence concerning the request to record the document should be mailed;
6) the number of applications, patents or registrations identified in the cover sheet and the total fee;
7) the date the document was executed;
8) an indication that the assignee of a trademark application or registration who is not domiciled in the United States has designated a domestic representative;

9) a statement by the party submitting the document that to the best of the person's knowledge and belief, the information contained on the cover sheet is true and correct and any copies submitted are a true copy of the original document; and

10) the signature of the party submitting the document.

Sample cover sheets for patents and trademarks are reproduced as Appendix B and C hereto.

Lastly, on October 24, 1991 the PTO announced that fraud and inequitable conduct issues will be considered when properly raised inter partes in patent interference cases. The notice reversed a decision made three years ago, but leaves intact the policy of refusing to consider fraud and inequitable conduct at the ex parte examination stage.

JUDICIAL DECISIONS

As always, the Court of Appeals for the Federal Circuit (CAFC) has been active over the past year.

In A. C. Aukerman Co. vs R. L. Chaides Construction Co., 22 USPQ 2d 1321 (Fed. Cir. 1992), an en banc panel of the CAFC agreed that a plaintiff's delay of six years in filing suit after learning that its patent was infringed can create a presumption of latches to bar the infringement claim. The court set out in extensive detail the rules on latches, equitable estoppel, and presumptions. However, the court went on to adopt the so called "bursting bubble" theory, whereby in response to a

motion for summary judgement, a plaintiff can overcome the presumption of latches merely by presenting evidence that creates a genuine issue with respect to any presumed fact. The court stated that elimination of the presumption does not mean elimination of the latches defense, but merely that the facts on delay and prejudice must be proved and judged in the context of the totality of the evidence.

In London vs Carson Pirie Scott & Co., 946 F.2d 1534, 20 USPQ 1456 (Fed. Cir. 1991), the CAFC remembered what it, along with many other courts and practitioners, had seemed to have forgotten, namely that the doctrine of equivalents in an infringement action is the exception, not the rule. The CAFC explained that if the public comes to believe that the language of patent claims can never be relied on, then claims will cease to serve their intended purpose.

A highly controversial case is Morton International, Inc. vs Cardinal Chemical Co., 959 F.2d 948, 22 USPQ2d 1231 (Fed. Cir. 1992). The CAFC followed what has essentially turned into its own per se rule of vacating declaratory judgements of invalidity upon a determination of non-infringement. The plaintiff, Morton International, Inc. has pursued three patent infringement actions on its two patents. In the first case, the Federal Circuit affirmed a non-infringement finding and vacated the District Court's judgement of invalidity. In the present action, the second to be tried, the Federal Circuit again affirmed a non-infringement finding and vacated the judgement of invalidity. In a third case, presently being stayed, Morton is again asserting its twice-resurrected patents.

The Federal Circuit's refusal to consider the issues of invalidity upon a finding of non-infringement has allowed Morton to repeatedly sue on patents which have twice been found to be invalid by District Courts. Cardinal Chemical Co. has filed an appeal with the Supreme Court of the United States and is being joined by Amicus Brief by the American Intellectual Property Law Association, if not others. The issue presented is whether after an accused patent infringer has obtained from the District Court a declaratory judgement that the asserted patent is invalid, may the Federal Circuit vacate that declaration as moot solely because it has determined that the patent has not been infringed?

The public policy issue has been succinctly stated by Professor Borchard:

> Having been forced into court by the patentee who necessarily relied on the validity of his patent, {the accused infringer} ought to be permitted to obtain an adjudication on the fundamental issue of validity--important for his present and any other products which approximate the patented device--and not be confined compulsorily and exclusively to the narrow question whether his present product infringes, regardless of his desire and demand that the patent be held invalid.

E. Borchard, Declaratory Judgements 2d Ed. (1941) pp. 802-804.

Lastly, in Arrhythmia Research Technology Inc. v. Coranzonix Corp., 22 USPQ 2d 1033 (Fed. Cir. 1992), the CAFC held that the use of mathematical formula or relationships to describe the electronic structure and operation of an apparatus does not make the claim nonstatutory under 35 USC 101, nor does the fact that the claimed functions could not have been performed effectively without the speed and capability of electronic devices and components, nor does the fact that the final output of the claimed apparatus was numerical. The fundamental question to be resolved is whether the claims are directed to a specific apparatus of practical utility and specified application. The PTO's adherence to this case is, at the least, not clear.

Thank you.

w:\wb\paper

March 3, 1992

APPENDIX A

* GUIDELINES * INFORMATION DISCLOSURE STATEMENT (IDS)

I. In order to satisfy the duty to disclose all information material to the patentability of the claim(s) and to have such information considered by the PTO, an IDS must be filed.

II. An IDS will be considered by the PTO, if filed:

A. with initial filing (our preferred practice is to file the IDS at this time)

-or-

1. within three months of the national filing date

-or-

2. within three months of entry into the national stage under PCT; (our preferred practice is to file the IDS when we enter the national stage)

-or-

3. before the mailing date of a first U. S. Office Action on the merits

(whichever occurs last)

B. subsequent to the initial filing periods specified in II-A but before the mailing date of either:

1. a final action under § 1.113;

-or-

2. a notice of allowance under § 1.311

* REQUIREMENTS *

a) certification indicating that submission is within three months from the date of knowledge and whether it was from a foreign counterpart application;

-or-

b) fee set forth in § 1.17(p)

C. after the mailing date of either;

1. a final action under § 1.113;

-or-

2. a notice of allowance under § 1.311 - but before payment of issue fee;

* REQUIREMENTS *

a) certification indicating that submission is within three months from the date of knowledge and whether it was from a foreign counterpart application;

-and-

b) petition requesting consideration of IDS;

-and-

c) petition fee set forth in § 1.17(i)(1)

III. No extension of time under § 1.136 is permitted for filing an IDS

IV For submission of references when not permitted under II A-C above

A. submit IDS by filing a continuing application if issue fee has not been paid

B. if issue fee has been paid, first withdraw application from issue under § 1.313(b) then submit IDS by filing a continuing application

1. petition to withdraw should be directed to the Office of Petition
2. if a patent number has been assigned, it is preferrable that the "Petition to Withdraw" be hand carried to the Office of Petition

C. if a patent has issued, then a reexamination or possibly a reissue must be filed

V. Information Disclosure Statement (IDS)

A. general requirements include

1. a listing of all information (items) submitted for consideration by the PTO by using one or both of the following
   a) form "PTO 1449"
   b) form "Information of Record in a Parent Application"
2. a legible copy of all items being submitted, except for
   a) items already of record in the subject case or in a properly identified prior application(s) relied upon for an earlier filing date
   b) any item(s) that is(are) cumulative to another item being submitted or already of record and a statement is made that such item(s) is(are) cumulative
   c) U.S. patent applications
3. a concise explanation of the relevance of any non-English language items (include translation if readily available) except those noted in a foreign search report
   NOTE: a concise statement of English language items is optional

VI. All continuing applications must include an IDS having a listing of all the items that are of record in a properly identified prior application(s) relied upon for an earlier filing date. (Use the new "Worksheet" and the new form entitled "Information of Record in a Parent Application")

VII. Definition of "material to patentability" as defined and used in new rule 1.56

A. information is material to patentability when it is not cumulative information and it establishes a prima facie case of unpatentability of a claim

B. a prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable;

1. under the preponderance of evidence, burden-of-proof standard
2. giving each term of the claim the broadest interpretation possible in view of the specification, and
3. before any consideration is given to evidence which may be submitted to establish patentability

March 3, 1992

* WORKSHEET *

INFORMATION DISCLOSURE STATEMENT

Sir:

The following information is submitted for the Examiner's consideration relative to one or more of the claims in the above identified application. (1) (2) (3(4)) (5)
§ (6 or 7)
§ (8 or 9)
§ (10)

Respectfully submitted,

(Select one or more of the variables below, as needed, for insertion above in the correspondingly numbered location)

VARIABLES

☐ 1. A copy of a foreign search report is included to explain the relevance of the non-English citation(s) cited therein.

☐ 2. The disclosure(s) of the reference(s) _____ is (are) substantively cumulative to the reference _____ .

☐ 3. A PTO 1449 form and a copy, if required, of each item listed thereon are attached (4).

☐ 4. if not already of record in the subject application

☐ 5. A concise explanation of the relevance of each non-English language item, not cited in a foreign search report, is noted below.

☐ 6. The undersigned certifies that each item of information listed on the attached PTO 1449 was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing date of this statement.

☐ 7. The undersigned certifies that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after having made a reasonable inquiry, was known to any individual having a duty to disclose more than three months prior to the filing date of this statement.

March 3, 1992

☐ 8. The Commissioner is hereby authorized to charge the fee set forth in 37 CFR § 1.17(p) to Deposit Account No. 03-1129. A duplicate copy of this sheet is enclosed.

☐ 9. The undersigned hereby petitions the Commissioner to consider, under 37 CFR § 1.97(d), this information disclosure statement. The Commissioner is hereby authorized to charge the fee set forth in 37 CFR § 1.17(i)(1) to Deposit Account No. 03-1129. A duplicate copy of this sheet is enclosed.

☐ 10. It is noted that the invention claimed in this application was (-sold- or -publically dispalyed- or -publically used-) on (date). However, it is submitted that the (-sale- or -public display- or -public use-) cannot be considered prior art since that act was after the date of the invention claimed in this application and was within the one year grace period permitted under 35 USC § 102(b).

INFORMATION OF RECORD IN PARENT APPLICATION

APPLICATION NO: FILING DATE:

APPLICANT: SHEET ___ OF ___

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)–(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

7. Section 1.63, paragraphs (b)(3) and (d) are revised to read as follows:

§ 1.63 Oath or declaration.

* * * * *

(b) * * *

(3) Acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in § 1.56.

* * * * *

(d) In any continuation-in-part application filed under the conditions specified in 35 U.S.C. 120 which discloses and claims subject matter in addition to that disclosed in the prior copending application, the oath or declaration must also state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in § 1.56, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

8. Section 1.67 is amended by adding a new paragraph (c) to read as follows:

§ 1.67 Supplemental oath or declarati

* * * * *

(c) A supplemental oath or declara meeting the requirements of § 1.63 m also be filed if the application was altered after the oath or declaration signed or if the oath or declaration v signed:

(1) In blank;

(2) Without review thereof by the person making the oath or declaratic or

(3) Without review of the specification, including the claims, a required by § 1.63(b)(1).

9. Section 1.97 is revised to read a follows:

§ 1.97 Filing of information disclosure statement.

(a) In order to have information considered by the Office during the pendency of a patent application, an information disclosure statement in compliance with § 1.98 should be file accordance with this section.

(b) An information disclosure statement shall be considered by the Office if filed:

(1) Within three months of the filir date of a national application;

(2) Within three months of the dat entry of the national stage as set for: § 1.491 in an international applicatio or

(3) Before the mailing date of a firs Office action on the merits,

whichever event occurs last.

(c) An information disclosure statement shall be considered by the Office if filed after the period specifi in paragraph (b) of this section, but before the mailing date of either:

(1) A final action under § 1.113 or

(2) A notice of allowance under § 1.311,

whichever occurs first, provided the statement is accompanied by either a certification as specified in paragrap (3) of this section or the fee set forth § 1.17(p).

(d) An information disclosure statement shall be considered by the Office if filed after the mailing date o either:

(1) A final action under § 1.113 or

(2) A notice of allowance under § 1.311,

whichever occurs first, but before payment of the issue fee, provided th statement is accompanied by:

(i) A certification as specified in paragraph (e) of this section, and

(ii) A petition requesting consideration of the information disclosure statement, and

(iii) The petition fee set forth in § 1.17(i)(1).

(e) A certification under this section must state either:

(1) That each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the statement, or

(2) That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in § 1.56(c) more than three months prior to the filing of the statement.

(f) No extensions of time for filing an information disclosure statement are permitted under § 1.136. If a bona fide attempt is made to comply with § 1.98, but part of the required content is inadvertently omitted, additional time may be given to enable full compliance.

(g) An information disclosure statement filed in accordance with this section shall not be construed as a representation that a search has been made.

(h) The filing of an information disclosure statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b).

(i) Information disclosure statements, filed before the grant of a patent, which do not comply with this section and § 1.98 will be placed in the file, but will not be considered by the Office.

10. Section 1.98 is revised to read as follows:

§ 1.98 Content of information disclosure statement.

(a) Any information disclosure statement filed under § 1.97 shall include:

(1) A list of all patents, publications, or other information submitted for consideration by the Office;

(2) A legible copy of:

(i) Each U.S. and foreign patent;

(ii) Each publication or that portion which caused it to be listed; and

(iii) All other information or that portion which caused it to be listed, except that no copy of a U.S. patent application need be included; and

(3) A concise explanation of the relevance, as it is presently understood by the individual designated in § 1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language. The concise explanation may be either separate from the specification or incorporated therein.

(b) Each U.S. patent listed in an information disclosure statement shall be identified by patentee, patent number and issue date. Each foreign patent or published foreign patent application shall be identified by the country or patent office which issued the patent or published the application, an appropriate document number, and the publication date indicated on the patent or published application. Each publication shall be identified by author (if any), title, relevant pages of the publication, date and place of publication.

(c) When the disclosures of two or more patents or publications listed in an information disclosure statement are substantively cumulative, a copy of one of the patents or publications may be submitted without copies of the other patents or publications provided that a statement is made that these other patents or publications are cumulative. If a written English-language translation of a non-English language document, or portion thereof, is within the possession, custody or control of, or is readily available to any individual designated in § 1.56(c), a copy of the translation shall accompany the statement.

(d) A copy of any patent, publication or other information listed in an information disclosure statement is not required to be provided if it was previously cited by or submitted to the Office in a prior application, provided that the prior application is properly identified in the statement and relied upon for an earlier filing date under 35 U.S.C. 120.

§ 1.99 [Removed]

11. Section 1.99 is removed and reserved.

12. Section 1.175, paragraph (a)(7), is revised to read as follows:

§ 1.175 Reissue oath or declaration.

(a) * * *

(7) Acknowledging the duty to disclose to the Office all information known to applicants to be material to patentability as defined in § 1.56.

* * * * *

§ 1.193 [Amended]

13. Section 1.193(c) is removed and reserved.

14. Section 1.291, paragraphs (a) and (c), are revised to read as follows:

§ 1.291 Protests by the public against pending applications.

(a) Protests by a member of the public against pending applications will be referred to the examiner having charge of the subject matter involved. A protest specifically identifying the application to which the protest is directed will be entered in the application file if:

(1) The protest is timely submitted; and

(2) The protest is either served upon the applicant in accordance with § 1.248, or filed with the Office in duplicate in the event service is not possible.

Protests raising fraud or other inequitable conduct issues will be entered in the application file, generally without comment on those issues. Protests which do not adequately identify a pending patent application will be disposed of and will not be considered by the Office.

* * * * *

(c) A member of the public filing a protest in an application under paragraph (a) of this section will not receive any communications from the Office relating to the protest, other than the return of a self-addressed postcard which the member of the public may include with the protest in order to receive an acknowledgment by the Office that the protest has been received. The Office may communicate with the applicant regarding any protest and may require the applicant to respond to specific questions raised by the protest. In the absence of a request by the Office, an applicant has no duty to, and need not, respond to a protest. The limited involvement of the member of the public filing a protest pursuant to paragraph (a) of this section ends with the filing of the protest, and no further submission on behalf of the protestor will be considered unless such submission raises new issues which could not have been earlier presented.

15. Section 1.313, paragraph (b), is revised to read as follows:

§ 1.313 Withdrawal from issue.

* * * * *

(b) When the issue fee has been paid, the application will not be withdrawn from issue for any reason except:

(1) A 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;

(4) For interference; or

(5) For abandonment to permit consideration of an information disclosure statement under § 1.97 in a continuing application.

18. Section 1.555 is revised to read as follows:

§ 1.555 Information material to patentability in reexamination proceedings.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective reexamination occurs when, at the time a reexamination proceeding is being conducted, the Office is aware of and evaluates the teachings of all information material to patentability in a reexamination proceeding. Each individual associated with the patent owner in a reexamination proceeding has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability in a reexamination proceeding. The individuals who have a duty to disclose to the Office all information known to them to be material to patentability in a reexamination proceeding are the patent owner, each attorney or agent who represents the patent owner, and every other individual who is substantively involved on behalf of the patent owner in a reexamination proceeding. The duty to disclose the information exists with respect to each claim pending in the reexamination proceeding until the claim is cancelled. Information material to the patentability of a cancelled claim need not be submitted if the information is not material to patentability of any claim remaining under consideration in the reexamination proceeding. The duty to disclose all information known to be material to patentability in a reexamination proceeding is deemed to be satisfied if all information known to be material to patentability of any claim in the patent after issuance of the reexamination certificate was cited by the Office or submitted to the Office in an information disclosure statement. However, the duties of candor, good faith, and disclosure have not been complied with if any fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct by, or on behalf of, the patent owner in the reexamination proceeding. Any information disclosure statement must be filed with the items listed in § 1.98(a) as applied to individuals associated with the patent owner in a reexamination proceeding, and should be filed within two months of the date of the order for reexamination, or as soon thereafter as possible.

(b) Under this section, information is material to patentability in a reexamination proceeding when it is not cumulative to information of record or being made of record in the reexamination proceeding, and

(1) It is a patent or printed publication that establishes, by itself or in combination with other patents or printed publications, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the patent owner takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability of a claim pending in a reexamination proceeding is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) The responsibility for compliance with this section rests upon the individuals designated in paragraph (a) of this section and no evaluation will be made by the Office in the reexamination proceeding as to compliance with this section. If questions of compliance with this section are discovered during a reexamination proceeding, they will be noted as unresolved questions in accordance with § 1.552(c).

PART 10—REPRESENTATION OF OTHERS BEFORE THE PATENT AND TRADEMARK OFFICE

17. The authority citation for part 10 continues to read as follows:

Authority: 5 U.S.C. 500; 15 U.S.C. 1123; 35 U.S.C. 6, 31, 32, 41.

18. Section 10.23, paragraphs (c)(10) and (c)(11) are revised to read as follows:

§ 10.23 Misconduct.

* * * * *

(c) * * *

(10) Knowingly violating or causing to be violated the requirements of § 1.56 or § 1.555 of this subchapter.

(11) Knowingly filing or causing to be filed an application containing any material alteration made in the application papers after the signing of the accompanying oath or declaration without identifying the alteration at the time of filing the application papers.

Dated: January 9, 1992.

Harry F. Manbeck, Jr.,

Assistant Secretary and Commissioner of Patents and Trademarks.

[FR Doc. 91-1064 Filed 1-16-92; 8:45 am]

BILLING CODE 3510-16-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 228

[FRL-4094-7]

Ocean Dumping; Designation of Site Brazos Island Harbor, TX

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA today designates a dredged material disposal site located in the Gulf of Mexico offshore of Port Isabel, Texas for the one time disposal of construction material dredged from the enlargement of the Brazos Island Harbor Entrance Channel. This action is necessary to provide an acceptable ocean dumping site for the disposal of material from the Army Corps of Engineers 42-Foot Project at Brazos Island Harbor. This final site designation is for an indefinite period of time but the site is subject to monitoring to insure that unacceptable adverse environmental impacts do not occur.

EFFECTIVE DATES: This designation shall become effective February 18, 1992.

ADDRESSES: Norm Thomas, Chief, Federal Activities Branch (6E-F), U.S. EPA, 1445 Ross Avenue, Dallas, Texas 75202-2733.

The file supporting this designation and the letters of comment are available for public inspection at the following locations: EPA, Region 6, 1445 Ross Avenue, 9th Floor, Dallas, Texas, and Corps of Engineers, Galveston District, 444 Baracuda Avenue, Galveston, Texas.

FOR FURTHER INFORMATION CONTACT: Norm Thomas 214/655-2260 or FTS 255-2260.

SUPPLEMENTARY INFORMATION:

A. Background

Section 102(c) of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 33 U.S.C. 1401 *et seq.* ("the Act"), gives the Administrator of EPA the authority to designate sites where ocean dumping may be permitted. On December 23, 1986, the Administrator delegated the authority to designate ocean dumping sites to the Regional Administrator of

FORM PTO-1595
1-31-92

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B. Patent No.(s)

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☐ Individual(s) citizenship _____
☐ Association _____
☐ General Partnership _____
☐ Limited Partnership _____
☐ Corporation-State _____
☐ Other _____

If assignee is not domiciled in the United States, a domestic representative designation is attached: ☐ Yes ☐ No
(Designation must be a separate document from Assignment)
Additional name(s) & address(es) attached? ☐ Yes ☐ No

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☐ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date: _____

4. Application number(s) or registration number(s):

A. Trademark Application No.(s)

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(1) Title; Policy and Management of Filing Patent Application for Multiple Related Inventions

(2) Date: October 1992 (The 23rd Convention in Okayama)

(3) Source

1. Source: PIPA
2. Group; JAPAN
3. Committee; 1

(4) Authors:

Kazumi Ohkawa	Teijin Limited
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(5) Key Words: "Improved System of Multiple Claims", "National Priority Institution", "Related Inventions", "Patent Management"

(6) Statutory Provisions: Japanese Patent Law Sections 36, 37, 42-2, 42-3

(7) Abstract:

This document reports on the patent management within a corporation as well as how the system of multiple claims and the national priority institution are utilized at the time of patent application for mutually related multiple inventions.

We have arranged various points required for patent management by classifying them according to each particular time period including the time of notification by an inventor, the time of preparation for patent application, the time before one year has lapsed after an application is filed, etc., while putting in order how to utilize the related systems and institutions. In addition, the policy and the conditions of utilizing various systems and institutions as well as the actual patent management situation are presented here in a unified manner through the gathering of information from corporations by the questionnaire method and looking into the Publication of Patent Application.

Table of Contents

1. Introduction

2. Points on Management of Filing Patent Applications for Related Inventions and Forms of Patent Applications

3. Management Policy and Actual Utilization Situation

4. Conclusion

1. Introduction

In Japan, regarding the patent application for multiple related inventions, the scope of the claim to be declared in a single patent application was expanded in 1988 by a substantial amendment to the law (to be called the "Improved System of Multiple Claims"). Similarly, there was a reform in the system/institution implemented by the amendment of the law in 1985. This led to the establishment of the National Priority Institution effecting the argument that the patent application claiming the priority right shall be granted for a period not exceeding one year from the date of the original patent application in Japan.

We tried presenting the features of the above system/ institution in a unified manner and examining the policy, management organization and management/utilization vis-a-vis how each corporation is going to manage the related inventions.

Further, we have recently conducted a survey to analyze the actual situation on utilizing the above systems/institutions.

We wish to introduce the above results to PIPA members. We hope that the above results will contribute to the further improvement in patent management at each corporation in the future.

We examined how to manage the related inventions through looking into management and the patent application techniques at each particular time according to the classification by different periods of time including the time of proposing the invention, the time of patent application for the invention, the time before one year has lapsed after an application is filed, etc. In the meantime, the survey on the actual situation was conducted by addressing a questionnaire to the PIPA member corporations and analyzing the patent applications sampled according to the respective technological field.

2. Points on Administration of Applications of Related Invention and Application Modes

This item describes points on patent administration regarding Multiple Claim System (accurately called as Improved Multiple Claim System) and National Priority Institution in Japan to inclusively obtain patents of related inventions which have been proposed by the inventors coincidently or with time lapse, and modes of application for effectively utilizing these systems.

2-1. Comparison of Systems between Japan and the United States

As an introduction of this item, a summary of the legislation of Japan will be described by briefly comparing inclusive protection institutions for related inventions between Japan and United States.

(1) Unity of Invention

[Japan]

1) Plural claims having the substantially same subject matter are permissible at all times.

EX: Claims of "apparatus B for producing material A" and "method for producing material A using apparatus B"

2) Plural claims having different subject matters are permissible insofar as they are in compliance with the provision of Article 37 (see note). The scope of Unity of Invention provided in Article 37 is evaluated as being identical to or broader than scope of Unity of Invention provided in Rule 13 of PCT.

3) The style of description of claims (independent style, dependent style and Markush style) is not relied on the judgment as to whether the subject matter of the invention is identical or different.

4) Non-compliance with the requirement of Unity of Invention is a ground for rejection, but is not a ground for Opposition to granted claims or Invalidity of patent. The former ground for rejection can be overcome by the amendment of deleting claims of the invention which does not comply with the requirement of Unity of Invention or by filing a divisional application.

[the United States]

1) An application claiming two or more independent and distinct inventions shall be subjected to a Restriction Requirement.

2) At least the categories of inventions as set forth in 37 CFR 1.141 comply with the requirement of Unity of Invention.

3) An application which does not comply with the requirement of Unity of Invention shall be subjected to a Restriction Requirement. However, the Restriction Requirement can be overcome by amending claims or filing a divisional application. Even if the Restriction Requirement has not been made in the proceedings, a patent shall not be invalidated on the basis of the non-requirement of Restriction.

(Note) The scope of Unity of Invention mainly covers the following matters.

i) Inventions having the same field to be applied and the same problem to be overcome

ii) Inventions having the same field to be applied and the same main construction

iii) Product, and Method for producing the Product or Apparatus for producing the Product

iv) Product and Manner of using the Product

v) Method and Apparatus of implementing the Method

(2) National Priority Institution of Japan and CIP System of the United States

[National Priority Institution]

1) Complete Identity of Applicant is required between a prior application and an application claiming an national priority right to the prior application.

2) The application claiming the national priority right is required to be filed within one year from the filing date on which the prior application pending in the proceedings was filed, and the priority right of an invention whose priority right has been already claimed is inhibited from being further claimed.

3) An invention whose priority right has been permitted shall be examined under the condition that the invention was filed on the filing date of the prior application.

[CIP System]

1) Identity of Inventorship is required between a prior application and a CIP application therefor.

2) No restriction is imposed on the filing term and filing number of the CIP application insofar as the prior application is pending in the proceedings.

3) An invention which is newly added to the prior application in a CIP application proceeding shall be

regarded as being filed on the filing data of the CIP application.

[Comparison between both systems]

Both of the National Priority Institution and the CIP System serve as means for supplementing a prior application with a related invention or a supplemental embodiment which has been implemented after the prior application was filed. However, both of the systems are mainly different in the following points. That is, the national priority right in the National Priority Institution has substantially the same content as the priority right of Paris Convention, and thus the term of claim for the priority right and the number thereof are restricted. On the other hand, the CIP System has a possibility that a CIP application could be filed at all times and at any number. In addition, the identity of applicant is required for an application claiming an national priority right while the identity of inventorship is required for a CIP application.

(3) Others

[Fees]

In Japan, an independent claim and a dependent claim are charged at the same rate. A filing fee is fixed to a constant one irrespective of the number of claims. However, each of a substantive examination fee and an annual fee for maintaining a patent in force is the total fee of a basic fee and a surcharge which is proportional to the number of claims. Therefore, an applicant in Japan tends to reduce the number of claims.

In the United States, an independent claim and a dependent claim are charged at different rates. A filing fee and an issuing fee are not necessarily proportional to the number of claims, so that it is best to prepare independent and dependent claims as many as possible to the extent that both fees for the claims are unvaried.

2-2. Points on Patent Administration of Applications for Related Inventions

This item considers the points on patent administration for effectively utilizing Multiple Claim System and National Priority Institution serving as Protection System for related inventions.

For utilization of Multiple Claim System and National Priority Institution, there are various points on patent administration as to how to induce or supplement new inventions or embodiments relevant to a proposed invention (invention concerned), how to estimate technical and patent values of these inventions and embodiments and what role should be played by staffs in patent and invention-development departments, etc.

These points will be hereunder described mainly with "Administration Matrix for Multiple Claim System and National Priority Institution".

(1) Way of viewing Administration Matrix of Multiple Claim System and National Priority Institution

The ordinate of this matrix represents a patent administration process from a creating step of an invention till an administration step of a patent, and this process is divided into eight steps. On the abscissa of this matrix, a theme for the patent administration which would be considered as most important one for each step on the ordinate is provided to each step, and subsequently a point on an administration system for the theme and a point on the content are successively considered.

A point of view for the patent administration theme of each step will be described hereunder.

1) <u>Creation and Proposal of Invention:</u>

It should be considered to obtain a patent which has been strengthened by inducing related inventions or supplementing embodiments supporting the claims for the proposal of the invention concerned so that the patent can be effectively protected from infringement by

another party.

2) Relationship between the invention concerned and the related inventions:
A system for avoiding self-collision between applications by the same company should be reviewed by checking the relationship between the invention concerned and a related invention which has been proposed or filed.

3) Consideration of inclusive application
An internal basic policy of a company regarding staffs for review, matters to be reviewed, standard for judgment, etc. should be considered.

4) Proposal for addition of a related invention after the filing of an application for the invention concerned (within one year after the filing of the application):
An application which is required to be filed should be considered on the basis of the difference in content and type between the invention concerned and the related invention.

5) Proposal for addition of a related invention after the filing of an application for the invention concerned (over one year after the filing of the application):
In this case, an application must be filed without priority right, and the application may be rejected by self-collision. Therefore, a countermeasure for avoiding the self-collision should be considered.

6) Application with Convention Priority Right:
A point on administration for an application with a priority right based on Paris Convention should be considered.

7) Response to Rejection/Opposition:

A response to rejection/opposition, which is matched with the multiple claim system, that is, a response to rejection/opposition in consideration of the difference in worth and necessity between respective claims should be considered.

8) Patent Administration (Annual Fee):

It is considered what factor should be mainly considered to maintain and use multiple claims.

(2) **Summary**

The final object of inclusively filing applications for related inventions is to obtain a broad and strong patent which is practically effective in the market.

In order to achieve this object, it is first important to assist inventors to have a general knowledge of the Multiple Claim System and the National Priority Institution and to recognize the necessity of development of inventions related to the proposed invention and the supplement of new embodiments.

Next, it is required as a role of patent departments that the relationship between the proposed invention and another invention which has not been filed yet or has been filed is checked through data base for proposed inventions and filed inventions to effectively achieve the inclusive applications. This is also effective means of avoiding the self-collision.

In addition, after an application with multiple claims is filed, it is preferable to administrate the application and the patent right thereof by each claim.

Administration Matrix for Multiple Claim System and National Priority Institution

	Theme on patent administration	Points on patent administration	
		Points on administration system	Points on content
Creation and proposal (notification) of invention	Induction of related inventions and supplement of embodiments.	* Enforcement of educational program of multiple claim system for inventors. * Foundation of examining department for supplement of embodiments and development or induction of related inventions.	Manner for induction of related inventions and supplement of embodiments * From invention of "material," producing method therefor, compositions thereof, etc. are developed. * From invention of "apparatus," parts thereof, materials for parts, etc. are developed. * Supplement of embodiments of representative mode and embodiments of critical numerical values.
Application administration			
Relationship between invention concerned and related inventions	Check of relationship between invention concerned and related inventions (applications which have been filed and have not been filed yet).	Establishment of check system for related inventions * Foundation of department for checking related inventions. * Construction of data base for internal proposal and applications for related inventions. * Return system of inventions which have been proposed or filed by same company.	Relation mode between inventions * Overlap relation, relation of superordinate/subordinate concepts, relation of numerical value limitation, etc. * Combination relation: Relation matched with unity of invention. * Utilization relation: Relation between part and device indispensably requiring the part
Consideration of inclusive application	Utilization of multiple claim system (determination of internal basic policy of company).	Specification of staffs for examining department for inclusive application and functions thereof 1. Research and development department: Technical matters relevant to invention, forecast of business development 2. Patent department: Consideration of application strategy and administration factor 3. Person (agent) in charge of application: Consideration of policy for specification and claim	Consideration of selection of inclusive application or separate application * For inventions in compliance with unity of invention, inclusive application is selected. * When there is possibility of self-collision, inclusive application is selected. * When inventions are different in enforcing field or licensee, separate application is selected.
Proposal for addition of related inventions after filing of invention concerned (before lapse of one year)	Consideration of national priority application.	* Return system of improved inventions and improved embodiments after filing to patent department. * Parallel proceedings of national priority application and convention priority application.	Supplement modes of inventions, embodiment modes and embodiments 1. Parallel-related invention supplement type 2. Subordinate concept invention supplement type 3. Article 37 complying invention supplement type Whether proposed content to be added is a new matter or not → Amendment or national priority application is selected.
Proposal for addition of related inventions after filing of invention concerned (after lapse of one year)	Avoidance of self collision.	Foundation of self-collision examining department * Search for related inventions which have been filed by same company. * Consideration of claims which are avoidable from self-collision.	Points to which attention should be paid to avoid self-collision 1. The invention was included literally in claim of prior application → Claim of prior application is partially narrowed 2. The idea was described in prior application before Laid-Open → Coincidence of applicant or inventor 3. The idea was described in prior application after Laid-Open → Alteration of content of invention
Convention priority application	Practical use of application with plural priorities/partial priority.	Function of examining department with department in charge of foreign matters at center thereof * Existence or nonexistence of other National priority applications to be filed with plural priorities * Consideration of CIP application.	Matching to unity of application and fee system for multiple claims in filed country.
Response to rejection/opposition	Response matched with multiple claim system.	Hearing system for opinion of invention enforcing department and license department	Cancel of undesired claims through amendment or divisional application.
Administration of patent right (administration for patent right maintenance)	Individual right administration for each claim.	Specification of staffs for examining necessity of payment of patent annual fee and function thereof * Invention department in accordance with each claim: Investigation of enforcement status every claim * License department: investigation of license continuation status * Patent Administration Department: Cost/merit judgment	* Judgment standard for payment of patent annual fee should be more strict year by year because of raising of annual fee. * Useless claims should be successively abandoned.

2-3. Utilization Mode for Multiple Claim System and National Priority Institution

The Multiple Claim System is usable in a case where plural inventions which are related to one another have been coincidently made. On the other hand, the National Priority Institution is usable in a case where plural inventions which are related to one another have been made with time lapse (under the condition that these inventions have been made within one year). Here, it is an important matter that plural applications which have been proposed within one year before can be classified and integrated into a single claim system by practically using both of Multiple Claim System and National Priority Institution in combination.

Utilization modes which are matched with both of Multiple Claim System and National Priority Institution will be hereunder introduced with "Matrix for Utilization Mode of Multiple Claim System/National Priority Institutions" of another table being centered.

(1) Way of viewing "Matrix for Utilization Mode of Multiple Claim System/National Priority Institutions"

For inventions which are substantially identical to each other, but different in expression, point of view, etc., the abscissa of the matrix represents the relationship which is in compliance with Article 36, and divided into two sections, one section where one invention is made by Internal Addition of an element to another and the other section where the inventions are substantially identical to one another, but categories thereof are different. On the other hand, for inventions which are technically closely related to one another, the abscissa of the matrix represents the relationship which is in compliance with Article 37, and divided into three sections, one section where one invention is made by External Addition of an element to another, another section where the inventions are in combination/subcombination relationship and the other section where the inventions have different elements.

Here, the five sections of the abscissa will be hereunder

described in detail.

1) Internal Addition of Element:

[A + B] represents a claim for an invention comprising elements A and B, and A' and B' represent elements corresponding to subordinate concepts of the elements A and B, respectively. A0 represents an element containing A and A' while B0 represents an element containing B and B', and both of A0 and B0 are in the form of a "superordinate-concept extraction type of claim" which is used in an application with national priority right.

2) Different category of substantially-identical inventions:

Combination of claims for a product which is produced by a process element [A + B] (Product by Process) and a method for producing the product which comprises the process element [A + B].

3) External addition of Element:

[A + B + C] represents a claim for an element [A + B] added with another element [C]. This is a claim format in which plural claims having a common main element [A + B] are developed.

4) Combination/Subcombination:

[A + B] represents a claim for the whole device or process comprising a combination of elements [A] and [B] each of which serves as a part of the device or process and is claimable as an independent invention.

5) Different Element:

Claims [A + B] and [C + D] are in such a relationship that they direct to the same subject matter, but the elements thereof are clearly different from each other. Under the condition that they have the same field of

industrial application, these inventions can be claimed in a single application.

Next, "inclusion of mutually-related applications" on the ordinate of the matrix represents an application having multiple claims using Multiple Claim System when plural related inventions are coincidently made. On the other hand, "measure for related inventions which have been made with time lapse" represents an application having multiple claims with a national priority right when an invention related to the invention concerned which has been filed is made within one year after the filing of the invention concerned.

(2) **Summary**

The Multiple Claim System of Japan aims at obtaining a multilateral and broad patent right with no leakage, and the National Priority Institution aims at enabling results of technical development which has been performed with time lapse to be entitled to an inclusive right. In order to effectively use these systems, how to prepare claims is a critical point, and it is expected that Matrix of Unitization Mode for the Multiple Claim System and the National Priority Institution is practically used for preparation of claims.

The following types should be particularly seriously considered.

Type 1

An invention is hierarchically claimed at each of a superordinate concept (basic concept) level, an intermediate concept (embodiment mode) level and a subordinate concept (embodiment) level. The invention is conceptualized to a subordinate concept through the Internal Addition of Element. When an embodiment is added to an application which has been filed, hierarchical claims are set through embodiment-supplement type and superordinate-concept extraction type of claim developments (formats).

Type 2

When there are plural inventions which are identical or similar to one another in system, apparatus, circuit, part or material, elements which are common among these inventions are extracted, and then these inventions are integrated into a single application through the claim development (format) of the "External Addition of Element".

Type 3

When plural means of solving a subject matter (problem to be solved) are developed, these means are integrated into a single application through the claim development (format) of "Different Element Type".

Utilizing Mode Matrix for Multiple Claim System and National Priority Institution

	For inventions which are substantially identical, but different in expression, point of view, etc. (Development of inventions in compliance with Article 36).		For technically-close and related inventions (development of inventions in compliance with Article 37)		
	1. Internal addition of element [A + B] → A = A' B = B' (FURTHER) → [A0 + B0]	2. Different categories of substantially-identical inventions Product comprising [A + B] Process for manufacturing product comprising [A + B]	3. External addition of element [A + B] → [A + B + C]	4. Combination/sub-combination [A + B] → [A], [B]	5. Different element type [A + B] → [C + D]
Inclusion of mutually-related applications					
General concept of utilizing mode	* Utilization is possible when one of elements is hierarchically recognized as superordinate concept, subordinate concept or the like * Claiming of optimum element (Ex: Elastic member → plate spring, acid → hydrochloric acid)	Utilization is possible when it is estimated in consideration of embodiment mode of another party that exercise of rights and protection scope is difficult and insufficient with only one claim (Ex: Consideration of practical mode of each of part maker, set maker and practical user of system)	Multilateral investigation of technically-close inventions from various standpoints (Ex: Same or similar system, apparatus, circuit, part, material, etc. can be integrally claimed in multiple claim system under condition that main parts thereof are identical to one another)	Combination corresponds to whole apparatus (process), and sub-combination corresponds to each of parts (steps) which are linked with one another to form whole apparatus	Plural solving means are considered for technologies which are applicable to same field and have common unsolved problem, separate applications are also considered.
Examples for utilization	* Claiming for hierarchical subordinate-conceptualization (Solution of A → alcoholic solution of A → ethanol solution of A = optimum embodiment corresponds to most subordinately-conceptualized claim) * Claim with numerical value 1. Two-step limitation with permissible numerical value range and optimum numerical value range 2. It is important to describe significance of limitation of upper and lower limit values	* Expressible both categories (Ex: Invention of "viscosity-variable fluid" and invention of "method for controlling viscosity of fluid") * Expression-modified claim for same invention (Ex: Chemical structure claim for bridged polymer and elastic-value limited claim therefor)	* Development of inventions having same main element (Ex: Improvement of optical fiber → (1) Optical fiber comprising core of glass and cladding of plastic, (2) Optical fiber comprising core of glass, cladding of plastic and outer coating of metal m) * Multistage-limited use claim (Ex: Development of material A having high rigidity and light weight (1) Invention of material A, (2) Invention of impact-resistant member comprising material A, (3) Invention of bumper comprising material A for automobile)	* Development to combination/sub-combination (Ex: Improvement of bearing structure → (1) Invention of bearing, (2) Invention of shaft, (3) Invention of bearing structure) * Development to system (Ex: Invention of transmitter → Invention of communication system comprising transmitter and receiver added thereto)	Example of different element type (Ex: Development of prevention against erroneous data erasure due to malfunction → (1) Invention of magnetic recording medium having erroneous erasure preventing mechanism, (2) Floppy disk having jacket for accommodating magnetic recording disk equipped with erroneous erasure preventing mechanism)

Utilizing Mode Matrix for Multiple Claim System and National Priority Ir. .tion

	For inventions which are substantially identical, but different in expression, point of view, etc. (Development of inventions in compliance with Article 36).		For technically-close and related inventions (development of inventions in compliance with Article 37)		
	1. Internal addition of element [A + B] → A = A' B = B' (FURTHER)→ [A0 + B0]	2. Different categories of substantially-identical inventions Product comprising [A + B] Process for manufacturing product comprising [A + B]	3. External addition of element [A + B] → [A + B + C]	4. Combination/sub-combination [A + B] → [A], [B]	5. Different element type [A + B] → [C + D]
Measure for inventions which have been made with time lapse					
General concept for utilizing mode	* Embodiment supplement type Extraction of superordinate concept is required for addition of embodiment to invention which has been filed * Superordinate-concept extraction type Invention of original application A1 + added invention A2 → extract invention a of superordinate concept	Different concept extraction type Case where another invention of different concept can be extracted from data accumulation of original invention or the like	Combined application type (I) Making of added invention which is technically close to original application → supplement of embodiments and claims and filing of national priority application	Combined application type (II) Improvement of sub-combination whose combination is contained in original application → supplement of embodiments and claims and filing of national priority application	Combined application type (III) Extraction of means for solving problem common to original application → supplement of embodiments and claims and filing of national priority application
Examples of utilization	* Supplement of embodiments whose ideas have been described in original application → details of the ideas are supplemented by filing national priority application, and then divisional application may be filed. * Supplement of embodiments which are in parallel relation with embodiments of original application → review or extraction of superordinate-concept claim.	Discovery of property B of component A which has been claimed in original application → setting of "composition ratio" claim and "property B" claim	Improvement of invention of original application and extraction of performance improved invention → Addition and gain of claim including added element	Combination completion type (Ex: Original application includes invention of "bolt A having novel screw thread" and added invention includes invention of "nut B" which is most suitably engaged with bolt A → claiming of "bolt A", "nut B" and "engaging member comprising bolt a and nut B")	Investigation of means for solving problem common to original application more economically and achievement of object by different implementing means → addition of claim for element different from element of original application

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2-4. Case Study for System Utilization and Administration

In this Case Study, three useful cases are assumed, and manner for utilization and administration point are considered for each of the cases.

Case 1

Various points to be noted to the patent administration when the inventor and licensee are different between two inventions which are technically related to each other and have been proposed by the same company are considered along a series of steps for patent application administration.

Case 2

An invention relating to the combustion control for direct injection type of engine is assumed, and what development of claim is possible under the condition that Unity of Invention is maintained and what effectiveness can be obtained by claim are considered.

Case 3

A case whether a part of the claim of an application is substantially supported by the specification or not is critical and the technology for the part is completed after the filing of the application is representatively introduced. A measure for this case is considered for each of two cases, one case where National Priority Institution is usable, and the other case where National Priority Institution is unusable.

Case 1	Case Study for Administration Point on Utilization of Multiple Claim System

[Content of Case]

Invention X1 and invention X2 are proposed at the same time by enterprise departments A and B of the same company, respectively. The inventions have subject matters which are claimable independently of each other, but are in such relation that they are integrated into an inclusive invention concept X. The inventions X1 and X2 are required to be licensed to company Y and company Z, respectively.

[Points to be Considered]

① Check system for related inventions
② Policy of applications and claims
③ Policy of reward system for inventors.
④ Application Administration.
⑤ Patent Administration.

Considered Contents

① Necessity of preventing self-collision and double patenting on the basis of check system for related inventions having different inventors from that of the invention concerned.

→ All internal proposed inventions of same company are classified every technical field to form data base, and related inventions are searched.

→ Search result should be jointly checked by proposer of each invention and staff of patent department.

② Consideration as to whether inventions X1 and X2 are filed as separate applications or as single application by integrating inventions X1 and X2 into inclusive invention concept X.

→ For separate applications: Attention should be paid to avoidance of double patenting. Response to Office Action and Administration of Right and License are facilitated by selecting separate applications.

→ Single application: Broad and strong patent is obtainable by disclosing best modes of inventions X1 and X2 and claiming invention x. Application fee and patent maintenance fee are saved.

③ It is set forth in Article 35 of Patent Law that reward should be made every claim for inventors.

→ Each of inventions X1 and X2 which have been independently made should be rewarded as one invention irrespective of the format of separate application or single application.

→ Reward for enforcement may be made by integrating inventions X1 and X2 into one invention.

④ Judgments of both enterprise departments A and B on Application Administration should be confirmed.

→ There occurs clear difference in estimation of importance of invention or desire for application maintenance between both enterprise departments A and B, it is reasonable that application is divided into a pplications of Inventions X1 and X2.

→ When only one of inventions X1 and X2 is estimated to be unpatentable on the basis of Notification of Rejection Ground (office action), Opposition, etc., Claim of the Unpatentably- estimated Invention should be canceled or newly filed as divisional application to assure patentability of the other invention.

⑤ Right scope and equivalent scope of claim for inclusive invention concept X are broader than claims of separate applications as a whole. However, partial or divisional assignment of Patent Right for Claim of Invention X is inhibited (under provision of Article 185). When claim of Invention X includes Invalidating Ground, the whole Patent Right would be invalidated unless special proceedings for narrowing claim is taken.

→ In consideration of the difference in inventors and licensee, it is preferable that Patent Right is individually obtained for each of inventions X, X1 and X2, and Patent Right for Claim of Desired Invention is assigned or abandoned as occasion demands.

Case 2	Case Study for Development Mode of Claim for Utilization of Multiple Claim System

[Content of Case]

Invention of combustion control for direct-injection type of engine as described below (assuming that the invention is novel)

"Information on combustion status of engine is obtained by combustion monitor A, and then input to controller B. The Controller B indicates timing of fuel injection and injection amount to fuel supply means C and indicates ignition timing to ignition means D. through feedback control as described above, fuel injection and ignition are optimumly carried out to keep excellent combustion status of engine."

[Points to be Considered]

① Multiple claim expression
② Effectiveness of Patent Right for multiple claims
③ Possibility of restriction requirement for multiple claim application in Japan and United States.

Co Jered Contents

① Two apparatus claims and one method claim can be set.

→ First apparatus claim: Direct-injection type engine comprising combustion monitor A, controller B, combustion supply means C and ignition means D.

→ Second apparatus claim: Combustion control apparatus comprising combustion monitor A and controller B for use in direct-injection type engine.

→ Method claim: Combustion control method for direct-injection type engine comprising the steps of obtaining information on combustion status of engine from combustion monitor A to input the information to controller B, and on the basis of the input information, indicating fuel injection timing and amount to fuel supply means C and indicating ignition timing to ignition means D by controller B.

② → The first apparatus claim would be infringed by another party if the party produces, uses, sales, rents or imports a direct-injection type of engine including elements A, B, C and D. Damages to infringement may be calculated on the basis of an unit cost of engine, so that high damages may be imposed.

→ The second apparatus claim would be infringed by another party if the party produces, uses, sales, rents or imports a control apparatus including elements A and B. If the control apparatus is an exclusively-used part of the engine of the first apparatus claim, this infringement corresponds to contribute infringement against the first apparatus claim.

→ Most of users for this invention are end users for private use, and Patent Right for Method Claim does not have effect on these users (under provision of Article 68), however, producer and seller may be sued for contribute infringement.

③ Multiple claims having substantially same content are permissible irrespective of difference of category in Japan, scope of multiple claims which have different contents, but are not subjected to restriction requirement are provided in Article 37. Since the first apparatus claim and the method claim have substantially same content and the second apparatus claim is in relation as set forth in Article 37, Section 2, with the first apparatus claim, the multiple claims of this case are not subjected to restriction requirement.

In the United States, restriction requirement is made if multiple claims include claims for two or more independent and distinct inventions. The first apparatus claim and the method claim are recognizable as not being subjected to restriction requirement in consideration of Examples of 37 CFR 1.143, but the second apparatus claim may be subjected to restriction requirement in accordance with examiner's judgment.

Case 3	Case Study for Measure for Making of Inventions with Time Lapse

[Content of Case]

Application for invention of composition A containing polymer component B is filed, and the component B is broadly claimed as comprising aromatic polymer in the application. However, the specification includes only description of embodiment in which the component B comprises polyparaphenylene of aromatic group, and other aromatic polymers including polystyrene are merely listed.

After the filing of the application, embodiment for the component B comprising polystyrene is completed, and this embodiment has unexpected excellent effect.

[Points to be Considered]

Consideration of application and claim drafting for three cases, ① where added embodiment is completed within one year after the filing of original application, ② where added embodiment is completed after one year has elapsed since the filing of original application and before original application is Laid-Open, and ③ where added embodiment is completed after original application is Laid-Open.

Co. ..lered Contents

① nsid

Added embodiment is new matter because it has unexpected effect, and thus supplement of added embodiment by amendment to specification is unacceptable (first paragraph of Article 53). However, supplement of added embodiment by national priority application (Article 42-2) is acceptable. Since in original application polystyrene is claimed in status where only chemical name thereof is disclosed, there is possibility that examiner's instruction for limiting claim for polystyrene is issued. In addition, even the claim is patented without amendment, there is a questionable matter as to whether another party can be sued for this infringement against patented claim for polystyrene. These anxieties can be overcome by supplement of added embodiment.

Added embodiment may be filed independently. Measure required for this case will be described in the following item ②.

② Supplement of added embodiment to original application is impossible even by amendment or national priority application, and thus independent and separate application is possible. When claims of prior and posterior applications are interfered to each other, posterior application is rejected (Article 39) even if applicants or inventors are identical between both applications. Therefore, claim for component B comprising aromatic polymer must be amended so as to literally remove polystyrene from claim.

Chemical name of polystyrene is described as component B in specification of original application, and thus posterior application having claim for invention of composition A containing polystyrene as component B may be rejected under the condition that original application is Laid-Open (Article 29-2). However, provision of Article 29-2 is not applicable to such case where applicant or inventor is identical between prior and posterior applications as this case.

③ Supplement of added embodiment to original application is impossible by any one of amendment and national priority application. Idea of "composition A Containing component B consisting of polystyrene" is made publicly known by Laid-Open of original application. Therefore, it would be difficult to obtain patent protection for added embodiment. However, the following attempts i) and ii) should be made irrespective of chance of success.

i) Claim for "composition A containing component B of polystyrene" is separated from original application, and divisional application including the claim is filed. Details of added embodiment should be described in divisional application.

ii) Application which includes description of added embodiment and claims "invention of composition A containing component B of polystyrene" is filed independently of original application. At the same time, claim of original application is amended so as to literally remove polystyrene.

3. Analysis on the Principles for Handling Applications of Related Inventions and the Operation

3-1. Utilization of multiplicity and national priority institution shown in the results of a questionnaire to Japanese companies

An analysis is given here as to the circumstances of utilization of the multiplicity and the national priority institution in Japanese companies. This is based on the results of a questionnaire obtained from 70 member companies of PIPA, Pacific Industrial Property Association. (Included were 15 machine/metalworking companies, 17 electrical engineering companies, 36 chemical companies and the other 2 companies.) Refer to the attached tables for further details of the results. (In the tables the percentage of the company which chose each item as compared to the total is shown. As for some of the questions two or more choices were allowed.)

3-1-1. Utilization of multiplicity

1) Principles

1-i) Companies utilizing the multiplicity

It is apparent from the results that almost all the companies have utilized the multiplicity in various manners. However, there seems to be a difference among the industries.

A graph attached to this text shows the distribution of the companies by taking the average number of claims included in an application of multiple claims as the X axis and the percentage of apllications of multiple claims to the total applications of a company as the Y axis.

In this graph it is clearly shown that both the percentage of applications including multiple claims and the average number of such claims are relatively small as for the machine/metalworking industry while there appears a considerably large percentage of such applications and average number of claims as for the chemical industry. The percentage and the average number of claims of the electrical engineering industry is in between the machine/metalworking industry and the chemical industry.

1-ii) Points in utilizing the multiplicity

Although most companies seem to lay emphasis on filing a single application covering two or more inventions in every industries, in the electrical engineering and the chemical industries the number of company which gives priority to multiplying claims covering an invention by viewing the invention from various points is greater than that in the machine/metalworking industry.

1-iii) Decision on whether or not filing an application of multiple claims

The intellectual property division decides to file such an application in most companies regardless of the industry they belong.

1-iv) Approach to engineering divisions to spread the utilization of multiple claims

The companies in the electrical engineering industry encourage engineers to multiply claims most positively as shown in the answers to the questions concerning what approach is taken particularly in the education and advices for engineers to spread the utilization of multiple claims.

2) Before application

2-i) Suggestion of multiple claims

As shown in the attached tables the intellectual property division suggests multiple claims in most cases.

2-ii) Utilization of multiplicity in engineering divisions

The results show that in every industry multiple claims are suggested most frequently to clarify the relation between genus and species or claim various embodiments, in other words, suggestions concerning genus and species are the predominant. In addition, it should be expressly noted that in the electrical engineering and the chemical industries related inventions are relatively frequently included in a single application by multiplying the claims.

3) Application

3-i) Positive measures for the intellectual property divisions to utilize the multiplicity

In the machine/metalworking and the electrical engineering industries it often happens that the intellectual property division tries to consolidate two or more inventions in one application to utilize the multiplicity. On the other hand, applications within the scope suggested by the intellectual property division are filed in a large percentage of cases in the chemical industries.

3-ii) Difference between a Japanese application and the U. S. application

For the question asking any intention to take a different claiming method when filing a U. S. application from that taken for the Japanese application, a considerably large number of companies answered in the negative. However, when it comes to the practices, many companies file applications of greater number of claims for U. S. patents than those for Japanese patents because

they often develop and multiply the claims in relation to the genus and species.

3-iii) Inventions which can be put together

In the chemical industry there seems to be many cases where the company choose to apply for another patent in addition to a prior application without using the multiplicity of claims even if the inventions can be put together into a single application so as to find a protection for each invention as early as possible by filing an application respectively or to license the resultant patents separately, etc.

3-iv) Application of invention of which the unity is in question

The companies in the machine/metalworking and the electrical engineering industries often file a single application in the beginning and examining the possibility of dividing the claims later while many companies in the chemical industry choose to file another application from the beginning.

3-v) Claiming

The largest number of the companies give priority to draft claims multiplied under sec. 37 of the Japanese Patent Law in every industry. In addition, considerably numerous companies lay emphasis on claiming various embodiments in the chemical industry.

3-1-2. Related inventions discovered at different time

1) Utilization of national priority institution

The companies which utilize the national priority institution when two or more inventions related mutually are discovered at different time respectively account for nearly 50 to 70 percentage of all the companies in every industry.

2) Application claiming the national priority

Many companies request inventors to report other related inventions, if any, and claim the national priority. However, in the largest number of cases the companies in the chemical industry examine the possibility of adding claims to the original application.

3) Search for related inventions

In the machine/metalworking industry the cases where inventors search for other related inventions and the cases where the intellectual property division searches for related inventions is in the proportion of fifty to fifty. As for the chemical industry, inventors seek for other related inventions by themselves.

4) Relation between supplemental embodiments and the original application

Inventors are requested to inform the intellectual property division of the relation between the original application and supplemental embodiments discovered later in most companies.

5) Control of applications to avoid interference

The greater number of the companies pay attention to control their applications respectively to avoid interference between a senior application and a junior application, in other words, to avoid self-collision.

6) Decision to claim the national priority

The intellectual property division seems to decide to claim the national priority in almost all the companies.

Results of the Questionnaire
on the Administrative Aspect of Patent Practices

1. Multiplicity of Claims

Points in Administration of Patent Practices	Machine/Metalworking Industry	Electrical Engineering Industry	Chemical Industry
Principles: Do you utilize multiplicity of claims?	Almost all the companies use the multiplicity.		
Ratio of the utilization	15/15 companies	16/17 companies	34/37 companies
To which point do you give priority when utilizing the multiplicity?	The percentage of companies which give priority to multiplication of claims covering a single invention is relatively high in the electrical engineering and chemical industries.		
o A single application claiming two or more inventions	87%	76%	71%
o Multiplication of claims covering a single invention	13%	24%	29%
For what purpose do you utilize the multiplicity?	Machine/metalworking companies seem to utilize the multiplicity for the purpose of reducing the cost for application.		
o To reduce the cost	44%	21%	13%
o To find a broader protection by claims of varing embodiments	44%	53%	64%
In which percentage do you apply for a patent of multiple claims and how many claims are included in the applications on average? (Refer to the attached sheets.)	Relatively low percentage and small numbers of claims	Intermediate percentage and numbers of claims are shown as compared with those of the machine/metalworking and the chemical industries.	Relatively high percentage and large numbers of claims
Which division does decide to apply for a patent of multiple claims?	The intel. prop. div. gives decision in most cases.	←	←
o Intellectual property div.	73%	69%	83%
o Engineering divs.	7%	19%	8%
How do you teach the multiplicity to engineers?	Most companies lay emphasis on acquiring general understanding of the system of the multiplicity.	Many companies teach not only the system of the multiplicity but also how to describe multiple claims.	←
o Giving training on how to describe multiple claims to engineers	0%	22%	23%
Do you advise engineers to multiply claims?	The percentage of companies of which the intellectual property division encourages engineers to multiply claims is high in the electrical engineering industry.		
o Encourage engineers to multiply claims	13%	56%	33%
o Advise engineers to multiply claims from case to case	47%	6%	36%
o Do not suggest multiple claims expressly	40%	37%	25%
Do you use the multiplicity to reduce applications?	Most companies of the machine/metalworking and the electrical engineering industries multiply claims to reduce applications.		
o Yes	80%	69%	21%

Points in Administration of Patent Practices		Machine/Metalworking Industry	Electrical Engineering Industry	Chemical Industry
Principles	Is there any standard for the total number of applications imposed on engineers?	Most companies answered in the positive.	←	Most companies answered in the negative.
	o Yes	67%	56%	21%
	o No	33%	38%	79%
	Is there any standard for the number of inventions to be presented by engineers?	The positives and negatives are almost equal in number.		Negative answers outnumber positive answers.
	o Yes	53%	44%	15%
	o No	47%	50%	85%
Before Application	Who or which division suggests multiple claims?	The intellectual property div. suggests the multiplicity in most cases.		
	o Engineering divs.	23%	36%	29%
	o Intel. prop. div.	62%	59%	63%
	o Outside attorneys	10%	5%	6%
	How do the engineers use the multiple claims?	They use it to describe the relation between genus and species in most cases.	← Relatively large number of engineers multiply claims to include related inventions.	← ←
	o Including related inventions	9%	21%	21%
	o Clarifying genus and species	43%	36%	37%
	o Substantially same claims	0%	6%	5%
	o Claiming various embodiments	26%	30%	21%
	o Multiple claims are not used so much.	22%	3%	16%
Filing an Application	What positive measure does the intellectual property division take to multiply claims?	The percentage of companies which consolidate two or more inventions into one application is low in the chemical industry.		
	o Broadening expressions of specifications based on the suggested invention	33%	20%	33%
	o Gathering two or more related inventions into a single application	44%	55%	28%
	o Filing a single application within the scope of the suggested invention	11%	10%	28%
	In which way does the intellectual property division use multiple claims generally?	The percentage of companies which multiply claims to include various embodiments into a single application is low in the electrical engineering industry.		
	o Claiming embodiments of the invention	13%	3%	16%

Points in Administration of Patent Practices	Machine/Metalworking Industry	Electrical Engineering Industry	Chemical Industry
Filing an Application			
In case that you file an an application of multiple claims for a U.S. patent, do you take a different claiming method intentionally from that you take when filing an application of multiple claims for a Japanese patent?	The positives and the negatives are almost equal in number.		The negatives far outnumber the positives.
o Yes	47%	56%	35%
o No	53%	44%	65%
Is there any difference between the U.S. application and the Japanese application in relation to the question above?	A greater number of claims are included in a U.S. application because in a U.S. application claims are often drafted to cover the relation between genus and species.		
Do you conduct a positive screening to seek for related applications?	Most companies do not conduct the screening.		
o Yes	40%	45%	26%
o No	60%	55%	74%
Is there any case where you apply for another patent in addition to a prior application even if they can be put together into a single application?	The companies of the chemical industry often file a separate application even in such a case.		
o Yes	20%	19%	45%
o No	80%	81%	55%
Does the intellectual property division review the suggested invention?	In almost all the companies the intellectual property division review the suggested invention.		
o Review all the inventions	60%	81%	71%
o Review important inventions	27%	19%	23%
o Does not review in most cases	7%	0%	6%
What kind of review does the intellectual property division conduct for an invention?	In most companies the intellectual property division review the claims and the subject matter.		
o Review of the subject matter of the inventions	28%	44%	36%
o Review of the terms and expressions of the claims	44%	32%	42%
o Review to devide/combine related inventions	28%	20%	20%
What will the intellectual property division do in principle if the unity of the invention is in question?	In most cases the companies of the chemical industry file one application in the beginning and subsequently divide the claims of the original application for a divisional application.		
o Filing another application from the beginning	19%	25%	50%
o Filing a single application and dividing the claims subsequently	75%	69%	47%
o Claiming only the most important claim	6%	6%	3%

Points in Administration of Patent Practices		Machine/Metalworking Industry	Electrical Engineering Industry	Chemical Industry
Filing an Application	What is the principle when drafting multiple claims?	In most cases the companies utilize the multiplicity based on section 37 of the Japanese Patent Law.	←	← In addition, the companies include claims of embodiments into the same application.
	o Laying emphasis on drafting substantially the same claims	6%	12%	4%
	o Laying emphasis on drafting claims multiplied based on sec. 37	67%	48%	49%
	o Laying emphasis on drafting claims of embodiments	27%	24%	35%
	o Claiming one claim in principle	0%	16%	11%
	How do you amend claims?	Most companies file an application including multiple claims from the beginning.		
	o Claiming one claim in the beginning and subsequently adding other claims or dividing the original claims	12%	25%	9%
	o Claiming as many claims as possible and subsequently arranging the claims	59%	63%	74%
	What is the principle of consolidation of inventions?	Most companies consolidate inventions related to section 37 into a single application in principle.		
	o Filing two or more applications even for inventions related to sec. 37 to maintain the effective rights as many as possible	19%	0%	0%
	o Consolidating inventions related to sec. 73 in one application	75%	100%	100%

2. Treatment of Related Inventions Discovered in Course of Time

Points in Administration of Patent Practices	Machine/Metalworking Industry	Electrical Engineering Industry	Chemical Industry
How do you handle the related inventions discovered at different times?	In most cases the companies utilizes the national priority institution positively.		
o Utilizing the national priority institution	71%	52%	71%
o Filing applications respectively	12%	24%	26%
o Postponing application until the junior invention is available (A case where other inventions related to the senior invention can be expressly available, etc)	12%	20%	9%

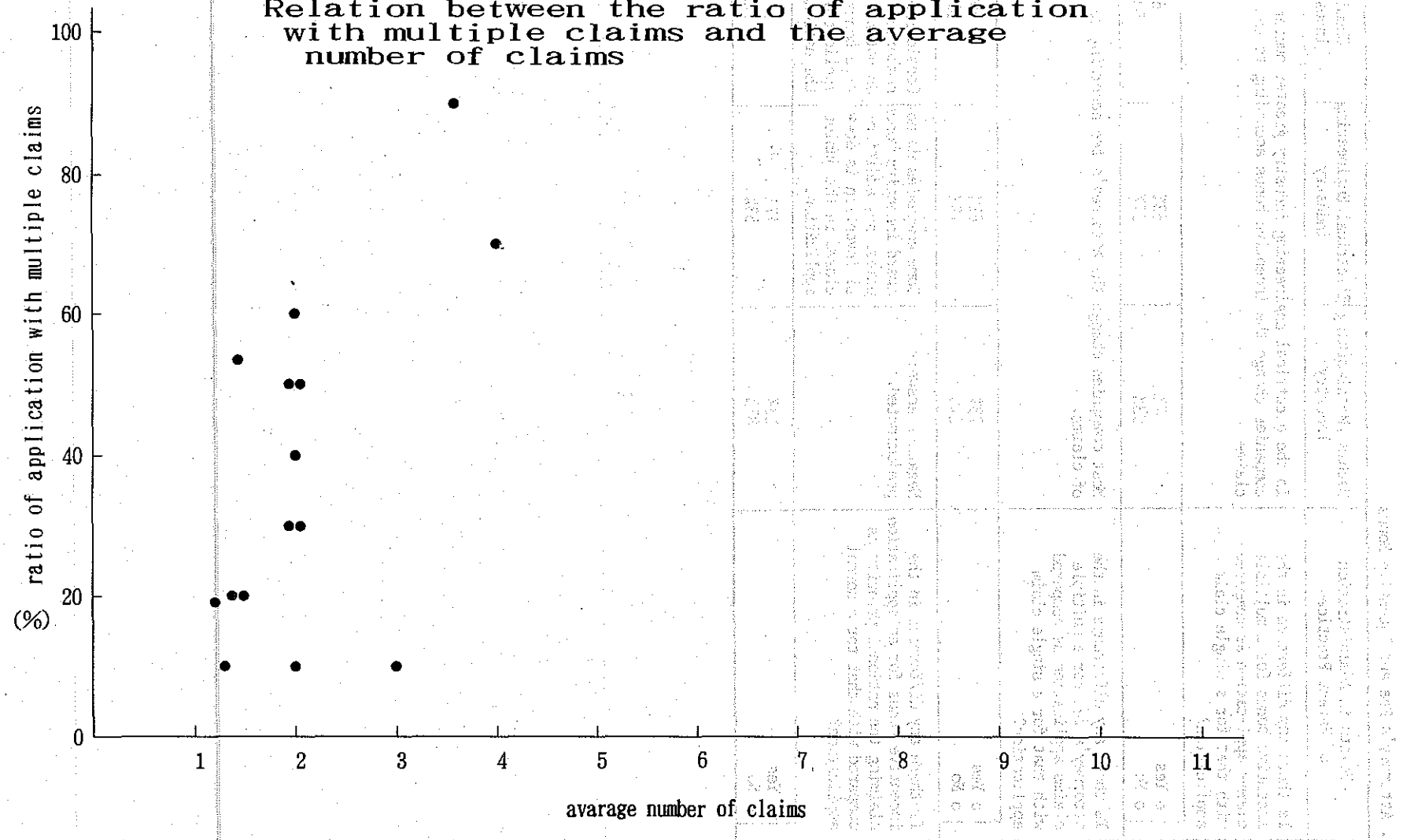
Points in Administration of Patent Practices	Machine/Metalworking Industry	Electrical Engineering Industry	Chemical Industry
How do you proceed the CIP or claim the national priority?	In the chemical industry many companies examine the possibility of adding claims to the original application.		
o Seeking for the parent application when an invention is discovered	18%	30%	9%
o Examining the possibility of adding claims to the original application	24%	15%	54%
o Requesting inventors to report the related inventions	29%	50%	38%
Who conducts the search for related inventions?	In the chemical industry inventors lead others in searching for related inventions.		
o Inventor	50%	55%	67%
o Intellectual property division	50%	45%	33%
How do you find the relation between supplemental embodiments and the original application?	Most companies require inventors to report the related applications, if any.		
o By the report of inventors	69%	84%	84%
o Through screening the related applications by the intellectual property division	45%	16%	14%
How do you handle applications of your company which may interfere each other?	A large number of companies control applications so that they do not interfere each other.		
o Control the applications to avoid interference	60%	71%	71%
o Do not control the applications especially to avoid interference	40%	29%	29%
In what case do you file an application claiming the national priority?	Relatively a large number of companies file an application claiming the national priority in case supplemental embodiments are disclosed.		
o In case of entering the procedures for a foreign patent application	22%	26%	26%
o In case that the claimed embodiments of the original application differs from the mode adopted in the present product	22%	14%	14%
o In case supplemental embodiments are disclosed	38%	43%	43%
o In case another invention concerning sec. 37 is discovered	18%	17%	17%
Who decides to claim the national priority?	The intellectual property divisions decide to claim the national priority.		
o Engineering divisions	6%	0%	6%
o Intellectual property division	94%	100%	94%

3. Attorney's Fee and Incentive Bonus

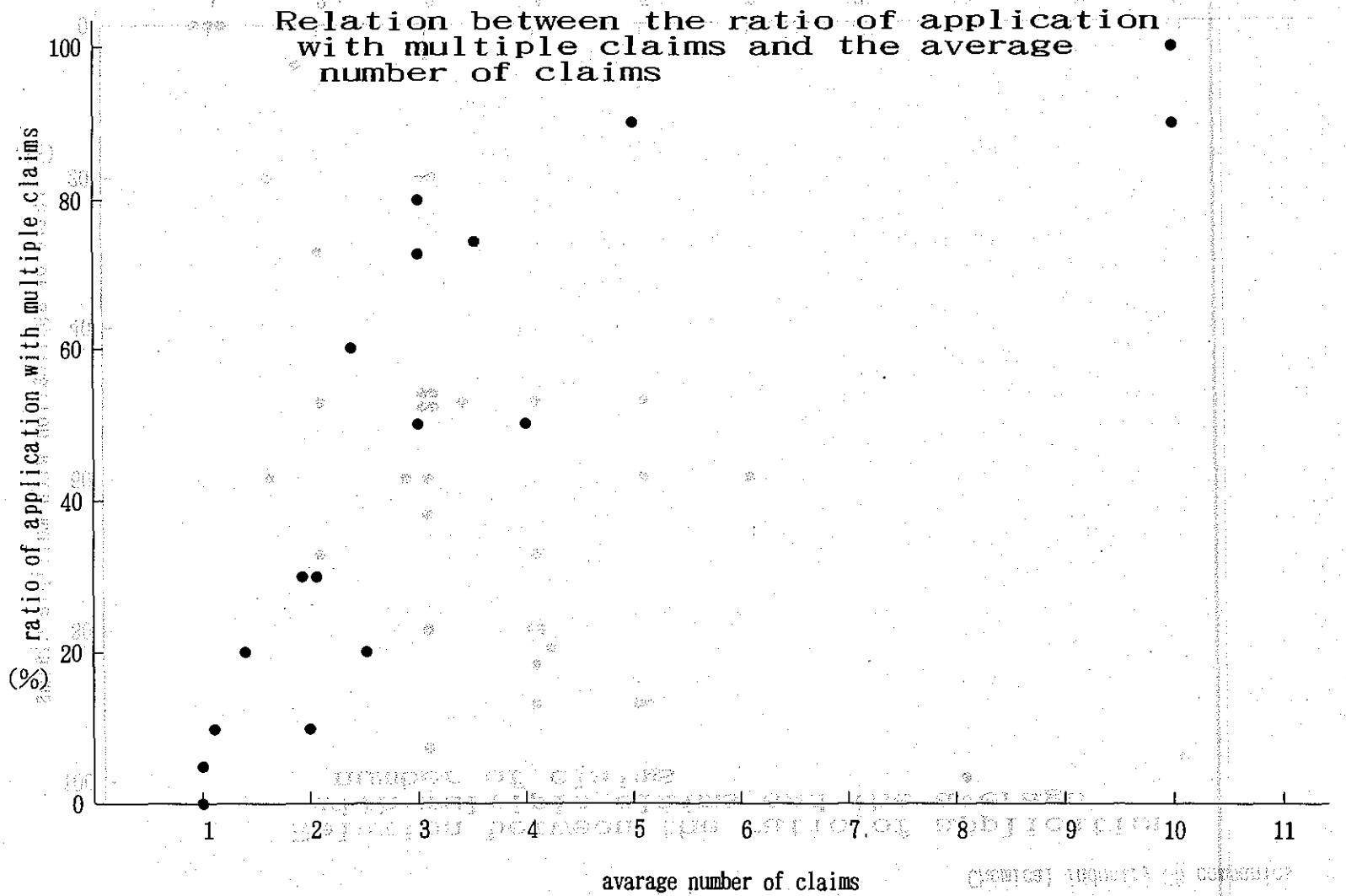
Points in Administration of Patent Practices	Machine/Metalworking Industry	Electrical Engineering Industry	Chemical Industry
Is there any difference in the incentive bonus for a multiple claims application as compared with that for a single claim application?	In the electrical engineering industry greater number of companies change the incentive bonus according to the number of claims.		
o Yes o No	7% 93%	63% 37%	6% 93%
Is there any difference in the attorney's fee for a multiple claims application as compared with that for a single claim application?	Most companies change the attorney's fee according to the number of claims.		
o Yes o No	73% 27%	81% 19%	69% 31%
Is there any difference in the incentive bonus for an application claiming the national priority as compared with that for a normal application?	Negative answers predominated.	Some companies do not award incentive bonus unless any additional invention is disclosed in the junior application.	Considerably a great number of companies do not award incentive bonus for an application claiming the national priority.
o Yes o No	13% 87%	47% 53%	38% 62%

Machine/Metalworking Industry
15 companies

Relation between the ratio of application with multiple claims and the average number of claims

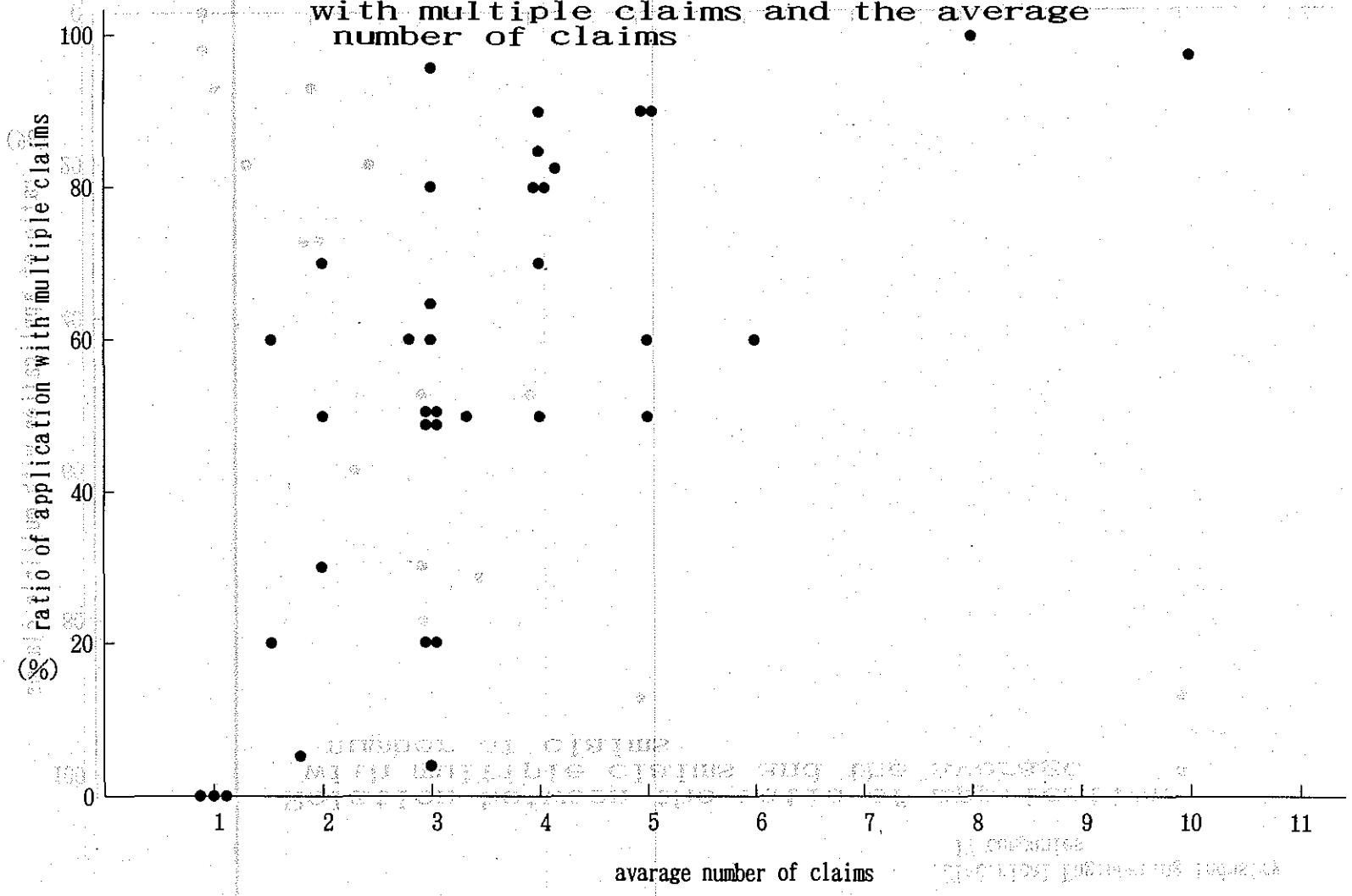


Electrical Engineering Industry
17 companies

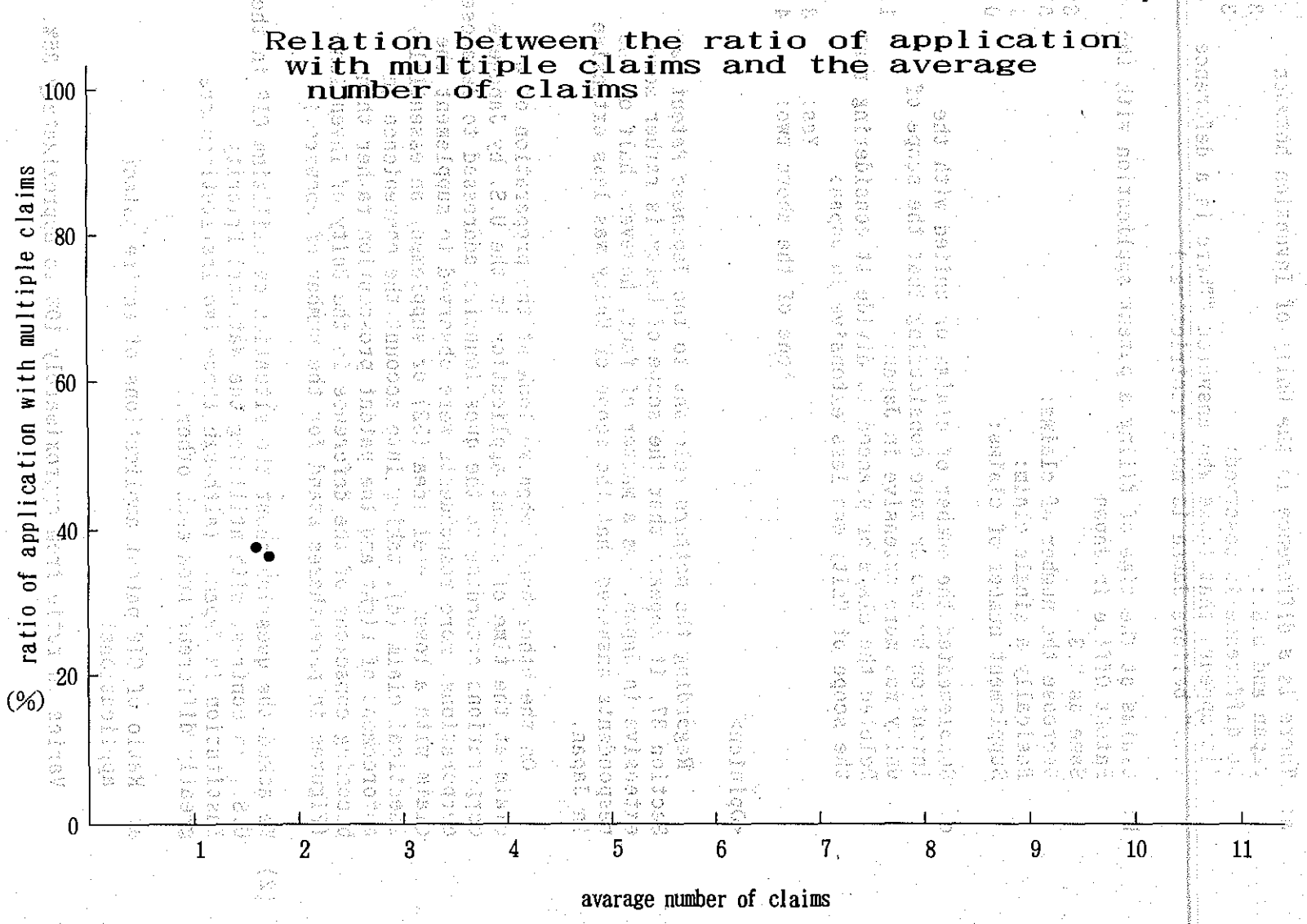


Chemical Industry 36 companies

Relation between the ratio of application with multiple claims and the average number of claims



Others 2 companies



3-2 Comments by U.S. Corporations (Number of comments: 7)

(1) Views on Japan's Improved System of Multiple Claims

a: There is a difference in the Unity of Invention between Japan and U.S.: 3
No difference is observed: 3
(It appears that those who answered "There is a deference ...." believe Japan is more restrictive.)

b: Claims at the time of filing a patent application with the Patent Office in Japan
Same as U.S. 3
Decrease the number of claims: 3
Basically a single claim: 1
Supplement number of claims: 0

c. Supplemented the number of claims or united with the invention by two or more considering that the scope of Unity was more extensive in Japan: 1
Deleted the claim or planned to divide it considering that the scope of Unity was less extensive in Japan:
Yes: 3
None of the above two: 4

<Opinion>

Regarding the matters relevant to the Japanese Patent Law Section 37, it appears that the scope of Unity is rather more extensive in Japan. As a matter of fact, however, half of the respondents answered that the scope of Unity was less extensive in Japan.

On the other hand, when we look at the preparation of a claim at the time of patent application in the U.S. by Japanese corporations according to the questionnaire addressed to Japanese corporations, more respondents were observed to supplement the claim with a lower level idea (52) or supplement an essentially identical claim (4), taking into account the convenience in enforcement of right and the patent prosecution rather than becoming conscious of the deference in the Unity of Invention. (Figures in parentheses stand for the number of answers.)

(2) We asked the question about the situation on utilizing CIP in the U.S., in contrast with utilizing the National Priority Institution in Japan. (although these two institutions are greatly different from each other.)

a: Ratio of CIP patent applications of entire patent applications:

Varies in ratio from approximately 10% to approximately 35%.

b: How is CIP managed?:

CIP is utilized after being triggered by the inventor's declaration of a new improvement: 4
CIP is utilized by the initiation of the patent division: 4
CIP is utilized by the office action: 1

c: No standard on judgment is available for whether to file CIP application or to file separate application. Judgment is made on a case by case basis:

d: Management of filing patent application when the supplemental embodiment is expected:

Case by case basis: 4
File the patent application first with the limited materials available at the moment, and utilize CIP later: 1
Wait until the supplemental embodiment is ready: 2

<Opinion>

According to the questionnaire addressed to Japanese corporations, the largest number of respondents answered that the patent application utilizing the National Priority Institution is filed based on the inventor's declaration of related inventions (31). Some respondents answered that they will look for the parent patent application of the new invention (13). Others answered that they will manage whether or not there is anything to be supplemented to the original patent application (28). No differences were observed in the trend between Japan and the U.S. in this respect.

It is very interesting, in this context, that CIP is utilized on a case by case basis is the U.S. without giving any priority to CIP over the separate patent application.

3.3 THE CONDITIONS FOR UTILIZATION OF THE MULTIPLE CLAIMING SYSTEM IN DIFFERENT TECHNICAL FIELDS:

(1) Object of the Investigation;

The conditions for utilization of the multiple claiming system in each technical field were compared and analyzed by sampling:U.S. Patents belonging to the Japanese companies, which were filed in a foreign country and regarded as of relatively important inventions; original Japanese Patent Laid-Opens (which are unexamined Publications) of such U.S. Patents; and Japanese Patent Laid-Opens belonging to the U.S. companies.

(2) Method of the Investigation;

i. To identify different technical fields, Sections in the International Patent Classification (hereinafter referred to as the IPC) were used.

ii. Random samplings were performed in each Section A-H of the IPC to sample 10 U.S. Patents (I)(total: 80 patents),which were filed by the Japanese companies. Their original filing date in Japan were on or later than January 1, 1990 .

iii. Japanese Patent Laid-Opens (II) of corresponding to (I) are sampled (total: 110 patents out of 117 of the corresponding original Japanese Patent Applications which were combined by claiming priority rights).

iv. In the same way, random samplings were performed in each Section A-H of the IPC, in order to sample 10 Japanese Patent Laid-Opens (III) which were filed by U.S. companies and had original filing dates in Japan on or later than January 1, 1990 (total: 80 patents).

v. As for each sample, the number of claims, the number of independent claims, and the number of drawings were checked, and each claim was classified by category and was also classified in connection with Item Nos. 1 to 5, Section No. 37 of Japanese Patent Law. Further,

additional checking was conducted for internal addition, external addition, and the presence or absence of the substantially same claims.

vi. Claims which refer to a preceding claim were automatically identified as dependent claims, and those which do not refer to a preceding claim in expression were identified as independent claims.

vii. As for product, claims were categorized into seven types (1.devices, parts, and material; 2.chemical substance, composition, and products; 3.production/manufacturing apparatus; 4.testing apparatus; 5.handing apparatus; 6.ones utilizing the properties of matter; and 7. system). Method claims were categorized into three types (1.method of production; 2. method of use; and 3. method of handling).

viii. In continuation with the Item Nos. 1 to 5, Section 37 of Japanese Patent Law (hereinafter referred to as Sec. 37), the first claim in each application was identified as the specified invention, and the relationship between the first claim and subsequent claims was investigated.

ix. The internal addition was judged in connection with Section 36 (hereinafter referred to as Sec. 36). Claims of external addition were counted in connection with Item No. 2, Sec. 37.

x. In addition, each claim was checked from the standpoint of: the substantially same claim; combination claim; sub-combination claim; and intermediate substance claim. Further, Japanese Patent Laid-Opens were checked for the presence of claiming the domestic priority right.

(3) Results of the Investigation;

Based on the tabulation of results of the sampling investigation as to the above-mentioned (I) (U.S. Patents filed by Japanese companies: total 80 patents), (II) (Japanese Patent Laid-Opens of original Japanese Applications corresponding to the (I): total 110 patents), (III) (Japanese Patent Laid-Opens filed by U.S. companies: total 80 patents), the investigation results were displayed in the following Tables and Figures:

TABLE-1: utilization rate of the multiple claiming system

TABLE-2(1): a tabulation of the number of claims and drawings (Japanese companies)

TABLE-2(2): a tabulation of the number of claims and drawings (the corresponding U.S. Patents of Japanese companies)

TABLE-2(3): a tabulation of the number of claims and drawings (U.S. companies)

TABLE-3(1): the number of the applications claiming priority rights (the corresponding U.S. Patents of Japanese companies)

TABLE-3(2): the number of the applications claiming priority rights (the Japanese Patent Laid-Opens of U.S.companies)

TABLE-4(1): the number of claims and drawings of Japanese companies

TABLE-4(2): the number of claims and drawings of U.S.companies

Fig. 1: the average number of Patent claims of both Japanese and U.S. companies

Fig. 2: the average number of drawings in the Patents of both Japanese and U.S. companies

Fig. 3: the average number of the claims in both Japanese and U.S. Patents belonging to Japanese companies

Fig. 4: the average number of claims in both Japanese and U.S.Patents belonging to U.S. companies

Fig. 5: the average number of drawings in both Japanese and U.S.Patents belonging to Japanese companies

Fig. 6: the average number of drawings in both Japanese and U.S.Patents belonging to U.S. companies

Fig. 7(1): the analysis of the contents (category) of the Patent claims of Japanese companies

Fig. 7(2): the analysis of the contents (category) of the Patent claims of U.S. companies

Fig. 7(3): the analysis of the contents (category) of Patent claims (the corresponding U.S. Patents) of Japanese companies

Fig. 8(1): the analysis of the contents (in connection with the specified invention) of the Patent claims of Japanese companies (also in connection with each of Item Nos., Sec.37)

Fig. 8(2): the analysis of the contents (in connection with the specified invention) of the Patent claims of U.S. companies (also in connection with each of Item Nos., Sec. 37)

(4) Analysis of the Results of the Investigation:

a. Utilization Rate of the Multiple Claiming System and the Number of the Claims (Tables 1,2 and 4)

As for the Japanese companies, an average value of the utilization rate of the multiple claiming system was 45 % for all Sections, and the average number of claims per each application was 2.2. On the other hand, for U.S. companies, the former was 89 % and the latter was 11.7(claims per sample). This suggests that Japanese companies have an extremely low utilization rate of the multiple claiming system in comparison with U.S. companies.

As for each Section, in Section C, the utilization rate of the multiple claiming system is 85 % and the average number of the claims is 4.3. Consequently, in Japanese companies Section C has a considerably high utilization level of the multiple claiming system in comparison with the other Sections.

The average number of the independent claims in each of the applications, in Japanese companies is 1.3 and 2.5 in U.S. companies. Consequently, in this respect, U.S. companies are superior to Japanese companies.

On the other hand, with respect to the U.S.Patents (I) of Japanese

companies, the utilization rate of the multiple claiming system in Japanese companies reached an average of 95% for all Sections, and the average number of claims per each application reached a high level of 9.5. In addition, when Japanese companies file U.S. Patent applications, the companies claim a plurality of priority rights with 1.4 of average number of original Japanese applications, (although there are 127 original Japanese applications, on the basis of which, the 80 U.S. Patents in the (I) claimed Convention priorities, 17 out of 127 original Japanese applications were withdrawn, because of claiming the domestic priority rights so that 110 original Japanese applications remained).

Comparing the Japanese application of U.S. companies with their corresponding U.S. Patents (sampling was conducted as to granted U.S. Patents only), the average number of claims of Japanese applications and claims of corresponding U.S. Patents were 9.7 and 12.3, respectively. In addition, 65 Japanese Patent Laid-Opens (III) (out of 80 patents) belonging to U.S. companies claimed the Convention priorities. Of these 65 patents, only 2 patents claimed a plurality of the priority rights (based on a pair of U.S. applications).

Judging from above, it is recognized that: when Japanese companies file foreign applications, they tend to consolidate a plurality of their domestic applications and use the multiple claiming system to fill up the contents of each of their applications.
In contrast with this, U.S. companies rather tend to decrease the number of the claims when they file Japanese applications (probably, to cut down on expenses).

b. <u>The Number of the Drawings (Tables 2 and 4, Figs. 2and 5 to 6)</u>

The average number of the drawings of Japanese companies and drawings of U.S. companies are 5.4 and 5.5, respectively. Consequently, there is substantially no difference.

As for each of the Sections, the average number of the drawings (0.6) in Section C is extremely low in comparison with remaining Sections, which clarifies the characteristics of the classification.

The average number of the invention drawings in U.S. Patents belonging to Japanese companies is 6.7 in each Sections, which is slightly higher than the original Japanese applications. However, taking into consideration that U.S. Patents are consolidated in single US application based on a plurality of Japanese applications, it is recognized that the average number of invention drawings of the original Japanese applications is considerably high.

There was no difference in the average number of the drawings between Japanese applications of U.S. companies and the corresponding U.S. Patents, the average number was 5.8 in each Japanese application and the corresponding U.S. Patent.

As for the number of the invention drawings/the number of independent claims: those of Japanese applications of Japanese companies, of Japanese application of U.S. companies, and of U.S. Patents of Japanese companies were 4.1, 2.2, and 3.5, respectively. As a result, it is recognized that the number of the drawings per independent claim of Japanese applications, belonging to the Japanese companies, is nearly double as many as that of the drawings per independent claim of Japanese application belonging to U.S. companies. Consequently, it is recognized that the independent claims of Japanese application of Japanese companies are filled up with drawings in comparison with Japanese applications of U.S. companies. It is recognized that the reason why the number (3.5) of U.S. Patents of Japanese companies appears to be low is mainly that the number of independent claims is increased (due to claiming a plurality of the priority rights in each application, or to addition of new claims, or to the reduced number of the drawings in each foreign application).

c. Category of the Claims (Fig. 7):

Japanese companies use 7 out of 10 categories (product: 7 categories; and method: 3 categories) through all Sections. Particularly, three categories (devices, parts, and material; chemical substance, composition, and products; and method of production) occupy approximately 90 % with respect to all the Sections on average, and one (devices, parts, and material) of these three categories, occupies greater than 50 %. As for the corresponding U.S. Patents of the Japanese companies, they show substantially the same tendency as Japanese applications of Japanese companies.

On the other hand, the U.S. companies use all the 10 categories through all Sections, and three categories (devices, parts, and material; chemical substance, composition, and products; and method of production) occupy approximately 80 % with respect to all the Sections on average. In the three categories, each utilization rate is around 30 %.

Judging from the above, it is recognized that Japanese companies prepare claims in specific categories in a considerably limited manner, whereas U.S.companies prepare various types of claims by using various categories. Particularly, U.S. companies use categories of systems, handing apparatus, method of use, and method of handling that Japanese companies do not use or scarcely use.

d. In connection with each Items, Sec. 37 (Fig. 8)

As for the condition of Japanese companies in utilization, there are considerable variations in different Sections. In all the Sections on average: the internal addition claims (conventional embodiment claims) occupies 53 %; claims in connection with the Item No. 2 (the external addition claims were counted in the same Item) occupy 25 %; claims in connection with the Item No. 3 occupy 9 %; claims in connection with the

Item No. 1 occupy 5 %; claims in connection with the Item No. 4 occupy 5 %; and claims in connection with the Item No. 5 occupy 3 %. As for the conditions of Japanese companies in utilization, in all the Sections on average, the rate is higher in internal addition. However, in different Sections, there is a low rate in internal addition in Section H and also Section H has almost the same utilization rates in the Item Nos. 1, 2, 3 and 5, which means that Items, Sec.37 are well utilized in Section H. Similarly, the rate of internal addition is relatively low in the Sections B, G and A, whereas the rate of the claims in connection with Item Nos.2 (the external addition is included), 3 and 4 is high. As for Sections C, D, E and F, the rate of internal addition is high. Particularly, for the Sections D, E and F, it is recognized that the claims in connection with each Item are seldom used.

As for the condition of U.S. companies in utilization, the rate of the internal addition is slightly higher for all Sections on average (particularly, the rate of the internal addition in Sections B and C is high). Nevertheless, it is recognized that in each Section US companies fully use claims in connection with each of the Items, Sec.37.

e. The substantially same claims and others:

Claims, which do not fall under Items, Sec. 37 and correspond to mere modifications in expression of other claims, were counted as the substantially same claims. In this case, the number of such claims was zero in Japanese Patent Laid-Opens (II) of Japanese companies, whereas the number of such claims was 68 in total in all Sections in Japanese Patent Laid-Opens (III) of U.S. companies.

The number of combination claims was one in Japanese Patent Laid-Opens (II) of Japanese companies, whereas the number of combination claims was 7 (F: 4; and G: 3) in total in all Sections of the Japanese Patent Laid-Opens (III) of U.S. companies.

There were no sub-combination claims in the Japanese Patent Laid-Opens (II) of Japanese companies, whereas the number of the sub-combination claims was 7 (A: 4; and F: 3) in total in all Sections of the Japanese Patent Laid-Opens (III) of U.S. companies.

The number of intermediate substance claims was 4 (Section C) in the Japanese Patent Laid-Opens (II), whereas the number of intermediate substance claims was 7 (C: 4; and D: 3) in total in all Sections of Japanese Patent Laid-Opens (III) of U.S. companies.

Of the 110 Japanese Patent Laid-Opens (II), 11 (A: 3; B: 3; C: 3; and H: 2) claimed the domestic priority rights.

(5) Conclusion of the Investigation:

In comparison with U.S. companies, Japanese companies scarcely use the multiple claiming system. Under such circumstances, it is recognized that Section C has a higher utilization rate and a greater average number of claims than the other Sections. This shows a higher utilization condition of the multiple claiming system in Section C.

With respect to drawings, Japanese companies have a high average number of drawings and thus have a considerably high utilization condition for drawings, which is almost equivalent to U.S. companies.

With respect to categories, Japanese companies are inferior in the variety of patent claims to U.S. companies.

With respect to claims in connection with Sec. 37, they are used well with balance by Japanese companies in Section H. However, in different Sections, Japanese companies show an uneven utilization thereof. In contrast with this, it is recognized that, as a whole, U.S. companies prepare claims in a fine-drawing manner.

With respect to the substantially same claims (except those classified in Item No. 2, Sec. 37), Japanese companies do not use them,

whereas they are used frequently by U.S. companies.

As described above, U.S. companies prepared many-sided claims in a fine-drawing manner to obtain patents, which were strong in both offensive and defensive aspects. Consequently, it is recognized that there is a difference in utilization conditions of the multiple claiming system in Japan between Japanese companies and U.S. companies. We expect the Japanese companies to use the multiple claiming system more frequently in the future.

Though we have performed a substantial statistical analysis in the above, we recognize that it is necessary to perform individual comparisons and analysis of the contents with respect to specific Sections.

TABLE－1 Utilization Rate of the Multiple Claiming System

Number of samples

		Secions	A	B	C	D	E	F	G	H	Total
JPCOMP	JPPAT	Single claim (A)	9	6	2	9	11	8	9	7	61
		Plural claims (B)	7	6	11	1	3	6	9	6	49
		B／(A＋B) × 100 (%)	44	50	85	10	21	43	50	46	45
	USPAT	Single claim (A)	0	1	1	0	1	0	0	1	4
		Plural claims (B)	10	9	9	10	9	10	10	9	76
		B／(A＋B) × 100 (%)	100	70	90	100	90	90	80	90	95
USCOM	JPPAT	Single claim (A)	0	3	1	0	1	1	2	1	9
		Plural claims (B)	10	7	9	10	9	9	8	9	71
		B／(A＋B) × 100 (%)	100	70	90	100	90	90	80	90	89

Note

JP PAT : Published unexamined Japanese Patent Laid-Opens
US PAT : Registered United States Patent

TABLE－2 (1) A Tabulation of the Number of Claims and Drawings (Japanese Companies)

Sections	A	B	C	D	E	F	G	H	Total
No. of samples * (total) (A)	16 (19)	12 (17)	13 (17)	10 (10)	14 (14)	14 (14)	18 (18)	13 (15)	110 (127)
No. of claims (total) (B)	28	27	56	15	21	31	40	27	245
Av. No. of claims (C＝B／A)	1. 8	2. 3	4. 3	1. 5	1. 5	2. 2	2. 2	2. 1	2. 2
No. of independent claims (Total)	21	16	19	10	14	14	24	25	143
Av. No. of independent claims	1. 3	1. 3	1. 5	1. 0	1. 0	1. 0	1. 3	1. 9	1. 3
No. of drawings (total) (D)	71	89	9	76	97	89	122	66	672
Av. No. of drawings (E＝D／A)	4. 4	7. 4	0. 7	7. 6	6. 9	6. 5	6. 8	5. 1	6. 1
Drawings covering invention(total)	67	77	8	74	81	77	99	55	589
Av. drawings covering invention	4. 2	6. 4	0. 6	7. 4	5. 8	5. 5	5. 5	4. 2	5. 4
Drawsings covering invention v. independent claims	3. 2	4. 8	0. 4	7. 4	5. 8	5. 5	4. 1	2. 2	4. 1

* : Numbers in parenthesis include applications withdrawn as a result of claming domestic priority

TABLE－2 (2) A Tabulation of the Number of Claims and Drawings (the Corresponding U.S. Patents of Japanese Companies)

Sections	A	B	C	D	E	F	G	H	Total
No. of samples * (total) (A)	10	10	10	10	10	10	10	10	80
No. of claims (total) (B)	84	86	70	145	65	119	105	86	760
Av. No. of claims (C＝B／A)	8. 4	8. 6	7. 0	14. 5	6. 5	11. 9	10. 5	8. 6	9. 5
No. of independent claims (Total)	17	18	13	21	13	21	26	23	152
Av. No. of independent claims	1. 7	1. 8	1. 3	2. 1	1. 3	2. 1	2. 6	2. 3	1. 9
No. of drawings (total) (D)	64	87	12	81	98	79	101	70	592
Av. No. of drawings (E＝D／A)	6. 4	8. 7	1. 2	8. 1	9. 8	7. 9	10. 1	7. 0	7. 4
Drawings covering invention(total)	64	77	11	78	93	72	75	62	532
Av. drawings covering invention	6. 4	7. 7	1. 1	7. 8	9. 3	7. 2	7. 5	6. 2	6. 7
Drawsings covering invention v. independent claims	3. 8	4. 3	0. 8	3. 7	7. 2	3. 4	2. 9	2. 7	3. 5

TABLE－2 (3) A Tabulation of the Number of Claims and Drawings (U.S.compaines)

Sections	A	B	C	D	E	F	G	H	Total
No. of samples * (total) (A)	10	10	10	10	10	10	10	10	80
No. of claims (total) (B)	201	80	109	133	154	87	65	107	936
Av. No. of claims (C＝B／A)	20. 1	8. 0	10. 9	13. 3	15. 4	8. 7	6. 5	10. 7	11. 7
No. of independent claims (Total)	36	24	16	29	30	23	18	27	203
Av. No. of independent claims	3. 6	2. 4	1. 6	2. 9	3. 0	2. 3	1. 8	2. 7	2. 5
No. of drawings (total) (D)	16	95	16	27	83	67	56	90	456
Av. No. of drawings (E＝D／A)	1. 6	9. 5	1. 6	2. 7	8. 3	6. 7	5. 6	9. 0	5. 7
Drawings covering invention(total)	15	90	16	27	83	64	51	86	438
Av. drawings covering invention	1. 5	9. 0	1. 6	2. 7	8. 3	6. 4	5. 1	8. 6	5. 5
Drawsings covering invention v. independent claims	0. 4	3. 8	1. 0	0. 9	2. 8	2. 8	2. 8	3. 2	2. 2

TABLE－3（1） No. of applications claiming priority rights
（USP of Japanese companies）

No. of samples

Section	A	B	C	D	E	F	G	H	Total
USP without claiming priority rights									
USP claiming one priority right	2	4	6	10	8	7	7	6	50
USP claiming 2 priority rights	3	5	2			2	1	3	16
USP claiming 3 priority rights	4	1	1		2	1	1	1	11
USP claiming 4 priority rights	1		1						2
USP claiming 5 priority rights							1		1

TABLE－3（2） No. of applications claiming priority rights
（JP PAT of US companies）

No. of samples

Section	A	B	C	D	E	F	G	H	Total
JP PAT without claiming priority rights	1	2	3	3	1	3	2		15
JP PAT claiming one priority right	8	8	7	6	9	7	8	10	63
JP PAT claiming 2 priority rights	1			1					2

TABLE－4（1） The Number of Claims and Drawings of Japanese Companies

Sections		A	B	C	D	E	F	G	H	Total
Number of samples	JP PAT	16	12	13	10	14	14	18	13	110
	US PAT	10	10	10	10	10	10	10	10	80
Number of claims	JP PAT	28	27	56	15	21	31	40	27	245
	US PAT	84	86	70	145	65	119	105	86	760
Av. Number of claims	JP PAT	1.8	2.3	4.3	1.5	1.5	2.2	2.2	2.1	2. 2
	US PAT	8.4	8.6	7.0	14.5	6.5	11.9	10.5	8.6	9. 5
Number of drawings	JP PAT	71	89	9	76	97	89	122	66	672
	US PAT	64	87	12	81	98	79	101	70	592
Av. Number of drawings	JP PAT	4.4	7.4	0.7	7.6	6.9	5.5	5.5	4.2	5. 4
	US PAT	6.4	8.7	1.2	8.1	9.8	7.9	10.1	7.0	7. 4

TABLE－4（2） The Number of Claims and Drawings of U.S. Companies

Sections		A	B	C	D	E	F	G	H	Total
Number of samples	US PAT	4	7	6	6	6	8	5	4	46
	JP PAT	4	7	6	6	6	7	5	4	45
Number of claims	US PAT	63	77	60	83	69	111	71	34	568
	JP PAT	76	42	61	35	65	68	42	30	419
Av. Number of claims	US PAT	15.8	11.0	10.0	13.8	11.5	13.9	14.2	8.5	12. 3
	JP PAT	19.0	6.0	10.2	5.8	10.8	9.7	8.4	7.5	9. 7
Number of drawings	US PAT	8	72	14	28	40	59	26	32	279
	JP PAT	8	80	9	19	47	54	23	31	271
Av. Number of drawings	US PAT	2.0	10.3	2.3	4.7	6.7	7.4	5.2	8.0	5. 8
	JP PAT	2.0	11.4	1.5	3.2	7.8	7.7	4.6	7.8	5. 8

FIG 1 The Average Number of Patent Claims
of both Japanese and U S Companies

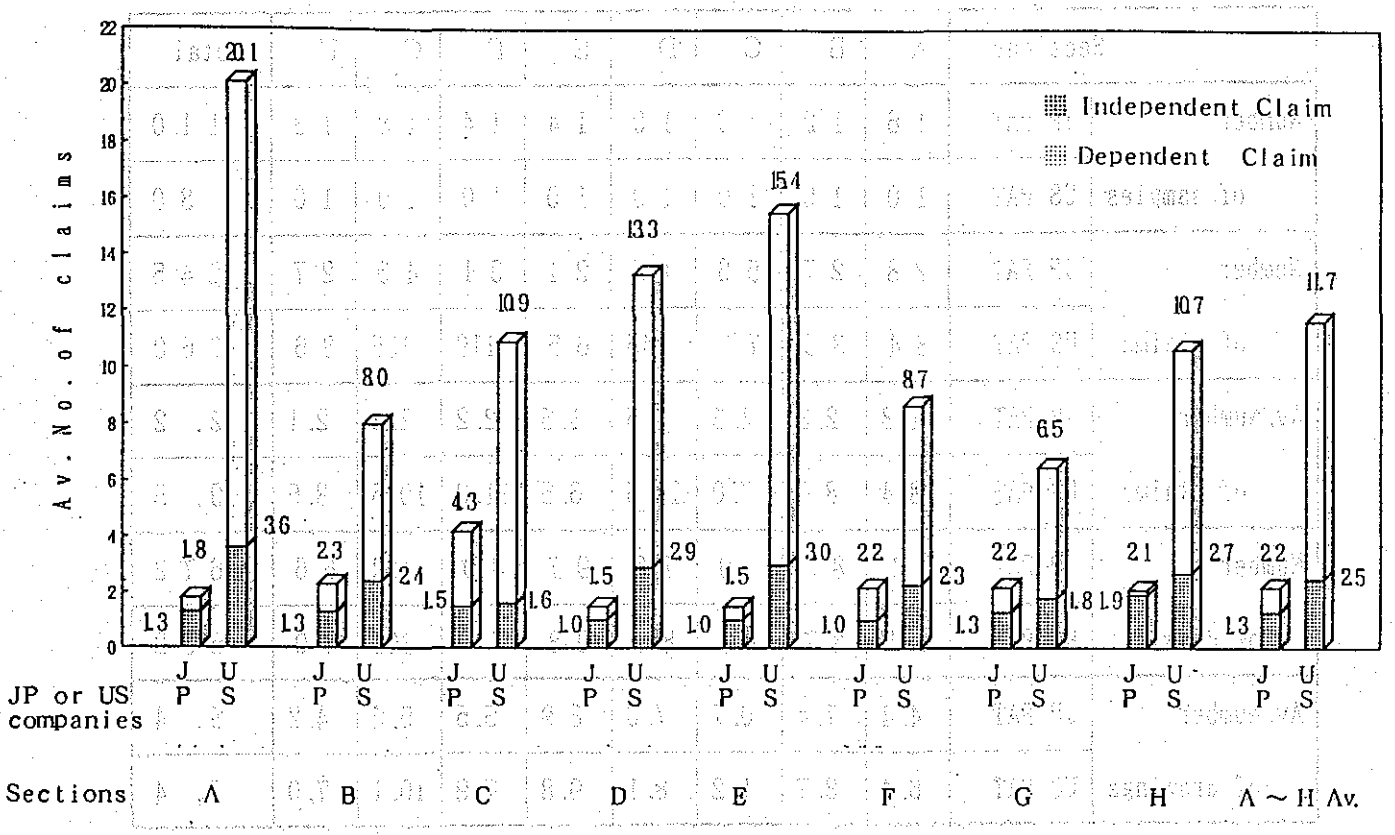


FIG 2 The Average Number of Drawings in Patents
of both Japanese and U S Companies

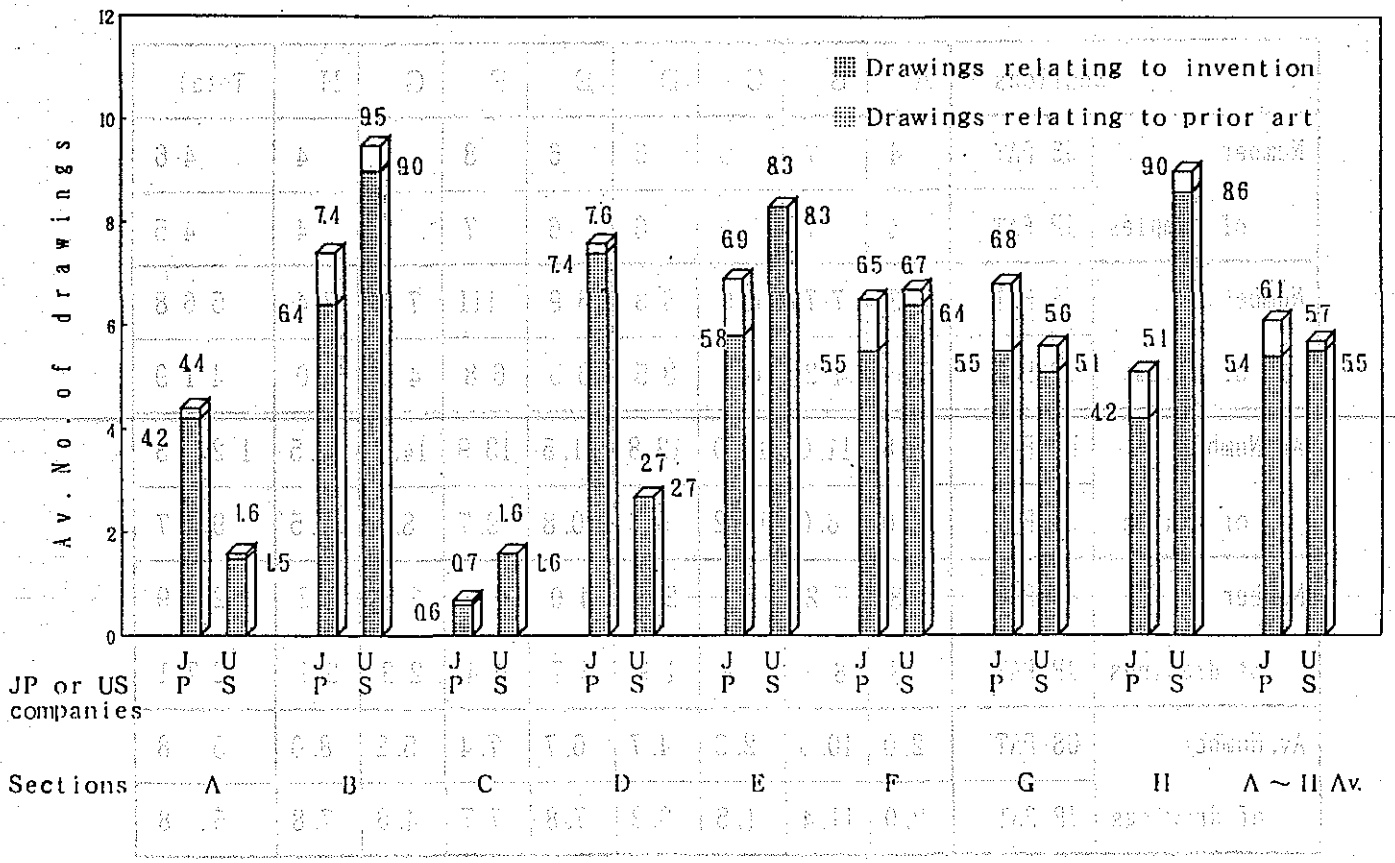


FIG 3 The Average Number of claims in both Japanese and U S Patents Belonging to Japanese Companies

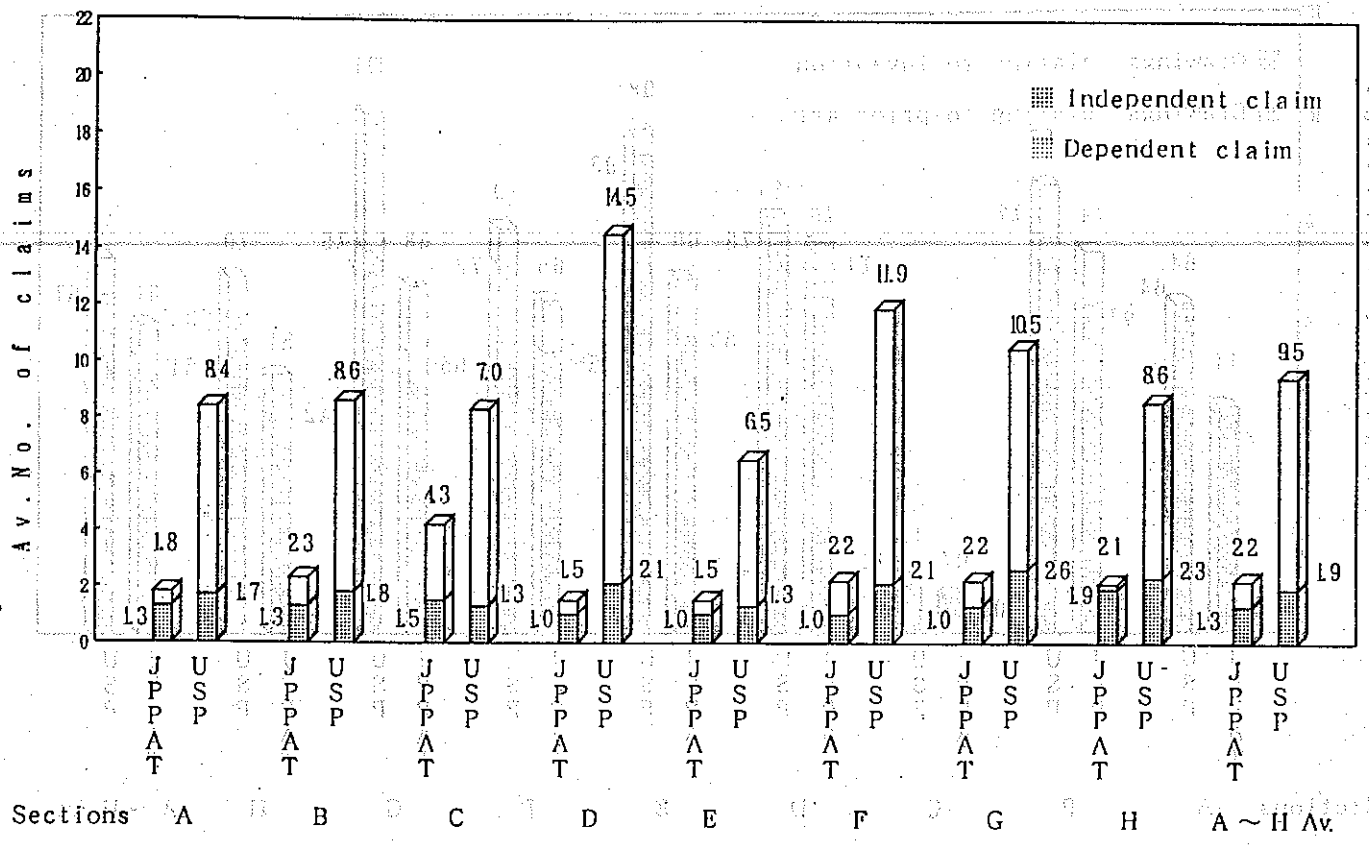


FIG 4 The Average Number of claims in both Japanes and U S Patents belonging to U S Companies

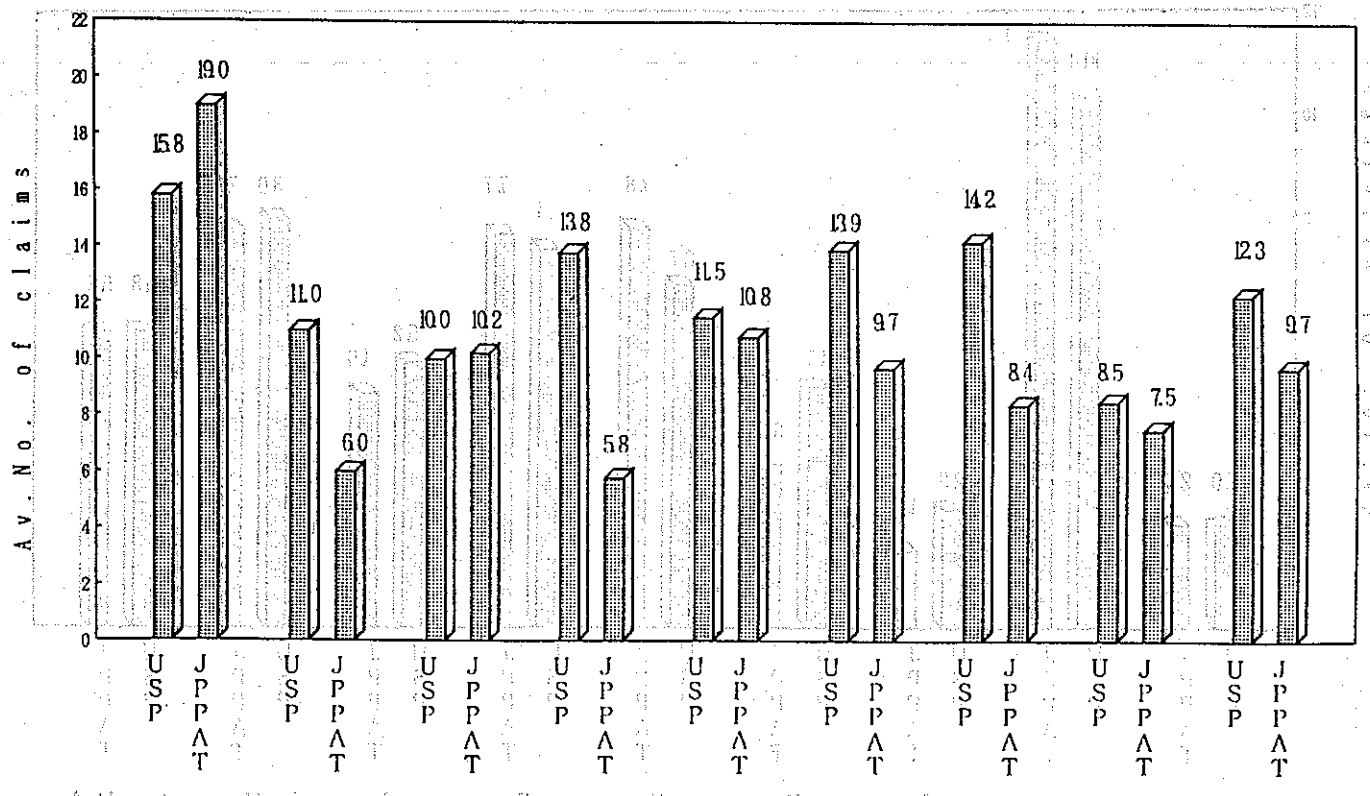


FIG 5 The Average Number of Drawings in both Japanese and U.S. Patents Belonging to Japanese Companies

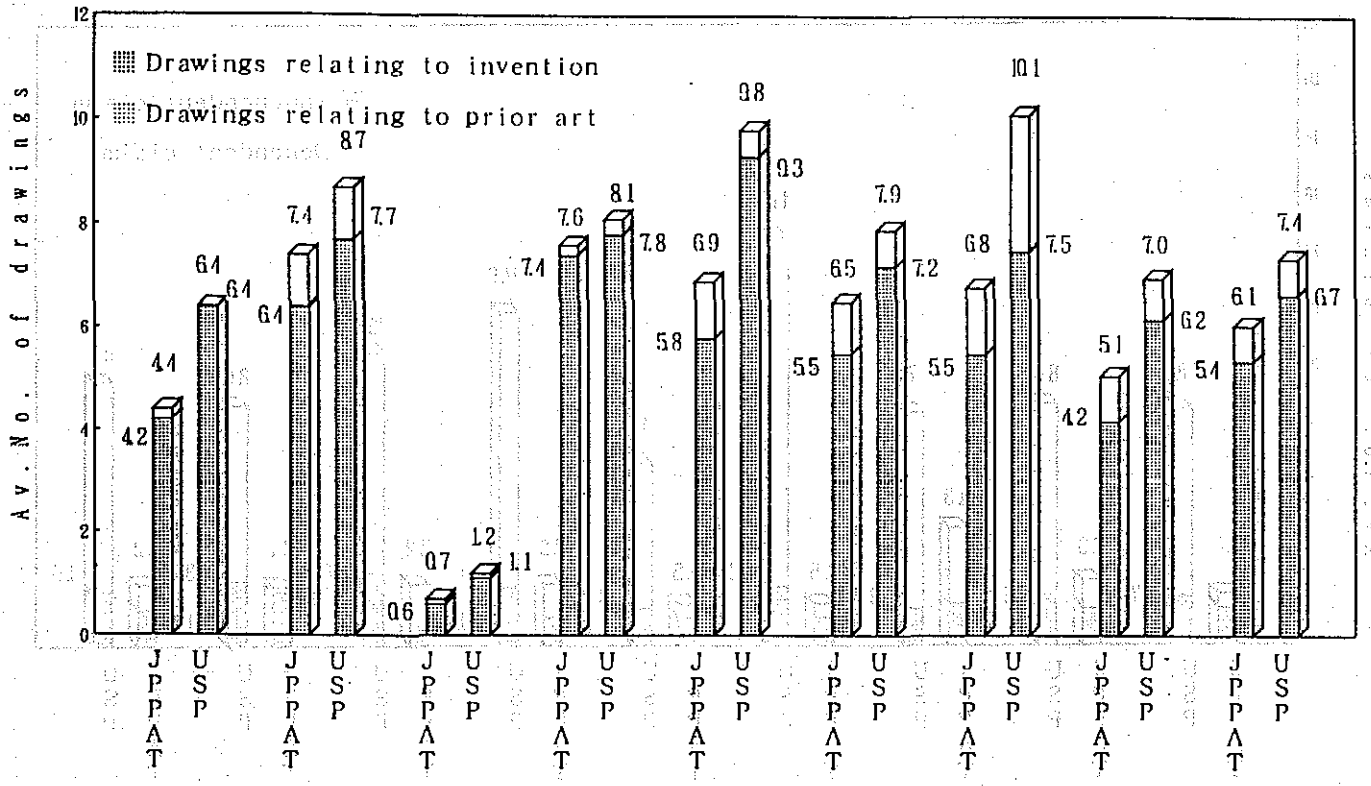


FIG 6 The Average Number of Drawings in both Japanese and U.S. Patents Belonging to U.S. Companies

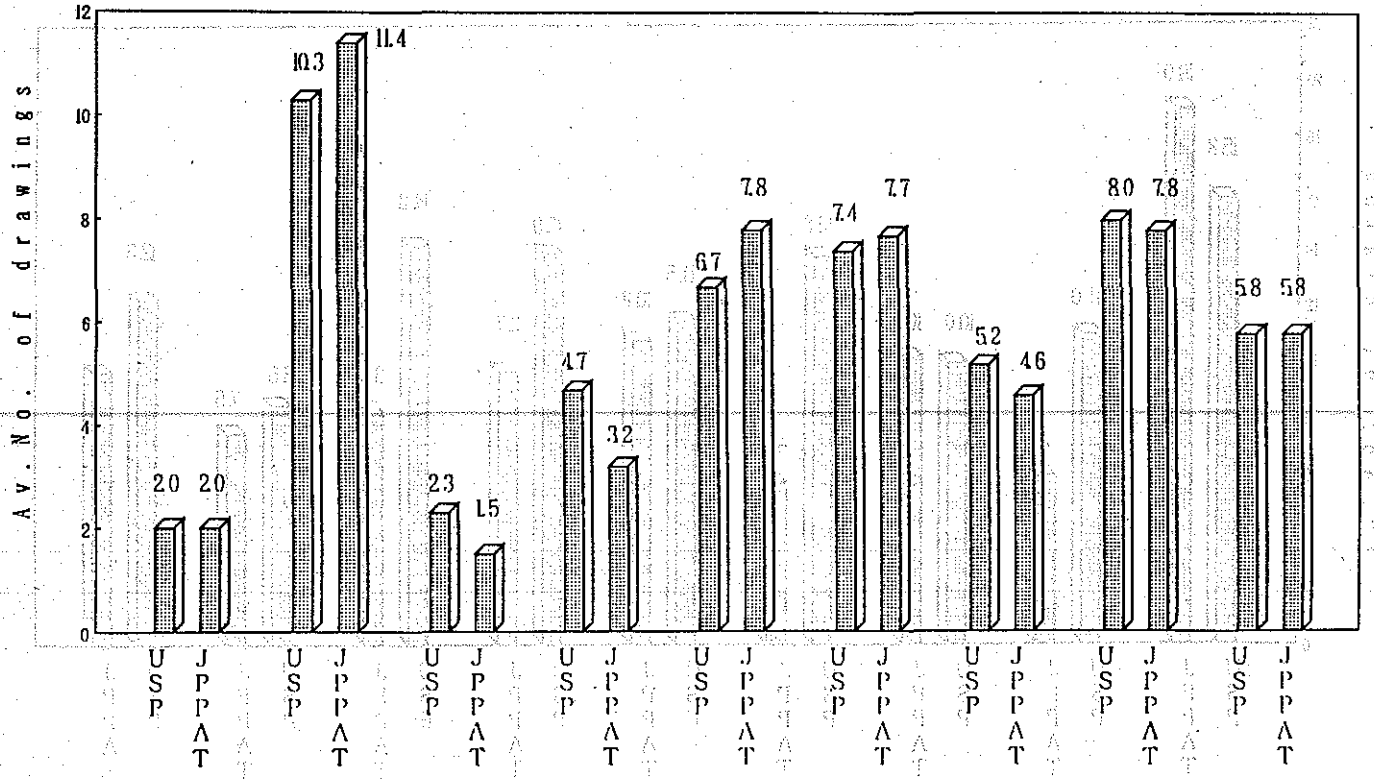


FIG. 7 (1) The Analysis of the Contents (Category) of the Patent Claims of Japanese Companies

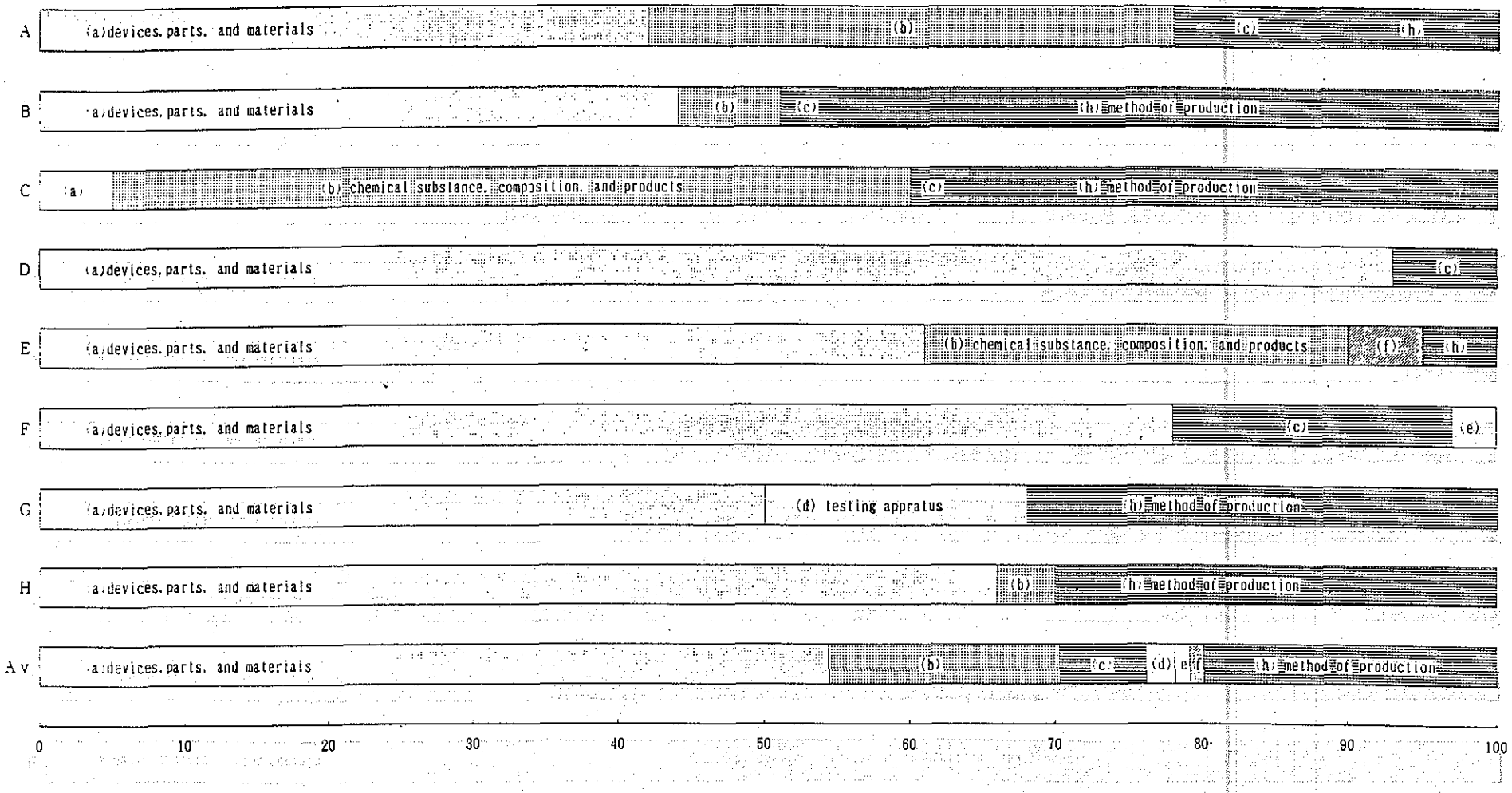


FIG. 7 (2) The Analysis of the Contents (Category) of the Patent Claims of U.S. Companies

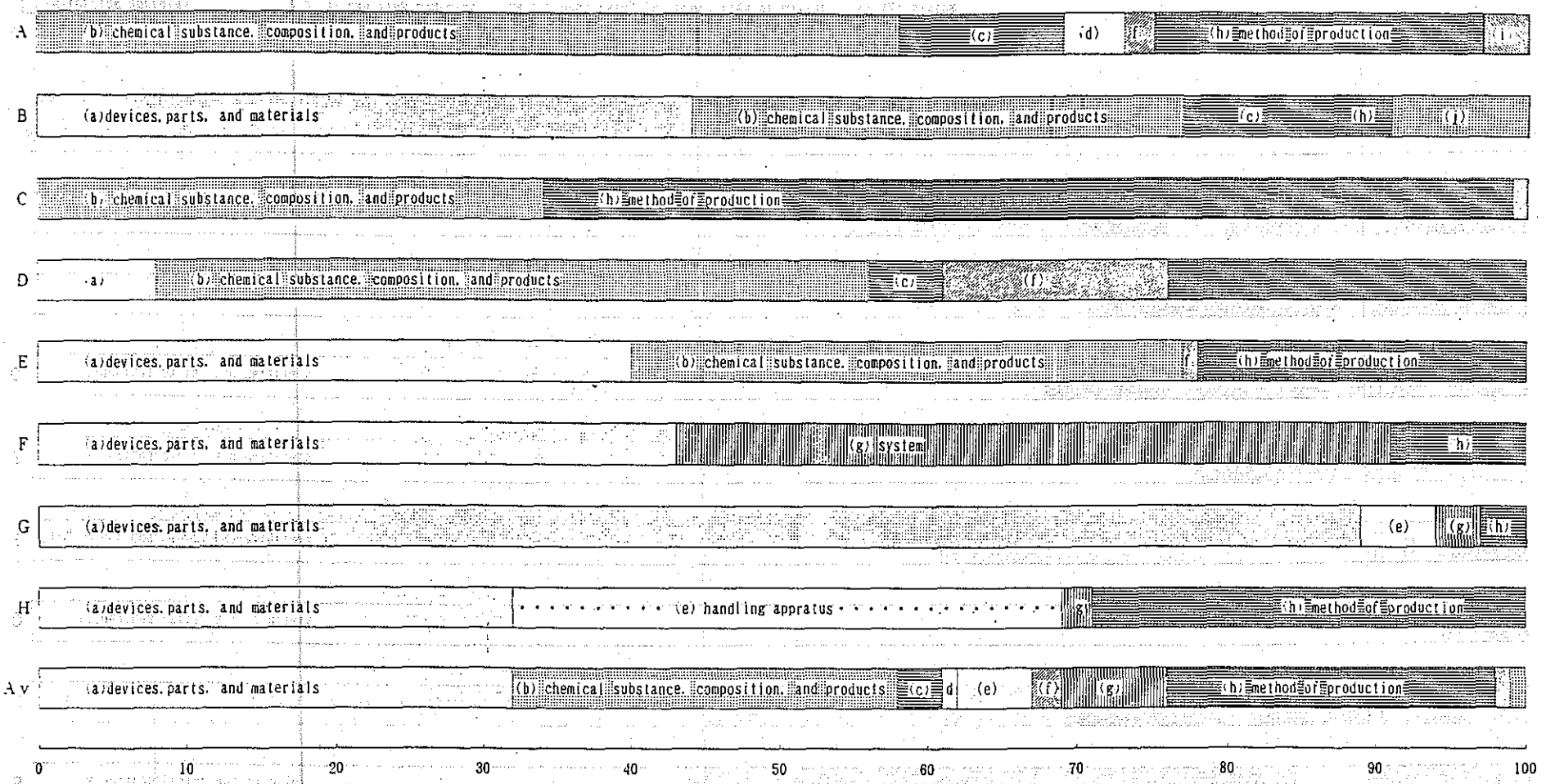


FIG. 7 (3) The Analysis in Contents (Category) of the Claims in the Patents (the Corresponding U.S.Patents) of Japanese Companies

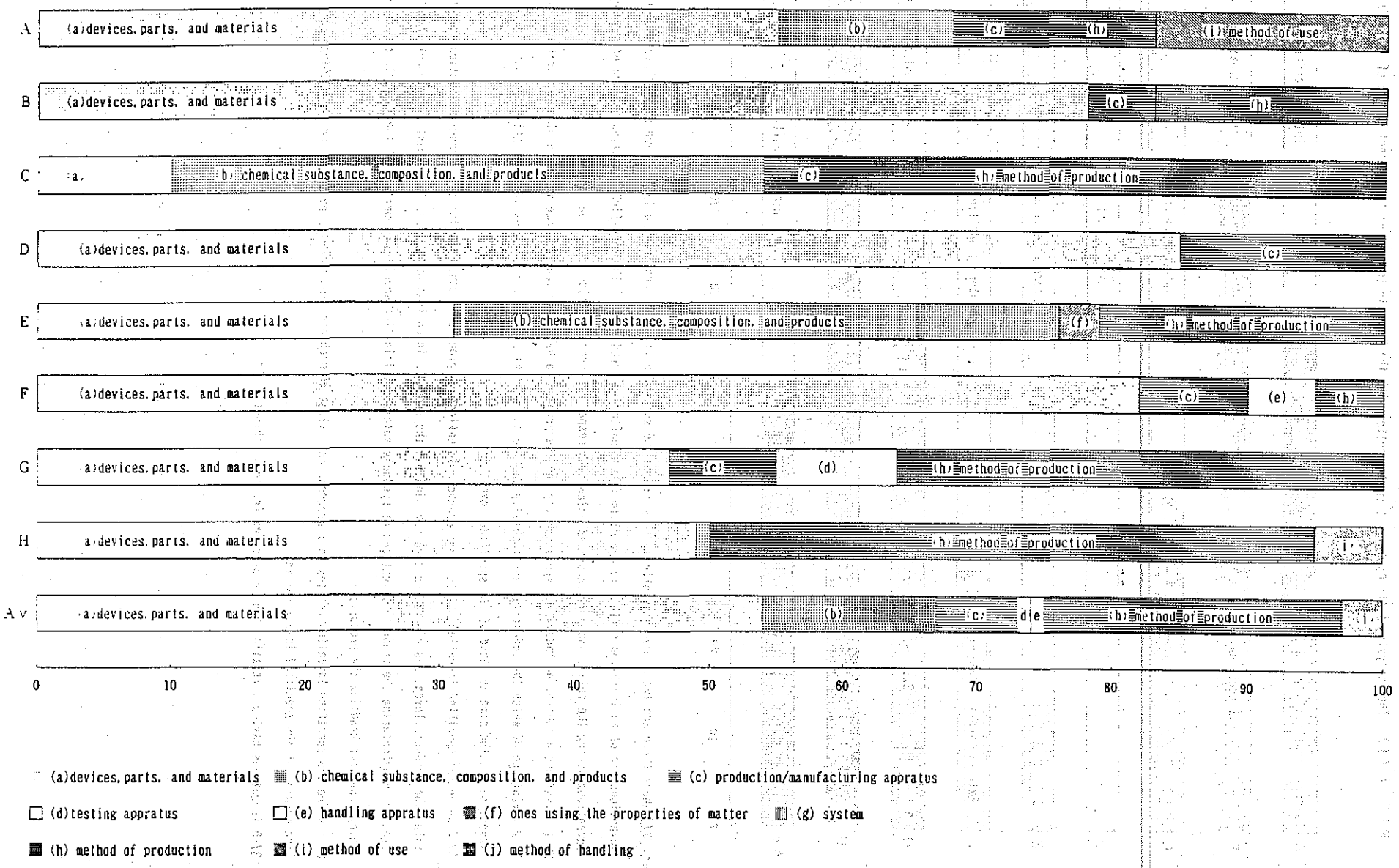
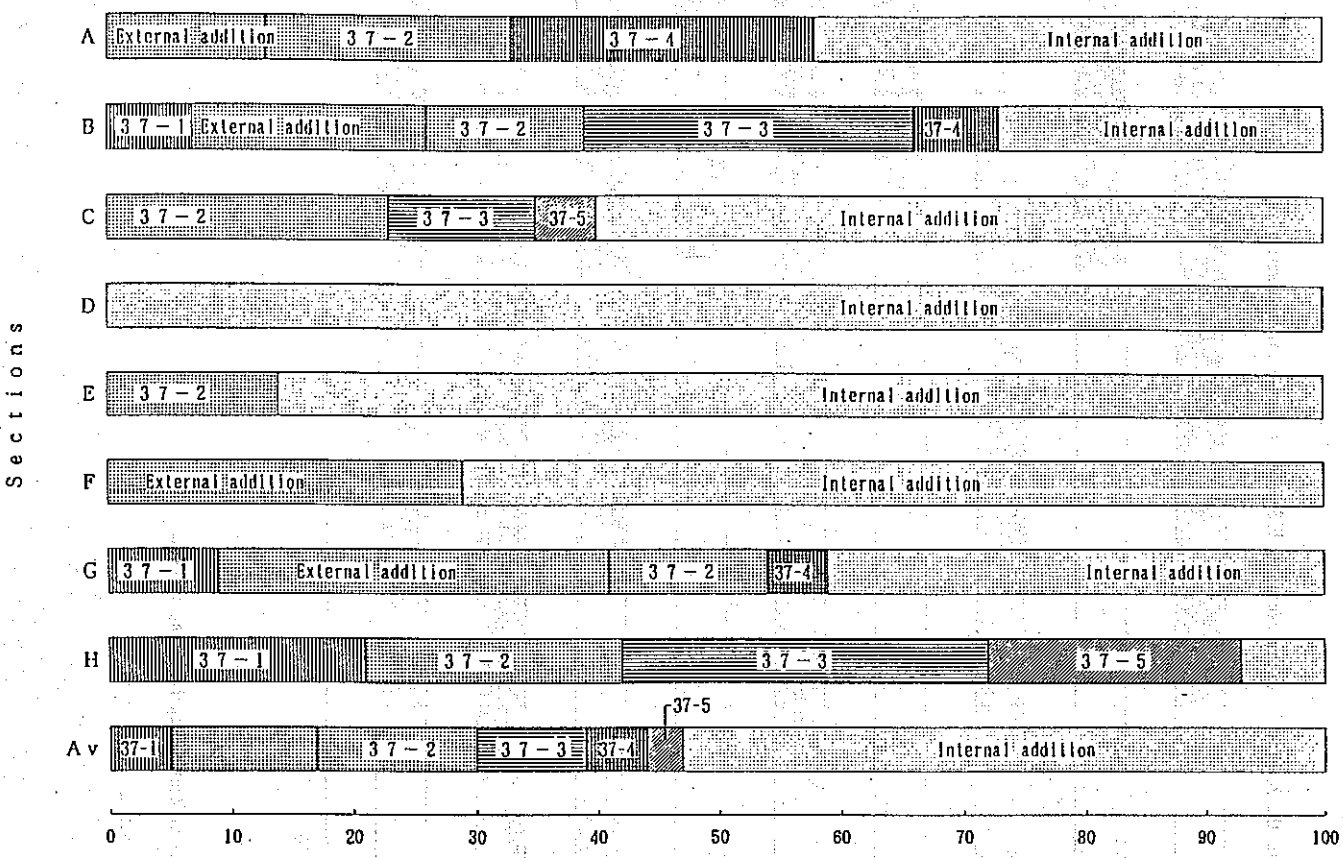


FIG. 8 (1) The Analysis of the Contents (in Connection with the Specific Inventions) of Patent Claims of Japanese Companiese



Sec. 37 Where there are two or more inventions, they may be the subject of a patent application in the same request provided that these inventions are of an invention claimed in one claim (hereinafter referred to as " the specified invention ") and of another or other inventions having the relationship as indicated below with respect to such specified invention : ——

37-1 inventions of which the industrial applicability and the problem to be solved are the same as those of the specified invention;

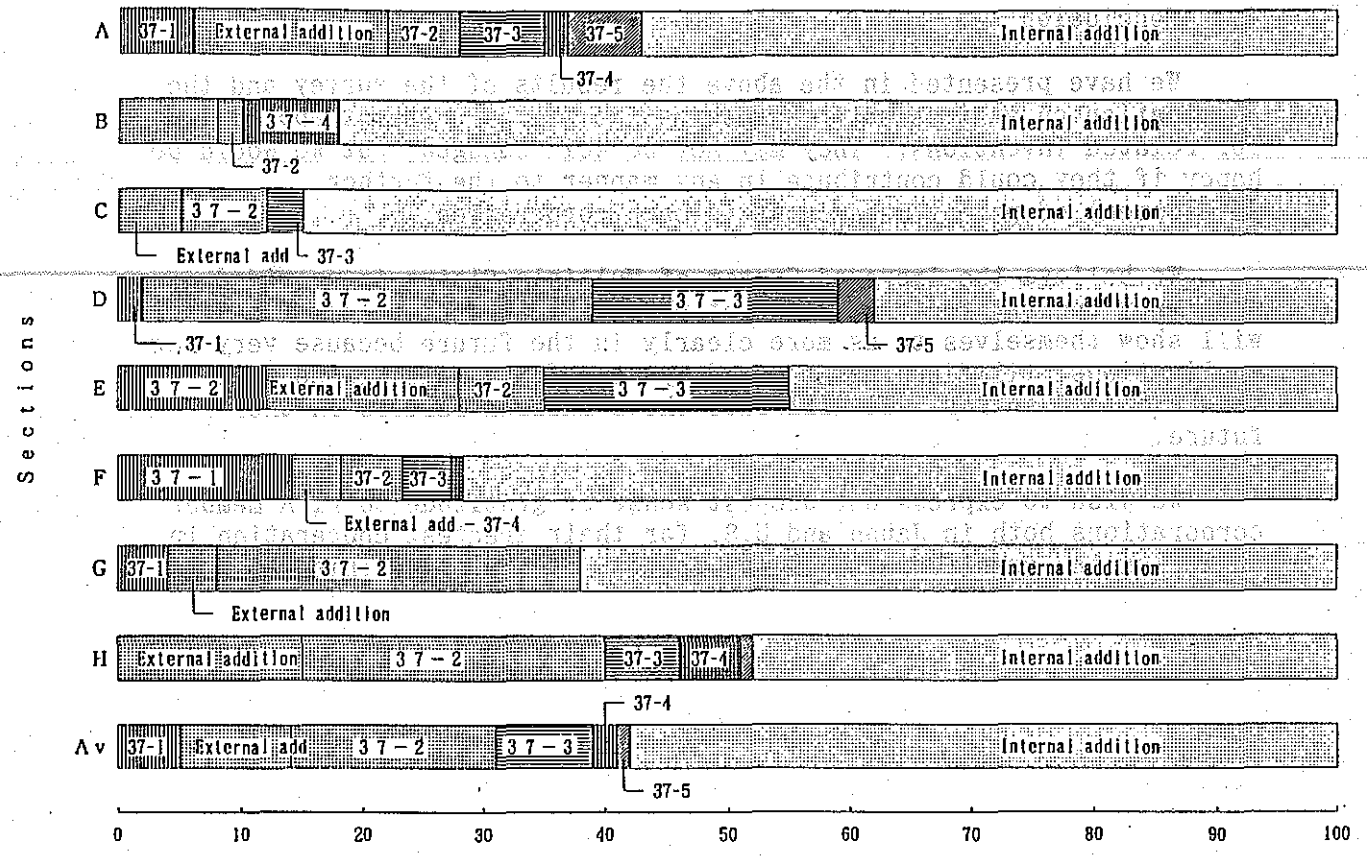
37-2 inventions of which the industrial applicability and the substantial part of the features indispensable for constitution of the invention are the same as those of the specified invention;

37-3 where the specified invention relates to a product, inventions of process of manufacturing the product, inventions of process of using the product, inventions of process used for handling the product, inventions of machine, instruments, equipment or other things used for manufacturing the product, inventions of products solely utilizing the specific properties of the product, or inventions of things used for handling the product;

37-4 where the specified invention relates to a process, inventions of machines, instruments, equipment or other things used directly in the working of the specified invention; and

37-5 inventions having a relationship as provided for in a cabinet order.

FIG. 8 (2) The Analysis of the Contents (in Connection with the Specific Inventions) of Patent Claims of U.S. Companies



Sec. 37- Where there are two or more inventions, they may be the subject of a patent application in the same request provided that these inventions are of an invention claimed in one claim (hereinafter referred to as " the specified invention ") and of another or other inventions having the relationship as inducated below with respect to such specified invention : ——

37-1 inventions of which the industrial applicability and the problem to be solved are the same as those of the specified invention;

37-2 inventions of which the industrial applicability and the substantial part of the features indispensable for constitution of the invention are the same as those of the specified invention;

37-3 where the specified invention relates to a product, inventions of process of manufacturing the product, inventions of process of using the product, inventions of process used for handling the product, inventions of machine, instruments, equipment or other things used for manufacturing the product, inventions of products solely utilizing the specific properties of the product, or inventions of things used for handling the product;

37-4 where the specified invention relates to a process, inventions of machines, instruments, equipment or other things used directly in the working of the specified invention; and

37-5 inventions having a relationship as provided for in a cabinet order.

4. Conclusion

We have presented in the above the results of the survey and the examination on various matters relevant to filing a patent application for related inventions. They may not be well managed, but we would be happy if they could contribute in any manner to the further development of patent management in each corporation.

We believe the Improved System of Multiple Claims is provided with many unclear factors. And yet we believe these unclear factors will show themselves to us more clearly in the future because very few applications utilizing the Improved System of Multiple Claims have been examined so far. We will face these unclear factors in the future.

We wish to express our deepest sense of gratitude to PIPA member corporations both in Japan and U.S. for their greatest cooperation in answering the questionnaire in the process of preparing this paper.

PIPA DATABASE Coversheet

(1) Title: The Proper Organization and Content of the "Description" Portion of a U.S. Patent Specification

(2) Date: August 14, 1992

(3) Source:
1) Source: PIPA
2) Group: United States
3) Committee: No. 1

(4) Author: Jack E. Haken - U.S. Philips Corp.

(5) Key Words: Patents, Written Description, Best Mode, Enablement, Computers

(6) Statutory Provisions: 35 U.S.C. 112

(7) Abstract: The paper surveys the present law with respect to the "description" part of a patent application with particular attention to the requirements for written description, enablement and best mode. Specific guidelines for the written description of a computer-related invention are discussed.

New Paper

The Proper Oganization and Content of the "Description" Portion of a U. S. Patent Application

This paper will review the requirements for the "description" portion of a United States patent application. I will first review the statutory provisions and recent case law and then make some specific suggestions with respect to patent applications for electronic systems and software related inventions.

The statutory requirements for patent specification are set forth in 35 U.S.C. 112. The first paragraph of section 112 states:

> "The specification shall contain a **written description** of the invention, and of the **manner and process of making and using** it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use same and shall set forth the **best mode** contemplated by the inventor for carrying out his invention. " (Emphasis added)

the essential element of the specification are therefore:

- the written description;
- the manner and process of making and using (i.e. enablement); and
- best mode.

Written Description

The requirement for a written description of the invention is separate and distinct from the requirement for enablement. It is possible for a specification to enable the practice of an invention as broadly as it is claimed and still not describe the invention (*Re Di Leone*, 436 F2d 1404, 168 USPQ 592, 693 (1971 CCPA)). For example, a specification which describes one chemical compound might enable a person skilled in the art to make and use other related compounds which have not been explicitly named or described. Inasmuch as the original claims of a patent application may be used to supplement the description without raising questions of new matter, the sufficiency of the written description usually is only questioned in cases where the substance of the claims is broadened or changed by amendment, in interferences, or where an applicant is attempting to obtain the benefit of an

earlier application filing date under 35 U.S.C. 119 Or 35 U.S.C. 120. (*Northern Telecom Inc. v. Data Point Corporation*, 908 F2d 931, 15 USPQ 2d 1321, 1326 (CAFC 1990)).

The essence of the written description requirement is that an application must contain sufficient disclosure, express or inherent, to make it clear to one skilled in the art that the patentee was in possession of the claimed subject matter at the time of filing the application (*Plastic Container Corp. V. Continental Plastics of Oklahoma, Inc.*, 607 F2d 885, 203 USPQ 27 (1979, CA10 Okla.) *Texas Instruments, Inc. v. U.S. Int'l. Trade Commission*, 871 F2d 1054, 10 USPQ 2d 1257 (CAFC 1989)). However, the specification does not have to expressly include matters which are commonly understood by persons skilled in the art. For example, the disclosure in a subsequent patent application of an inherent property of a product does not deprive the product of the benefit of an earlier filing date.

Compliance with the written description requirement is a question of fact which is decided on a case-by-case basis.

Enablement

The specification must also contain a description which is sufficient to enable one who was skilled in the pertinent art on the date the application was filed to make and use the invention. The specification need not teach, and preferably omits, what is known in the art (*Hybritech, Inc. v Monoclonal Antibodies, Inc.*, 802 F2d 1367, 231 USPQ 81 (CAFC 1988)). However, skilled persons must be able to practice the invention based on the specification without undue experimentation. The applicant is not required to explain the scientific principles which underlie his invention nor is he required to show that his invention has any advantages over the prior art.

Compliance with the enablement requirement is a question of law, but there may be and often are underlying fact issues which must be resolved (*Amgen, Inc. v Chugai Pharmaceutical Co. Ltd.* 927 F2d 1200, 18 USPQ 2d 1016 (CAFC 1991)).

The requirements for an enabling disclosure under 35 U.S.C. 112 are more strict than those which would be

sufficient to anticipate a claim under 35 U.S.C. 102 (*Chester v. Miller*, 906 F2d 1574, 15 USPQ 2d 1333 (CAFC 1990)).

Best Mode

The purpose of the best mode requirement is to restrain inventors from applying for patents while at the same time concealing from the public preferred embodiments of their inventions which they have in fact conceived. (*In re Gay*, 50 CCPA 725, 309 F2d 769, 135 USPQ 311 (CCPA 1962)). There is no requirement that the best mode disclosed in fact be the optimum mode of carrying out the invention. Even if there is a better mode, the patentee's failure to disclose it will not invalidate the patent if he does not know or does not appreciate that it is the best mode.

Compliance with the best mode requirement is a question of fact. The patentee must disclose the best mode known to him even if it is the invention of another (*Consolidated Aluminum Corp. V. Foseco International Ltd.*, 910 F2d 804, 15 USPQ 2d 1481 (CAFC 1990)). The disclosure must set forth the best mode in sufficient detail to enable a person skilled in the art to practice that best mode with reasonable effort.

Relevant data cannot be omitted from the patent application merely because it is characterized as "manufacturing data" "customer requirements" or even "trade secret". Information necessary to practice the best mode simply must be disclosed. (*Kempcast Corp. V. Arco Industries Corp.*, 913 F2d 923, 16 USPQ 2d 1033 (CAFC 1990)).

Organization

The Patent Office guidelines for drafting a patent application are set forth in §601 of the Manual of Patent Examining Procedure (Appendix I). The written description part of the specification is usually divided into three sections: the Background of the Invention which includes the Field of Invention and a Description of the Related Art, the Summary of the Invention, and the Description of the Preferred Embodiment(s).

Although not explicitly required by U.S. Law, it is generally good practice to include in the Summary of the Invention section, some objects of the invention and a brief discussion of how the invention differs from the prior art. The enablement and best mode requirements of §112 are

typically addressed in the Description of the Preferred Embodiment(s).

The written description must provide support for every element of every claim in the application. Therefore it is certainly good practice to diagram all claims and cross-check the written description for support of each of the diagrammed elements.

Computer Related Cases

The Northern Telecom case (*Northern Telecom, Inc. v. Data Point Corp.*) *supra* provided some guidance as to the degree of disclosure needed to enable a computer program that implements a claimed device or method. That case held that:

- the amount of disclosure that is necessary to enable practice of an invention that utilizes a computer program may vary according to (1) the nature of the invention, (2) the role of the program in carrying it out and (3) the complexity of the contemplated programming; and
- the possible design of superior software, or whether each programmer would work out the details in an identical

way, is not relevant in determining whether the inventor has complied with the enablement requirement.

Practitioners should also be aware of the Patent Office regulations set forth in MPEP §2106.02 for disclosure in computer programming cases (Appendix II) as well as the informal guidelines published by Examining Group 230 which reviews computer related applications (Appendix III).

Special problems arise when dealing with electronic systems and computer program inventions which are often described in terms of "black boxes". While this practice certainly simplifies the description of complicated systems, it is fraught with danger from the standpoint of enablement. In our office, we advise our attorneys that black box diagrams should only be used when the content of each box is either is available as a catalog component or software module or is adequately described in a single prior art publication. If this is not the case, the relevant black box should be expanded with additional drawings and written description until the individual components satisfy this requirement. While the applicant is ordinarily permitted to coin names for the various black boxes, this can be self-defeating if it

later becomes necessary to refer to commercial products or published descriptions. Thus, the terminology used in the written description should track that used by component manufacturers and prior authors. In the same manner, it is particularly dangerous to use the same name to describe two black boxes which have substantially different functions.

At this time the Patent Office informally discourages applicants from listing computer source and/or object code in patent applications and states that, from an examination standpoint, inclusion of source code will not guarantee compliance with the enablement requirement. On the other hand, if the inventor has actually written code at the time the application is filed, failure to include a listing is an invitation for a best mode challenge during an interference or litigation. As a general rule we include a listing of relevant source code modules as an appendix to the specification.

Also note that despite Group 230's guidelines which suggest that programmer's comments be included with listings, we discourage this practice. We find that these remarks are often outdated or irrelevant and have potential for causing

problems if the patent should wind up in interference or litigation.

GUIDELINES FOR DRAFTING A MODEL PATENT APPLICATION

The following guidelines illustrate the preferred layout and content of patent applications. These guidelines are suggested for the applicant's use.

Arrangement and Contents of the Specification

The following order of arrangement is preferable in framing the specification and, except for the title of the invention, each of the lettered items should be preceded by the headings indicated.

(a) Title of the Invention.

(b) Cross-References to Related Applications (if any).

(c) Statement as to rights to inventions made under Federally-sponsored research and development (if any).

(d) Background of the Invention.
1. Field of the Invention.
2. Description of related art including information disclosed under §§1.97-1.99.

(e) Summary of the Invention.

(f) Brief Description of the Drawing.

(g) Description of the Preferred Embodiment(s).

(h) Claim(s).

(i) Abstract of the Disclosure.

Content

(a) Title of the Invention: (See 37 CFR 1.72(a).) The title of the invention should be placed at the top of the first page of the specification. It should be brief but technically accurate and descriptive preferably from two to seven words.

(b) Cross-References to Related Applications: (See 37 CFR 1.78 and MPEP § 201.11.)

(c) Statement as to rights to inventions made under Federally sponsored research and development (if any): (See MPEP § 310).

(d) Background of the Invention: The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions. The statement should be directed to the subject matter of the claimed invention. This item may also be titled "Technical Field".

(2) Description of the related art including information disclosed under 37 CFR 1.97- 37 CFR 1.99: A paragraph(s) describing to the extent practical the information known to the applicant, including references to specific documents where appropriate. Where applicable, the problems involved in the information disclosed which are solved by the applicant ┌s invention, should be indicated. This item may also be titled "Background Information".

(e) Summary of the Invention: A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the

disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the art (and preferably indicated in the Background of the Invention). In chemical cases the summary should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention. This item may also be titled "Disclosure of Invention".

(f) Brief Description of the Drawing(s): A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(g) Description of the Preferred Embodiment(s): A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to adequately and accurately describe the invention. This item may also be titled "Best Mode for Carrying Out the Invention".

Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field to which the invention pertains, form a part of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

2106.02 Disclosure in Computer Programming Cases [R-6]

To establish a reasonable basis for questioning the adequacy of a disclosure, the examiner must present a factual analysis of a disclosure to show that a person skilled in the art would not be able to make and use the claimed invention without resorting to undue experimentation.

In computer cases, it is not unusual for the claimed invention to involve two areas of prior art or more than one technology, (*White Consolidated, Supra,* 214 USPQ at 821); e.g., an appropriately programmed computer and an area of application of said computer. In regard to the "skilled in the art" standard, in cases involving both the art of computer programming, and another technology, the examiner must recognize that the knowledge of persons skilled in both technologies is the appropriate criteria for determining sufficiency. See *In re Naquin,* 158 USPQ 317, (CCPA1968); *In re Brown,* 177 USPQ 691 (CCPA 1973); and *White Consolidated, supra* at B22.

In a typical computer case, system components are often represented in a "block diagram" format, i.e., a group of hollow rectangles representing the elements of the system, functionally labelled and interconnected by lines. Such block diagram computer cases may be categorized into 1) systems which include but are more comprehensive than a computer and 2) systems wherein the block elements are totally within the confines of a computer.

BLOCK ELEMENTS MORE COMPREHENSIVE THAN A COMPUTER

The first category of such block diagram cases involves systems which include a computer as well as other system hardware and/or software components. In order to meet his burden of establishing a reasonable basis for questioning the adequacy of such disclosure, the examiner should initiate a factual analysis of the system by focusing on each of the individual block element components. More specifically, such an inquiry should focus on the diverse functions attributed to each block element as well as the teachings in the specification as to how such a component could be implemented. If based on such an analysis, the examiner can reasonably contend that more than routine experimentation would be required by one of ordinary skill in the art to implement such a component or components, that component or components should specifically be challenged by the examiner as part of a 35 U.S.C. 112, first paragraph rejection. Additionally, the examiner should determine whether certain of the hardware or software components depicted as block elements are themselves complex assemblages which have widely differing characteristics and which must be precisely coordinated with other complex assemblages. Under such circumstances, a reasonable basis may exist for challenging such a functional block diagram form of disclosure. See In re Ghiron, supra, In re Brown, supra. Moreover, even if the applicant has cited prior art patents or publications to demonstrate that particular block diagram hardware or software components are old, it should not always be considered as self evident how such components are to be interconnected to function in a disclosed complex manner. See *In re Scarbrough, supra,* at 301 and *In re Forman,* 175 USPQ 12, 16 (CCPA 1972). Furthermore, in complex systems including a digital computer, a microprocessor, or a complex control unit as one of many block diagram elements, timing between various system elements may be of the essence and without a timing chart relating the timed sequences for each element, an unreasonable amount of work may be required to come up with the detailed relationships an applicant alleges that he has solved. See In re Scarbrough, supra at 302.

For example, in a block diagram disclosure of a complex claimed system which includes a microprocessor and other system components controlled by the microprocessor, a mere reference to a prior art, commercially available microprocessor, without any description of the precise operations to be performed by the microprocessor, fails to disclose how such a microprocessor would be properly programmed to either perform any required calculations or to coordinate the other system components in the proper timed sequence to perform the functions disclosed and claimed. If, in such a system, a particular program is disclosed, such a program should be carefully reviewed to insure that its scope is commensurate with the scope of the functions attributed to such a program in the claims. See In re Brown, supra at 695. If the disclosure fails to disclose any program and if more than routine experimentation would be required of one skilled in the art to generate such a program, the examiner clearly would have a reasonable basis for challenging the sufficiency of such a disclosure. The amount of experimentation that is considered routine will vary depending on the facts and circumstances of individual cases. No exact numerical standard has been fixed by the courts, but the "amount of required experimentation must, however, be reasonable" (White Consolidated, Supra, at 963. One court apparently found that the amount of experimentation involved was reasonable where a skilled programmer was able to write a general computer program, implementing an embodiment form, within four hours. (*Hirschfield, Supra,* at 279 *et seq.*). On the other hand, another court found that, where the required period of experimentation for skilled programmers to develop a particular program would run to 1 1/2 to 2 man) years, this would be "a clearly unreasonable requirement" *(White Consolidated, supra* at 963).

BLOCK ELEMENTS WITHIN A COMPUTER

The second category of block diagram cases occurs most frequently in pure data processing applications where the combination of block elements is totally within the confines of a computer, there being no interfacing with external apparatus other than normal input/output devices. In some instances, it has been found that particular kinds of block diagram disclosures were sufficient to meet the enabling requirement of 35 U.S.C. 112, first paragraph. See *In re Knowlton*, 178 USPQ 486 (CCPA 1973), *In re Comstock and Gilmer*, 178 USPQ 616 (CCPA 1973). Most significantly, however, in both the Comstock and Knowlton cases, the decisions turned on the appellants' disclosure of 1) a reference to and reliance on an identified prior art computer system and 2) an operative computer program for the referenced prior art computer system. Moreover, in Knowlton the disclosure was presented in such a detailed fashion that the individual program ⊨s steps were specifically interrelated with the operative structural elements in the referenced prior art computer system. The Court in Knowlton indicating that the disclosure did not merely consist of a sketchy explanation of flow diagrams or a bare group of program listings together with a reference to a proprietary computer in which they might be run. The disclosure was characterized as going into considerable detail into explaining the interrelationships between the disclosed hardware and software elements. Under such circumstances, the Court considered the disclosure to be concise as well as full, clear and exact to a sufficient degree to satisfy the literal language of 35 U.S.C. 112, first paragraph. It must be emphasized that because of the significance of the program listing and the reference to and reliance on an identified prior art computer system, absent either of these items, a block element disclosure within the confines of a computer should be scrutinized in precisely the same manner as the first category of block diagram cases discussed above.

Regardless of whether a disclosure involves block elements more comprehensive than a computer or block elements totally within the confines of a computer, the examiner, when

analyzing method claims, must recognize that the specification must be adequate to teach how to practice the claimed method. If such practice requires particular apparatus, it is axiomatic that the application must therefore provide a sufficient disclosure of that apparatus if such is not already available. See *In re Ghiron, supra* at 727 and *In re Gunn,* 190 USPQ 402, 406 (CCPA 1976). When the examiner questions the adequacy of computer system or computer programming disclosures, the examiner's reasons for finding the specification to be non-enabling should be supported by the record as a whole. In this regard, it is also essential for the examiner to reasonably challenge evidence submitted by the applicant. For example, in In re Naquin, supra, an affiant's statement unchallenged by the examiner, that the average computer programmer was familiar with the subroutine necessary for performing the claimed process, was held to be a statement of fact which rendered the examiner's rejection baseless. In other words, unless the examiner presents a reasonable basis for challenging the disclosure in view of the record as a whole, a 35 U.S.C. 112, first paragraph rejection in a computer system or computer programming case will not be sustained on appeal. See *In re Naquin, supra, In re Morehouse and Bolton,* 192 USPQ 29, 32 (CCPA 1976).

While no specific universally applicable rule exists for recognizing an insufficiently disclosed application involving computer programs, an examining guideline to generally follow is to challenge the sufficiency of such disclosures which fail to include either the computer program itself or a reasonably detailed flowchart which delineates the sequence of operations the program must perform. In programming applications whose software disclosure only includes a flowchart, as the complexity of functions and the generality of the individual components of the flowchart increase, the basis for challenging the sufficiency of such a flowchart becomes more reasonable because the likelihood of more than routine experimentation being required to generate a working program from such a flowchart also increases.

As stated earlier, once an examiner has advanced a reasonable basis or presented evidence to question the adequacy of a computer system or computer programming disclosure, the applicant must show that his or her specification would enable one of ordinary skill in the art to make and use the claimed invention without resorting to undue experimentation. In most cases, efforts to meet this burden involve submitting affidavits, referencing prior art patents or technical publications, arguments of counsel or combinations of these approaches

Appendix III

Extracted from "How to Prepare and Prosecute Computer Related Applications", Gerald Goldberg - U.S. Patent and Trademark Office Group 230, January 1992

WISH LIST FOR PROGRAMS

The following items are things the examiners would like to see but which practitioners are not required to provide under existing requirements.

1. Computer Program listing submitted in microfiche format. The physical size of some program listings are increasing and causing storage, retrieval, search and printing problems.

2. A written presentation which provides an adequate discussion of the program and includes:

   A. A title for the program listing which provides an adequate description of the purpose of the program.

   B. An abstract paragraph which provides a brief but meaningful description of the program's utility, functionality and characteristics.

   C. Any comments made by the programmer and/or inventor. These comments and/or notation to the program listing help the examiner to understand the inventive concept and search the existing prior art more effectively.

   D. The relationship of the program listing to other existing programs.

   E. A detailed description and explanation of "The Algorithm." The specification, in order to satisfy the examiner's review under 35 U.S.C. 112, first paragraph, should provide an adequate written description of the algorithm itself. This is more than just a presentation of the algorithm but a description of what the algorithm is and what it does.

(1) Title:

Examination Practice Concerning "Functional Expressions in Patent Claims" in Japan

(2) Date: October 1992 (The 23rd General Assembly at Okayama)

(3) Source

1) Source: PIPA
2) Group: Japan
3) Committee: 1

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(5) Keywords: Claim, functional expression, defective statement, detailed description of the invention, technical means, generic concept, comprehensive expression, and example.

(6) Statutory: JPL 36 (5), 35 USC 112 (6)

(7) Abstract:

This paper makes an investigation based on actual cases to determine what functional expressions in claims were permitted or rejected in Japan, and reports the results of comparative case studies of examination practice relating to functional expressions in claims in both Japan and the United States.

Also in Japan, functional expressions are acceptable in a claim(s) depending on the particular technical field or technical matter. This practice is established, however, provided that "the detailed description of the invention" in the specification includes a specific description about the means of performing the function set forth in the claim(s) in such a manner that any person skilled in the art may easily practice the invention, and further, no claim may be made elsewhere beyond the disclosure of "the detailed description of the invention."

Regarding these requisite conditions, judgment by the Japanese Patent Office is considered to be more strict than that of Japanese Courts. Further, for the functional expressions acceptable in a claim(s) are concerned, judgments found in examination practice in this country may be said to be more strict than those in the United States.

I. INTRODUCTION

1. Significance of Claim and Statement Thereof

Japanese Patent Law, Article 70 states:

> "The scope of a patented invention shall be determined on the basis of the statements of the patent claim(s) in the specification attached to the request for the application."

In other words, the statements of a claim holds important significance in that it determines the scope of a right to which the applicant is entitled for the invention, as well as preventing third parties from practicing the invention in question within the scope.

Consequently, if an unclearly stated claim is approved as such, it would induce unnecessary disputes between the patentee and third parties restricted by the patent rights, contrary to the purpose of the law which aims to contribute the development of industry by promoting the protection and utilization of inventions.

For this reason, Japanese Patent Law provides stipulations regarding the statement of a claim in a patent application (Article 36, Paragraph 5), and it is determined that applications which are not in compliance with the provision shall be rejected (Article 49).

2. Functional Expressions in Claims

There are various causes of ambiguity of statements in a claim, but the functional (or, operational and/or effect-focused) expressions in the claim is numbered as one of the causes.

An invention is basically an abstract technical idea and then, it is actually a difficult task to express the technical scope thereof in concrete and precise terms.

For example, as regards the technical field of machines, an invention is frequently made for functions performed by the elements constituting the machine. However, for a patent application it is customary to provide diagrams each showing a specific embodiment of the machine having the invented functions as working examples, and usually the construction of the

embodiment(s) is described in the specification. Further, in order to gain proper protection for the invention, it is necessary to specifically express the invention in clear, yet generic technical terms which encompass not only the embodiments stated as examples in the specification but also any variations and/or modifications of the embodiments. In actual practice, this often proves to be a very difficult task.

In such cases, however, since the invention concerns the function per se, it is a relatively easier matter to express the embodiments according to the specific functions performed thereby.

Thus, the functional expressions used in a claim occupy an extremely important role for the applicants, particularly in the fields of machinery and electronics, who must state an abstract technical idea in a simple, yet comprehensive manner.

However, as more functional expressions are used in an attempt to state the claim(s) in a more comprehensive manner, it results in greater ambiguity of the statement thereof, which becomes a ground for rejection of the claim(s) for the application. Therefore, it is a matter of the greatest importance for the applicant to determine to what extent functional expressions may be used in the claim(s).

In view of the above point, we made a series of case studies to determine what functional expressions in claims are permitted or rejected in Japan. At the same time, we made comparative case studies of examination practice relating to functional expressions of claims in both Japan and the United States.

3. Functional Expressions in Claims as Discussed in this Paper

The term "functional expressions in claims" as the object of study in this paper means "describing the invention in terms of function without stating in the specific terms the construction which is necessary for achieving the purpose and advantageous effect of the invention, when stating claims." More specifically, this includes the following expressions [1), 5), 6), 7)].

(1) **Claims expressed by, "means plus function"**

Claims expressed using "means plus function" correspond to those claims which include the constituent elements in the form "Means for Performing the Function"; that is, it refers to those claims in which the constituent elements themselves are represented with their functions.

(2) **The expression, "an A so that..."**

In order to clearly describe the operation and advantageous effect of the invention, the expression "an A so that..." is used.

(3) **The expression, "an A whereby..."**

This expression is used to describe a result, operation and advantageous effect, or a function which necessarily follows from the previously recited constituent elements of the invention.

In addition to the above, for inventions in the field of chemistry, the numerical limitations often employed in the claims can also be considered "functional expressions in claims", but these are not discussed in this paper.

Further, in this paper "invention" broadly signifies both "invention and device".

II. STIPULATIONS IN PATENT LAW, ETC. REGULATIONS FOR FUNCTIONAL EXPRESSIONS

1. Japanese Patent Law, etc.

In Japan, there are no expressed stipulations provided in patent law regarding the functional expressions in claims. Permission or objection to functional expressions in a claim depends on whether the patent application complies with the requirements provided in Article 36 of the Patent Law.

1-1 Article 36, Paragraph 5 of the Patent Law.

The statements of the patent claim(s) ... shall comply with each of the following paragraphs as being:

(1) statements setting forth the invention(s) for which a patent is sought and which is described

in the detailed description of the invention;

(2) statements separated by paragraphs claim by claim (hereinafter referred to as "a claim or claims"), which set forth only the features indispensable for the constitution of the invention(s) for which a patent is sought; and

(3) statements as provided for in an ordinance of the Ministry of International Trade and Industry.

1-2 Examination Criteria on "Specification" and Manual of Patent Examining Procedure

When reference is made to the Examination Criteria on "Specification" and the Manual of Patent Examining Procedure, the above mentioned stipulation in Patent Law is further summarized into the following points.

(1) Each claim must be clearly stated.

(2) Each claim must be stated in such a way that the subject matter thereof can be understood by artisan in the art.

(3) All of the constituent elements of the invention recited in the claim(s) must be described in the section of "Detailed Description of the Invention", and must be fully supported by the description.

(4) All the features indispensable for the constitution of the invention described in the "Detailed Description of the Invention" section must be recited in the claim(s).

Here, the phrase "the features indispensable for the constitution of the invention" means the technical means (technical matters) indispensable for solving a technical problem of the invention in question.

(5) Not only each technical matter must be recited in the claim(s), but also the relationship of each technical matter to the others must also be stated.

(6) No matter may be stated which is not deemed to be a matter indispensable for the constitution of the invention, even if it is described in the "detailed description of the invention" in the specification.

1-3 Criteria Regarding Functional Expressions

The statements in the above mentioned examination criteria etc., are general and do not relate particularly to functional expressions in claims. From the types of violations of Article 36, Paragraph 5 which are given in the examination standard "Specification", the following examples regarding the functional expressions in claims can be extracted:

(1) Criteria for functional expressions

(i) Functional (operational) expressions

In cases where the matters recited in the claim(s) comprise a single technical means, and the technical means is expressed in functional (or operational) terms.

(Example) "a stake driving method whereby stakes are driven noiselessly"[2)]

When the technical means for solving a technical problem of the invention consists of a single technical means, then simply showing in functional terms the construction of the technical means is nothing more than a statement of the technical problem. In other words, this criteria can be rephrased to mean "when the statement of the constituent elements in the claims is simply the presentation of the technical problem."

This criteria stipulates regarding cases where the technical means for solving the technical problem of the invention comprises a single technical means, but it is also understood to be applicable in the same manner to those cases where the means comprises a plurality of technical means.

(ii) **The Expressions "an A whereby ..." and "an A so that ..."**

When the technical means in a claim is unclear due to the expression "an A whereby ..." or "an A so that ..." .

(iii) **Expressions using "Result" (or "Object", "Function", "Advantageous Effect")**

When the technical means in a claim is unclear due to only a statement of the result produced by the technical means of the invention.

(2) **General Criteria**

In addition, when the functional expressions employed in a claim fall under one of the following categories, the application is rejected as not complying with Article 36, Paragraph 5.

(i) When the scope of the invention as defined by the statement(s) in the claim(s) is substantially broader than the technical scope of the invention as supported by the description in the "detailed description of the invention", because the claims are stated in a generic concept or a comprehensive expression.

(ii) When a generic concept or comprehensive expression is used in cases where it is judged that matters covered by said generic concept or comprehensive expression are not equivalent to each other in consideration of the object and the advantageous effect as described in the "detailed description of the invention".

COMPUTER PROGRAM PATENTS

U.S.PATENT	TITLE	DATE	CLAIMS
4,853,962	ENCRYPTION SYSTEM	AUG. 1, 1989	10
4,864,492	SYSTEM AND METHOD FOR NETWORK CONFIGURATION	SEPT. 5, 1989	10-14
4,896,291	VALUATOR MENU FOR USE AS A GRAPHIC USER INTERFACE TOOL	JAN 23, 1990	16-19
4,897,781	SYSTEM AND METHOD FOR USING CACHED DATA AT A LOCAL NODE AFTER RE-OPENING A FILE AT A REMOTE NODE IN A DISTRIBUTED NETWORKING ENVIRONMENT	JAN. 30, 1990	16
5,057,935	METHOD FOR CONFIRMATION OF DOCUMENT RECIPIENTS IN A DATA PROCESSING SYSTEM	OCT. 15, 1991	13-14
5,031,117	PRIORITIZATION SCHEME FOR ENHANCING THE DISPLAY OF RAY TRACED IMAGES	JULY 9, 1992	9-16

Comparison of Novelty and Prior Use of Software Patent in U.S. and Japan

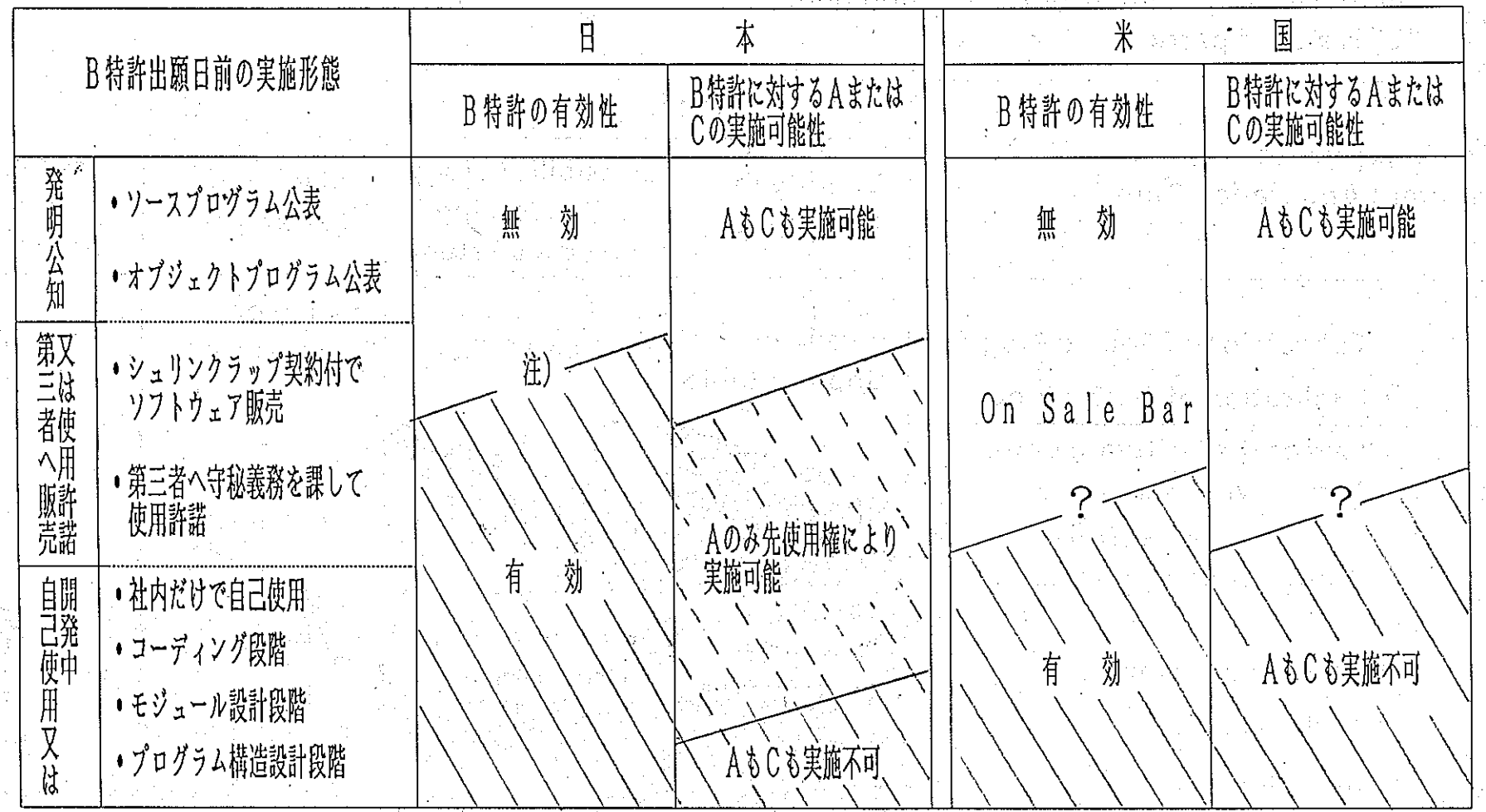
Case: "A" (Senior Party) is a company which is the first to make an software invention, but does not file it as a patent.
"B" (Junior Party) is a competitor company which independently developed the same technology and file it as a patent after A's development.
"C" is a third party.

Workings prior to B's Patent Application Date		JAPAN		U. S. A.	
		Validity of B's Patent	Possibility of A's or C's Working under B's Patent	Validity of B's Patent	Possibility of A's or C's Working under B's Patent
Publicly Known	• Publication of Source Program • Publication of Object Program	Invalid or Unpatentable	A and C Can	Invalid or Unpatentable	A and C Can
Sold or Leased	• Sale of the Software under Shrink-wrap Agreement • License of the Software under Confidential Agreement	Note		On Sale Bar	
Internally Used or Under Development	• Internal Use Only • Coding Level • Module Spec. Level • Program Structure Spec. Level	Valid or Patentable	Only A Can based on Prior Use License A and C Can Not	? Valid or Patentable	? A and C Can Not

Note: Slanted boundary lines in the table mean "Case By Case".

ソフトウェア特許の新規性および先使用についての日米比較

ケース ： A社（先発明者）は、ある新規なソフトウェアを開発したが、それについて特許出願しなかった。
B社（後発明者）は、A社の上記開発より後にA社のソフトウェアと同じ内容のソフトウェアを独自に開発し、それについて特許出願した。
Cは、第三者。



注）表中の境界線が斜線であるのは、「ケース・バイ・ケース」であることを示す。

2. United States Patent Law, etc.

In the U.S., Patent Law Section 112, Paragraph 6 provides stipulation regarding the approval of functional expressions in claims.

2-1 Patent Law Section 112, Paragraph 6:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. (Paragraph 2)
>
> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

2-2 Also, the Conditions for the Approval of Functional Expressions are Stipulated in the Manual of Patent Examining Procedure as Follows.

MPEP706.03(c) Functional

> The last paragraph of 35 U.S.C. 112 has the effect of prohibiting the rejection of a claim for a combination of elements (or steps) on the ground that the claim distinguishes from the prior art solely in an element (or step) defined as a "means" (or "step") coupled with a statement of function. However this provision of the last paragraph must always be considered as subordinate to the provision of paragraph 2 that the claim particularly point out and distinctly claim the subject matter. If a claim is found to contain language approved by the last paragraph such claim should always be tested additionally for compliance with paragraph 2 and if it fails to comply with the requirements of paragraph 2, the claim should be so rejected and the reasons fully stated.
>
> The last paragraph of 35 U.S.C. 112 makes no change in the established practice of rejecting claims as <u>functional</u> in situations such as the following:
>
> 1. A claim which contains functional language not supported by recitation in the claim of sufficient structure to warrant the presence of the functional language in the claim.
>
> (Example) "A woolen cloth having a tendency to wear rough rather than smooth."

2. A claim which recites only a single means, and thus encompasses all possible means for performing a desired function.

(Example) "In a device of the class described means for transferring clothes-carrying rods from one position and depositing them on a suitable support.

III. STATISTICAL SURVEY OF ACTUAL CONDITIONS OF EXAMINATION REGARDING FUNCTIONAL EXPRESSIONS IN CLAIMS IN JAPAN

1. Statistical Figures

In order to gain a grasp of the actual conditions in examinations of "functional expressions in claims", decisions in appeal trials against the examiner's decision of rejection and decisions in lawsuits for annulment of the appeal trial decision affirming the examiner's decision of rejection from January, 1987 until the June, 1992 were investigated. The cases investigated regarding appeal trial decisions were the ones listed in the "Patent Gazette for Appeal Trial Decisions" published by the Japanese Patent Office, and those regarding decisions in the suits were the ones listed in "Collection of Decisions in Lawsuits for Annulment of Appeal Trial Decisions" compiled by the Japanese Patent Office.

Table 1 to 3 show the statistical figures of lawsuits for annulment of appeal trial decisions affirming the examiner's decision of rejection in which a defective statement in the specification was in dispute, those in which a defective statement in the claims was in dispute and those in which the point in dispute eventually became the use of functional expressions in the claim.

Table 2 shows a comparison between technical fields, with respect to the judgments in lawsuits at Tokyo High Court for annulment of appeal trial decisions where the point in dispute was the use of functional expression in the claims.

Table 3 shows the comparison between two cases where the first application was filed in Japan, and where it was filed in a foreign country with respect to such judgment as mentioned above in which the point in dispute was the use of functional

expressions in the claims.

Table 4 shows the statistical figures of appeal trials against the examiner's decision of rejection in which a defective statement in the specification was in dispute, those in which a defective statement in the claims was in dispute and those in which the point in dispute eventually became the use of functional expressions in the claim.

Table 1

Number of Lawsuits for Annulment of Appeal Trial Decisions Affirming the Examiner's Decision of Rejection in which the Point in Dispute was the Use of Functional Expressions in the Claims

Court	Total cases of lawsuits for annulment of appeal trial decisions affirming the examiner's decision of rejection *1	Cases in which a defective statement in the specification was in dispute *2	Case in which a defective statement in the claim(s) was in dispute *3	Case in which the use of functional expressions in the claims was in dispute *4
Tokyo High Court	744	51	26	6
	Defective statement present	37	17	0
	Non-defective statement	14	9	6
Supreme Court	88	14	4	0
	Defective statement present	14	4	0
	Non-defective statement	0	0	0

(Notes) *2 is included in *1. *3 is included in *2. *4 is included in *3.

Table 2

Number of Lawsuits for Annulment of Appeal Trial Decisions Affirming the Examiner's Decision of Rejection in which the Use of Functional Expressions in the Claims was in Dispute, Listed According to Technical Fields (Tokyo High Court)

Technical Field		Cases in which a defective statement in the specification was in dispute *2	Case in which a defective statement in the claim(s) was in dispute *3	Case in which the use of functional expressions in the claims was in dispute *4
Machinery	-	35	17	5
	Defective statement present	26	11	0
	Non-defective statement	9	6	5
Electronics	-	12	6	1
	Defective statement present	8	3	0
	Non-defective statement	4	3	1
Chemistry	-	4	3	0
	Defective statement present	3	3	0
	Non-defective statement	1	0	0

(Notes) *3 is included in *2. *4 is included in *3.

Table 3

Number of Lawsuits for Annulment of Appeal Trial Decisions Affirming the Examiner's Decision of Rejection in which the Use of Functional Expressions in the Claims was in Dispute, Listed According to Country of First Application (Tokyo High Court)

First Application Country		Cases in which a defective statement in the specification was in dispute *2	Case in which a defective statement in the claim(s) was in dispute *3	Case in which the use of functional expressions in the claims was in dispute *4
Japan		35	13	1
	Defective statement present	29	11	0
	Non-defective statement	6	2	1
Foreign Countries		16	13	5
	Defective statement present	8	6	0
	Non-defective statement	8	7	5

(Notes) *3 is included in *2. *4 is included in *3.

Table 4

Number of Appeal Trial Against the Examiner's Decision of Rejection in which the Use of Functional Expression in the Claims was in Dispute

Total Number of Appeal Trial Against the Examiner's Decision of Rejection	Cases in which a defective statement in the specification was in dispute *2	Case in which a defective statement in the claim(s) was in dispute *3	Case in which the use of functional expressions in the claims was in dispute *4
25556	788	463	24
Defective statement present	451	252	24
Non-defective statement	337	211	0

(Notes) *2 is included in *1. *3 is included in *2. *4 is included in *3.

2. Considerations

2-1 Concerning Lawsuits in which the Use of Functional Expressions in the Claim(s) was in Dispute.

(1) Concerning the number of lawsuits

The number of the lawsuits for annulment of the decisions in appeal trials in which the propriety of functional expressions in the claim(s) was in dispute was less than expected.

This may be considered to be due to the tendency of the applicants to seek patent allowance by amending the claim(s) to be limited somewhat during the examination or appeal trial proceedings when a defective statement in functional expressions in the claim(s) is being used as the ground of rejection.

(2) Comparison of Number of Lawsuits between Technical Fields

The ratios of the number of lawsuits where functional expressions in the claim(s) were in dispute to the number of lawsuits where a defective statement in the specification was in dispute were compared between technical fields. The ratio was the highest for the field of machinery and zero for the field of chemistry.

Considering that the functional expressions in claims themselves were created to define inventions in the fields of machinery and electronics in a comprehensive manner, such a result may be said to be a matter of course.

(3) Difference in the Number of Lawsuits between the Countries of First Application.

The ratio of the number of lawsuits where functional expressions in the claim(s) were in dispute to the number of lawsuits where a defective statement in the specification was in dispute is lower for the applications first filed in Japan than for those first filed in a country other than Japan.

It cannot be denied that this is because there is a great difference in practices of the statement of claims.

2-2 Concerning the Number of Appeal Trials Against the Examiner's Decision of Rejection in which Functional Expressions in Claims were in Dispute.

(1) As is shown in Table 4, the number of appeal trials where the use of functional expressions in the claims was in dispute is 5% of the number of appeal trials where the defective statement in the claims was in dispute, which is in turn 2% of the total number of appeal trials against the examiner's decision of rejection. Such a low percentage presumably results from some countermeasures taken by applicants such as an amendment to remedy the defect during the prosecution, though most of grounds of rejection are lack of novelty or an inventive step. In almost all appeal trials where functional expressions in the claim were in dispute, the original examiner's positions recognizing the defective statement were affirmed. So it can be said that the chances are against applicants in these appeals.

IV. EXAMINATION PRACTICE OF FUNCTIONAL EXPRESSIONS IN CLAIMS IN JAPAN.

1. Judgment Disclosed in Appeal Trial Cases Against the Examiner's Decision of Rejection

1-1

Table 5 is a compilation of judgments regarding functional expressions, which were disclosed in 10 appeal trial cases against the examiner's decision of rejection in which functional expressions in the claim(s) were in dispute.

Table 5 Appeal Trial Cases against the Examiner's Decision of Rejectionin which Functional Expressions in the Claim(s) were in Dispute

No.	Case	Title of the invention (technical field)	Defective statement	Reason for Judgment
1	S56 Appeal Trial Case No. 15993 / Utility Model Application No. SHO 53-109741	Container (machinery)	Yes	The manner in which "the periphery of the opening of the slot piece meets the weight board in the area around the fulcrum of the fold of the frame section "is stated, though functionally and in completely, in the specification in passage "so that no space is created", but it is not clearly defined as an indispensable constituent element in the claim.
2	S57 Appeal Trial Case No. 4059 / Patent Application No. SHO 53-90065	Self gating circuit (electronics)	Yes	The claim is limited to simply stating the necessary function of each constituent element (especially latch-type circuit, output maintaining means). "Latch-type circuit and output maintaining means" are the constituent elements for achieving the purpose of the invention to realize a latch operation "in the self-gating circuit composed of a latch-type circuit with a simpler configuration than circuits of the prior art." Thus construction should be specifically recited in the claim as matters indispensable to the constitution of the invention. (Publisher's note: Embodiments relating to the latch-type circuit and the output maintaining means are illustrated in the drawings as well as in the "detailed description of the invention".) Also, the construction of the output maintaining means is left unstated in the claim, and the arrangement of and connection between the latch-type circuit, the pulse power source and the output maintaining means are unclear from the statement in the claim.

Table 5 Appeal Trial Cases against the Examiner's Decision of Rejectionin which Functional Expressions in the Claim(s) were in Dispute

No.	Case	Title of the invention (technical field)	Defective statement	Reason for Judgment
3	S57 Appeal Trial Case No. 23620 / Patent Application No. SHO 53-129311	Long-distance surveillance device (electronics)	Yes	Concerning "the means for changing to a predetermined continuous signal based on the power of the above mentioned battery means" at the moment of cutting off of the power to the transmitter, from the modulated signal outputted from the above mentioned signal transmission means, it is unclear what sort of continuous signal is being mentioned, and the means for causing the continuous signal to be "outputted based on the power of the above mentioned battery means" is not disclosed. For these and other reasons, it is difficult to concede that the constitution of the invention is stated such that it may be easily carried out by a person skilled in the art.
4	S59 Appeal Trial Case No. 7185 / Patent Application No. SHO 55-110471	A polymeric plastic composition for the manufacture of video disks (chemistry)	Yes	The term "PMMA composition" is understood to include not simply PMMA alone, but also compositions including an impact modifier, a liquid plasticizer, etc. However, the claim involves only limitation, "processing the composition in order that said composition shows a melt flow index ... when measured under conditions ... in order to endow ... stability and ... a comparatively uniform density to the composition". By such a statement, it is not clear what else is included in said PMMA composition besides PMMA.
5	S59 Appeal Trial Case No. 22463 / Utility Model Application No. SHO 54-75250	Shield Excavator (machinery)	Yes	In the claim, "the cutter face or the cutter bit or the head captive jack are separately attachable and removable" is a functional statement, but it is unclear what sort of construction is used to make them separately attachable and removable. The detailed description of the device states a specific construction for them to be "separately attachable and removable," and the construction is a matter which is necessary and indispensable in order to solve the technical problem of the device. Therefore, it is concluded that a matter indispensable for the constitution of the device is not stated in the claim.

Table 5 Appeal Trial Cases against the Examiner's Decision of Rejectionin which Functional Expressions in the Claim(s) were in Dispute

No.	Case	Title of the invention (technical field)	Defective statement	Reason for Judgment
6	S60 Appeal Trial Case No. 19445 / Utility Model Application No. SHO 53-112390	Switch (electronics)	Yes	The statement, "the above mentioned thumb-screw is constructed in such a way that at the first level of said thumb-screw the above mentioned double-pronged output does not function on the above mentioned two elongated contacts, at the second level it functions on only one of the contacts, and at the third level it functions on both contacts" is nothing more than a simple statement relating to the desired conditions. In order to fulfill these desired conditions, it is necessary to state the shape and construction of the thumb-screw, and its relationship to the other parts.
7	S60 Appeal Trial Case No. 22597 / Patent Application No. SHO 52-39925	Automatic progressing system for hovering (machinery)	Yes	Concerning a lateral controller, only functional stipulations are stated, i.e. "to provide a signal to the above mentioned automatic pilot system which controls the direction of the heading of the aircraft for guiding the aircraft along an arcuate ground track of a constant radius towards a desired destination." So long as its connection with the sensor, etc. which generates the necessary input signal for said function is not specified, the mutual relationship with the constituent elements is not made clear.
8	S61 Appeal Trial Case No. 19102 ¥ Patent Application No. SHO 54-83035	Document processor (electronics)	Yes	Only the matters desired for the function of "determining means for checking the nature of the kanji information which is read from the aforementioned first table and determining whether or not it is directly connected with the immediately preceding kanji information" is stated without disclosing its construction in the specification clearly.
9	S61 Appeal Trial Case No. 22471 / Utility Model Application No. SHO 55-190192	Winch apparatus with zero pull tension (machinery)	Yes	Concerning "resistance reduction means" and "cable deadweight compensating means", only the function is explained in the detailed description, and no disclosure is made regarding the specific technology for fulfilling said functions.

Table 5 Appeal Trial Cases against the Examiner's Decision of Rejectionin which Functional Expressions in the Claim(s) were in Dispute

No.	Case	Title of the invention (technical field)	Defective statement	Reason for Judgment
10	S62 Appeal Trial Case No. 10079 / Patent Application No. SHO 56-84250	Pressure medium regulated servo driver for an operating or transporting machine used for lifting loads. (machinery)	Yes	The statement, "A servo driver is equipped with a braking device which reduces the processing speed of the above mentioned follower members before they reach a predetermined location, and rigorously controls said follower members", refers only to the function or matters desired for the braking device, or the purpose of the present invention, and there is no statement made concerning the technical means therefor.

2. Judgments made for Judicial Decisions in Lawsuits Concerning Annulment of Appeal Trial Decisions for the Final Rejection

2-1

The six cases below are the summary of judgments regarding functional expressions which were made for the judicial decisions in lawsuits for annulment of appeal trial decisions to the final rejection whose ground was the defective statement in functional expressions in the claim(s).

2-1-1 Case 1

(1) **Case No. S58 (Gyo-ke) 117 (Decision: 3/29/1988)**
Title of the Invention: "Distance measuring device"
(Patent Application No. SHO 47-109001)
Technical Field: Machinery

(2) **Claim**

A distance measuring device for measuring the distance from an object through detection of the plane of maximum amplitude of the spatial frequency, characterized by being composed of a movable object lens; means which include at least one spatial frequency of the object and arranged near the focal plane behind said object lens; one or a plurality of photo-electric detectors arranged behind said means for detecting the predetermined spatial frequency of the image of the object, and generating an output signal corresponding to said spatial frequency; and means responding to the signal from said photo-electric detector, for indicating or setting the position of the object lens in which the plane of maximum amplitude of said spatial frequency exists.

(3) **Gist of the Appeal Trial Decision**

The recitation "means which include at least one spatial frequency of the object and arranged near the focal plane behind said object lens" in order to

correlate the images is vague, and it is unclear about what sort of thing is being described.

(4) **Gist of the Judicial Decision**

Judicial Decision: Non-defective statement (Appeal Trial Decision annulled)

The recitation "means which include at least one spatial frequency of the object" is inappropriate and vague in the Japanese language, but since it is understood from the context that the arranged location of said means is defined as the focal plane of the object lens, and that said means provides the spatial frequency to the photo-electric detector, it is possible to grasp the meaning of them as the constituent elements.

2-1-2 Case 2

(1) **Case No. S59 (Gyo-ke) 199 (Decision: 11/18/1990)**

Title of the Invention: "Method and Apparatus for Electro-Erosion Machining" (Patent Application No. SHO 50-75783)

Technical Field: Machinery

(2) **Claim**

An electro-erosion machining method for eliminating the decrease in electro-erosion machining precision and electro-erosion machining speed caused by the bending and the transverse vibration of the wire electrode under mechanical tension during the electro-erosion machining process, characterized by exerting an electrical influence on said wire electrode in addition to said electro-erosion machining process so that electromagnetic field generated by the electrical influence compensates for the force causing said bending and transverse vibration of said wire electrode during said electro-erosion machining process.

(3) **Gist of the Appeal Trial Decision**

In the claim, there is no recitation of the means for achieving the purpose of the invention (the manner in which the electromagnetic field "compensates for the force causing said bending and transverse vibration of said wire electrode during said electro-erosion machining process ..." may be realized), and only the function thought to be based on the means and the purpose or desire of the invention are stated, and thus it cannot by any means be conceded that all the matters indispensable to the constitution of the invention are stated.

(4) **Gist of the Judicial Decision**

Judicial Decision: Non-defective statement (Appeal Trial Decision annulled)

As the present invention is an improvement on the previously known technology of an electro-erosion machining method using a wire electrode, it is self-evident that, when attempting to find the most favorable compensation power in order to exhibit the intended advantageous effect of the present invention using a specific electro-erosion machine, any person skilled in the art can make a suitable selection of the various conditions of materials, etc. for the above mentioned wire electrode based on the prior conventional technology.

Therefore, "exerting an electrical influence on said wire electrode so that electromagnetic field generated by the electrical influence compensates for the force causing said bending and transverse vibration of said wire electrode during said electro-erosion machining process" signifies technical means indispensable to achieve the purpose of the invention, and it is clearly stated in the section "detailed description of the invention".

2-1-3 Case 3

(1) Case No. S61 (Gyo-ke) 123 (Decision: 3/29/1988)
Title of the Invention: "Telescopic Instrument"
(Patent Application No. SHO 51-103273)
Technical Field: Electronics

(2) Claim

A telescopic instrument having at least one optical telescope, one infrared telescope, and one laser telescope for receiving laser light, characterized in that there is an object lens for coordinating these telescopes; a revolving dichroic mirror is set at a slight incline with respect to the optical axis of the coordinated light path; and the infrared rays reflected while being rotated by the above mentioned dichroic mirror are re-reflected by a polariscope and are pointed towards an infrared detector for generating an aberration display signal corresponding to the angular deflection of the infrared image from the optical axis of the above mentioned coordinated light path.

(3) Gist of the Appeal Trial Decision

There is no recitation of the construction of "an infrared detector for generating an aberration display signal corresponding to the angular deflection of the infrared image from the optical axis of the above mentioned coordinated light path", and even if it is considered as a functional expression, it does not include the operating principle.

(4) Gist of the Judicial Decision

Judicial Decision: Non-defective statement (Appeal Trial Decision annulled)

To recite the constitution of the invention using a functional expression in a claim is not necessarily forbidden depending on the technical field or the

technical content of the invention. The statement reciting the infrared detector, "an infrared detector for generating an aberration display signal corresponding to the angular deflection of the infrared image from the optical axis of the above mentioned coordinated light path" is quite clear as a functional expression.

2-1-4 Case 4

(1) **Case No. S62 (Gyo-ke) 71 (Decision: 6/8/1989)**
Title of the Invention: "Attitude Controller for an Orbiting Satellite" (Patent Application No. SHO 51-87715)
Technical Field: Machinery

(2) **Claim**

An attitude controller for an orbiting satellite in a low inclination orbit, equipped with

a) roll error sensing means for generating an output signal ... ;

b) magnetic torquing means oriented in said satellite for generating a magnetic dipole along the axis present in the plane including the roll axis and the yaw axis of said satellite, and at a predetermined deviation angle relative to said roll axis in the plane;

c) detecting means for generating a control signal ... ; and

d) means for generating the above magnetic dipole in response to said control signal from said detecting means.

(3) **Gist of the Appeal Trial Decision**

The recitation of "a predetermined deviation

angle" in the claim can be permitted as a constituent element for achieving the purpose of the present invention. However, since the disclosure in the "detailed description of the invention" is unclear and it cannot be conceded that the deviation angle is specified based on the various constituent elements necessary for the controller of the present invention and their relationship to each other. Thus it cannot be conceded that the claim is specified only by the matters indispensable to the constitution of the invention which are stated in the "detailed description of the invention".

(4) **Gist of the Judicial Decision**

Judicial Decision: Non-defective statement (Appeal Trial Decision annulled)

Although it is deniable that the recitation "a predetermined deviation angle" in b) of the claim of the present invention is functional, it is appropriate to concede that any person skilled in the art could easily determine the size of a desired deviation angle from the disclosure in the specification. Considering the technical problem and the constitution of the present invention, it should be mentioned that the method for determining the desired deviation angle itself is not a constituent element for the invention in this application.

2-1-5 **Case 5**

(1) **Case No. S63 (Gyo-ke) 197 (Decision: 1/30/1990)**

Title of the Invention: "Cassette Tape Holding Apparatus" (Patent Application No. SHO 53-114679)

Technical Field: Machinery

(2) **Claim**

A cassette tape holding apparatus characterized by being equipped with a cassette box, a guide mechanism

for guiding the movement of said cassette box, a motor capable of rotation in both directions, a switch for sensing the insertion of a cassette tape and energing rotation of said motor, and a power transmission mechanism for transmitting the rotational force of said motor to said cassette box, where said power transmission mechanism has a spring to bias said cassette box, said cassette box is movable against the biasing of said spring, and said switch operates when said cassette box is pushed in up to a predetermined position.

(3) **Gist of the Appeal Trial Decision**

Since the relationship between the biasing of the "spring" of the power transmission mechanism and the operating position of the "switch" is not also recited in the claim, the corresponding relationship between an invention constructed from the matters recited in the claim and an invention described in the "detailed description of the invention" and the drawings is unclear. Thus, it cannot be conceded that the invention stated in the claim is identical to the invention disclosed in the "detailed description of the invention"

(4) **Gist of the Judicial Decision**

Judicial Decision: Non-defective statement (Appeal Trial Decision annulled)

It should be mentioned that the positional relationship between the predetermined region of movement of the cassette box (the region of movement of the cassette box depending on the finger pressure via the cassette tape) and "predetermined position" at which the motor-starting switch operates, is clear, though functional, in the claim of the present specification.

2-1-6 **Case 6**

Refer to V. 1.

3. Considerations

3-1 Considerations Regarding Judgments of the Japanese Patent Office to Functional Expressions in the Claims.

As shown in Table 5, there are no cases in which an application is rejected on the ground of the use of functional expressions in the claim.

One ground of an appeal trial decision to hold the final rejection was that the construction (technical means) for performing the functions recited in the claim was not stated in the "detailed description of the invention" or drawings well enough so that any person skilled in the art could easily implement it.

Another ground was that the specific construction for performing the function recited in the claim was stated in the "detailed description of the invention," etc., but the construction was not stated in the claim as the constituent elements for achieving the purpose of the invention.

Judging from these results, it is necessary that the technical means for achieving the purpose of an invention be stated as specifically as possible in the "detailed description of the invention" in a specification, etc. (one method is to present a large number of embodiments), and in some cases it may be said that it is possible to overcome the ground of rejection by inserting the specific construction of the technical means into the claim as the constituent elements.

Often a difference in opinion is found between the applicant and the examiner or the trial examiner as to whether a person skilled in the art can easily think of a technical means, or as to whether the technical matter is a constituent element of the invention. Since it seems that the judgments of the Japanese Patent Office are generally strict, it is preferable to deeply consider the course of the action taken by the examiner for

overcoming them in an appropriate manner.

3-2 Considerations Regarding Judgments of the Japanese Court to Functional Expressions in the Claim(s).

As shown by the judicial decisions regarding the above mentioned cases, the appeal trial decisions holding the examiner's rejection were annulled for all of the six cases in which the point in dispute was the propriety of functional expressions in the patent claim(s).

Judging from these cases, it appears that the Japanese Court takes the basic position that "functional expressions are permitted depending on the technical field and technical contents," and that due effort is made to understand the functional expressions in claims as fully as possible from the standpoint that "the context is taken into consideration even when the constituent elements expressed in functional terms are vague." Also, as regards judgments as to whether it is easy or not for a person skilled in the art to practice the invention based on the "detailed description of the invention" in the specification, as well as the scope of the claim granted on the basis of the embodiments, the Japanese Court seems to be more lenient when compared to the Japanese Patent Office.

Judging from this, when it is in dispute whether or not a functional expression in the claims in technically clear, it may be said that the Japanese Court is more negative in affirmation of the rejection of an application based only on the point in sharp contrast to the Japanese Patent Office.

V. COMPARISON OF EXAMINATION PRACTICE CONCERNING FUNCTIONAL EXPRESSION IN CLAIMS IN JAPAN AND THE U.S.

In order to attempt a comparison of examination practice concerning functional expressions in claims between Japan and the U.S., the details of the examination of two applications filed in both Japan and the U.S. were investigated.

1. Case 1: "Sewing Machine" Case : First filed in the U.S. and later filed in Japan claiming the Convention Priority based on the former.

1-1

(1) **Title of the Invention:** "Sewing Machine Capable of Pattern Stitching from Data Stored in Static Memory"
(Patent Application No. SHO 49-72702)
Case No.: SHO 63 (Gyo-ke) 43 (Decision date: 1/31/89)
Corresponding U.S. Patent: USP 3,855,956

(2) **Summary** of the Invention

The invention relates to a sewing machine having a stitch forming instrumentality which functions mechanically in response to a signal corresponding to data retrieved from a static memory where predetermined stitch patterns are restored.

1-2 **Details of Examination** for Japanese Application

(1) **Judgment of the appeal trial**

After annulment of the appeal trial decision holding the final rejection for the lack of inventive-step, the ground of rejection that the expressions "driver", "counter" and "static memory", etc. in the claim were functional and unclear was notified.

In order to overcome the rejection, the applicant amended "driver" (constituent element B) to "electro-mechanical actuator", and "a device for effectively impressing said driver" (constituent element F) to "a driving circuit which includes at least one each of an active element and a passive element ... for effectively impressing the stitch pattern signal on said electro-mechanical actuator"; however, the final rejection was held in the appeal trial based on the grounds listed below relating to the defective statement.

1) Although it is indispensable to specify that the "electro-mechanical actuator" is equipped with a predetermined number of solenoids and that the output momentum of each solenoid is weighted as the constituent elements, no recitation is made regarding the specific construction of the actuator. Also, the expression "electro-mechanical actuator" is too comprehensive when compared to the embodiments.

2) The "driving circuit which includes at least one each of an active element and a passive element for effectively impressing the stitch pattern signal on said electro-mechanical actuator" (constituent element F) is a driving circuit which includes driving transistor and resistance for controlling the current to each solenoid, but the relationship between the driving transistor and the solenoids is not specified.

Further, judging from the embodiments, the "driving circuit" should be limited to a device wherein the output signal corresponding to the data retrieved from the memory is fed to each solenoid without any modification of the signal form.

(2) Judgment of the Lawsuit for Annulment of Appeal Trial Decision

Among the constituent elements recited in the claim, the present invention is particularly characterized by the selection of the static memory (constituent element E). Since actuators other than the electro-mechanical actuator, as well as the circuit configurations for impressing on an actuator a pattern signal corresponding to data retrieved from a memory were well known in the art, there is no need to limit the constituent elements B and F to the disclosure of the embodiments. Also, in consideration of the context, the expression "effectively impressing" may be specified to define that the driving circuit has a function for impressing a signal corresponding to the data from the memory. Thus, no defective in the functional expres-

sions of the claim was attributed.

1-3 Details of Examination in the U.S. Application

In the U.S., there were no particulars regarding the rejection stating that the constituent element was expressed functionally. Further, the recitations "means for extracting data groups" and "means for summing each data group" for correlating the data groups stored in the "static memory" with stitch pattern signals impressed on the "driving device" were supplemented to clarify the difference from the prior art.

1-4 Comparison of Patented Claims in Japan and those in the U.S. (Table 6)

"A static memory" (constituent element E+F) was amended in both countries to "a static memory (constituent element E) and means for impressing a stitch pattern signal on a driving device" (constituent element F). However, in the U.S., constituent elements E2 and E3 regarding the static memory were added in order to clarify the difference from the prior art, while in Japan the driving device was modified into an electro-mechanical actuator, but the subject matter was deemed roughly identical to that at the time of the filing of the application.

Table 6-1 Comparison between Claims in Japan at the time of Application and at the time of Publication for Opposition

Claim in Japan at the time of Application	Claim in Japan at the time of Publication for Opposition
A In a sewing machine having a stitch forming instrumentality variable over a predetermined range between successive stitches to produce a pattern of stitches,	A A sewing machine having a stitch forming instrumentality to produce a pattern of stitches by varying the individual coordinates over a predetermined range between successive stitches, comprising
B a driving device operatively connected to impart movement to said stitch forming instrumentality over said predetermined range in response to stitch pattern signals,	B an electro-mechanical actuator operatively connected to said stitch forming instrumentality to impart movement to said stitch forming instrumentality over said predetermined range in response to stitch pattern signals,
C a pulse generator driven in timed relation with said sewing machine for producing an effective timing pulse between stitches,	C a pulse generator for producing an effective timing pulse between stitches, being driven in timed relation with said sewing machine,
D a counter responsive to said timing pulses from said pulse generator for producing output control signals in a progressive code, and	D a counter for producing output control signals in a progressive code which is responsive to said timing pulses from said pulse generator,
E + F a static memory responsive to said control signals and effective to impress on said driving device an individual predetermined stitch signal corresponding to each different integer in said progressive numerical code of control signals.	E a static memory capable of influencing any individual coordinate position of said stitch forming instrumentality within said predetermined range, and which stores data which can be retrieved in response to impression of said output control signal, and
	F a driving circuit which includes at least one each of an active element and a passive element, and effectively impresses a stitch pattern signal which corresponds to said data retrieved from said static memory on said electro-mechanical actuator, in response to said output control signal of said progressive code.

Table 6-2 Comparison between Claims in the U.S. at the time of Application and at the time of Issue of Patent.

Claim in the U.S.A. at the time of Application	Claim in the U.S.A. at the time of Issue of Patent
A In a sewing machine having a stitch forming instrumentality variable over a predetermined range between successive stitches to produce a pattern of stitches,	A In a sewing machine having a stitch forming instrumentality variable in position over a predetermined range of positions between successive stitches to produce a pattern of stitches,
B a driving device operatively connected to impart movement to said stitch forming instrumentality over said predetermined range in response to stitch pattern signals,	B a driving device operatively connected to impart movement to said stitch forming instrumentality over said predetermined range of positions in response to stitch pattern signals,
C a pulse generator driven in timed relation with said sewing machine for producing an effective timing pulse between stitches, ,	C a pulse generator driven in timed relation with said sewing machine for producing an effective timing pulse between stitches,
D a counter responsive to said timing pulses from said pulse generator for producing output control signals in a progressive code, and	D a counter responsive to said timing pulses from said pulse generator for producing output control signals in a progressive numerical code,
E + F. a static memory responsive to said control signals and effective to impress on said driving device an individual predetermined stitch signal corresponding to each different integer in said progressive numerical code of control signals.	E1 a static memory means for storing data groups capable of being summed every combination of which is unique,
	E2 means responsive to said progressive numerical code of said control signals for extracting said data groups from said static memory,
	E3 means for summing each data group extracted from said static memory, and
	F means effective to impress on said driving device a stitch pattern signal corresponding to the summation of each different data group extracted in response to said progressive numerical code of control signals.

2. **Case 2:**

"Running Vehicle" Case : First filed in Japan and later filed in the U.S. claiming the Convention Priority based on the first application.

2-1

(1) **Title of the Invention: "Running Vehicle"**
(Patent Application No. SHO 57-188386)
Field: Machinery
Corresponding U.S. Patent: USP 4,537,271

(2) **Summary of the Invention**

The invention relates to a self-propelled vehicle for lawn mowing, etc., which senses obstacles, judges whether the obstacle is at rest or in motion, and controls the vehicle so as to cause it to detour when the obstacle is at rest and to automatically stop the vehicle when the obstacle is in motion.

2-2 **Ground of Rejection of the Japanese Application and Response Thereto**

The Japanese application has the same three claims at the time of filing as those at the time of filing in the U.S., but the following grounds of rejection were indicated.

(1) In the section "Claims" of the present specification, the following constituent elements (a) - (d) for the present invention are not stated.

(a) The fact that the obstacle sensor includes multiple non-contact type obstacle sensors arranged laterally of said vehicle for the purpose of sensing the position of the obstacle in a plurality of divided ranges arranged laterally of said vehicle.

(b) The fact that said obstacle sensor repeatedly detects the obstacle at predetermined time intervals.

(c) The fact that said obstacle sensor judges whether an obstacle is at rest or in motion on the basis of a change in the detected position of the obstacle or a lack thereof.

(d) The fact that said running vehicle enacts detour control when the obstacle is at rest and automatically stops running when the obstacle is in motion.

The Examiner asked the applicant to limit Claim 1 to the embodiments stated in Claim 3. By accepting this limitation, the objection to statement in the claim was withdrawn, and thus, the invention was patented.

Also, to overcome the rejection based upon the prior art using only one sensor, the claim was limited to an embodiment using multiple sensors.

2-3 **Ground of Rejection to the U.S. Application and Response Thereto**

Claims 1 to 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The claims are narrative in form and merely catalog two elements, namely a sensor and a control means, and attribute all sorts of desirable results to the two elements without defining further elements necessary to produce the desired results.

Following this, the invention was patented upon addition of the necessary means for carrying out the functions and rewriting the claim into a "means plus function" type claim, for example, by changing "cause the vehicle body to detour the detected obstacle when it is at rest", to "control means operatively interconnecting said vehicle body and said signal generating means and receiving said generated rest-detection and motion-detection signals, said control means for (a) causing the vehicle body to detour the detected obstacle in response to receiving said rest-detection signal."

Further, the ground of rejection that the invention is obvious over the prior art was overcome by limiting the claim to an embodiment of unmanned running vehicles.

2.4 Comparison of Patented Claims in Japan and those in the U.S. (Table 7)

In the U.S., despite the more specific recitation of the constituent elements in "means plus function" type claim than the original which was found to have a defective statement, the content is deemed to be roughly identical to that at the time of the filing application. However, in Japan a patent was issued only after limiting the claims to the embodiments as described in claim 3. Further, the constituent element C was added to overcome the rejection based upon the prior art.

Table 7-1 Comparison between Claims in Japan at the time of Application and at the time of Publication for Opposition

Claim in Japan at the time of Application	Claim in Japan at the time of Publication for Opposition
(Claim 1) A A running vehicle having an obstacle sensor 5 of the non-contact type at a front portion of its body 1, characterized in that the vehicle is provided with control means E1 for judging whether an obstacle detected is at rest or in motion based on the result of detection F and controlling the vehicle body 1 so as to cause the body to detour the obstacle when it is at rest or to automatically stop the vehicle body when the obstacle is in motion.	(Claim 1) A A running vehicle which is equipped with an obstacle sensor 5 of the non-contact type at a front portion of its body 1, F and a controller 12 for controlling running means or steering means of said vehicle body based on the result of said obstacle detection by said obstacle sensor 5, and which is characterized by comprising the following elements listed as B-F. B The above mentioned obstacle sensor 5 is composed of multiple non-contact type obstacle sensors 5A, 5B which are arranged laterally of said vehicle body 1 for the purpose of sensing the position of the obstacle in a plurality of divided sensing areas A1-A3 arranged laterally of said vehicle body 1. C Said sensing areas A1-A3 detected by said obstacle sensors 5A, 5B are separated into a plurality of detecting areas comprising the area detected separately by each individual obstacle sensor 5A and 5B and the area detected simultaneously by the adjacent sensors 5A, 5B. D Said obstacle sensors 5A, 5B are set to repeatedly detect the obstacle at a predetermined time interval t_0. E Said controller 12 is equipped with judgment means for judging whether the obstacle is at rest or in motion based on whether or not an obstacle is detected in said sensing areas A1-A3. F Said controller 12 is equipped with means for coping with said obstacle which, based on the result from said judgment means, outputs an evasion control command to said running means or said steering means, to cause the vehicle body to detour the obstacle when the obstacle is at rest and outputs a stop command to said running means to cause said vehicle body to stop running when the obstacle is in motion.

Table 7-1 Comparison between Claims in Japan at the time of Application and at the time of Publication for Opposition

Claim in Japan at the time of Application	Claim in Japan at the time of Publication for Opposition
(Claim 2) A running vehicle as defined in Claim 1 wherein the control means D measures the distance L1 from the vehicle body 1 to the obstacle repeatedly at a predetermined time interval t_0 by the obstacle sensor 5 E2 and judges whether the obstacle is at rest or in motion based on whether or not the measured distance L1 differs from an estimated distance L2 to the obstacle which varies in corresponding relation to the variation in the distance L0 of travel of the vehicle body 1 per predetermined time interval t_0.	
(Claim 3) A running vehicle as defined in Claim 1 wherein the control means B comprises an obstacle sensor 5 composed of a plurality of obstacle sensors 5A, 5B of the non-contact type arranged side by side laterally of the vehicle body 1 for detecting the position of the obstacle laterally of the vehicle body 1 in a plurality of ranges, and E3 judges whether the obstacle is at rest or in motion based on whether or not there is a change in the position A_1, A_2, A_3 of the obstacle D which is repeatedly detected at a predetermined time interval t_0.	

Table 7-2. Comparison between Claims in the U.S.A.at the time of Application and at the time of Issue of Patent

Claim in at the time of Application	Claim in U.S.A. at the time of Issue of Patent
(Claim 1) A A running vehicle having an obstacle sensor 5 of the non-contact type at a front portion of its body 1, characterized in that the vehicle is provided with control means E1 for judging whether an obstacle detected is at rest or in motion based on the result of detection F and controlling the vehicle body 1 so as to cause the body to detour the obstacle when it is at rest or to automatically stop the vehicle body when the obstacle is in motion.	(Claim 1) A A self-propelled, unmanned running vehicle having a vehicle body movable over a surface, said vehicle comprising: B obstacle sensor means of the non-contact type disposed at a front portion of said vehicle body for detecting the presence of an obstacle in the path of movement of said vehicle body; E1 signal generating means connected to said sensor means for determining whether the detected obstacle is at rest or is in motion and for generating in response thereto a rest-detection signal or a motion detection signal, respectively; and F control means operatively interconnecting said vehicle body and said signal generating means and receiving said generated rest-detection and motion-detection signals, said control means for (a) causing the vehicle body to detour the detected obstacle in response to receiving said rest-detection signal, and (b) stopping the movement of the vehicle body in response to receiving said motion-detection signal.
(Claim 2) A running vehicle as defined in Claim 1 wherein the control means D measures the distance L1 from the vehicle body 1 to the obstacle repeatedly at a predetermined time interval t_0 by the obstacle sensor 5 E2 and judges whether the obstacle is at rest or in motion based upon whether or not the measured distance L1 differs from an estimated distance L2 to the obstacle which varies in corresponding relation to the variation in the distance L0 of travel of the vehicle body 1 per predetermined time interval t_0.	(Claim 2) A running vehicle as defined in Claim 1 wherein said signal generating means includes D (a) measuring means for measuring a distance L1 from the vehicle body to the obstacle detected by said sensor means repeatedly at a predetermined time interval t_0 and E2 (b) judgment means for judging whether the obstacle is at rest or in motion based upon whether or not the measured distance L1 differs from an estimated distance L2 to the obstacle which varies in corresponding relation to the variation in the distance L0 of travel of the vehicle body per said predetermined time interval t_0.

Table 7-2. Comparison between Claims in the U.S.A.at the time of Application and at the time of Issue of Patent

Claim in at the time of Application	Claim in U.S.A. at the time of Issue of Patent
(Claim 3) A running vehicle as defined in Claim 1 wherein the obstacle sensor 5 comprises	(Claim 3) A running vehicle as defined in Claim 1 wherein said obstacle sensor means includes
B a plurality of lateral obstacle sensors 5A, 5B of the non-contact type arranged side by side laterally of the vehicle body 1 for detecting the position of the obstacle laterally of the vehicle body 1 in a plurality of ranges,	B a plurality of lateral obstacle sensor means each of the non-contact type arranged side by side laterally of the vehicle body for detecting positions A1, A2, A3 of the obstacle laterally of the vehicle body in a plurality of ranges,
E3 and the control means judges whether the obstacle is at rest or in motion based upon whether or not there is a change in the position A1, A2, A3 of the obstacle	E3 and wherein said signal generating means judges whether the obstacle is at rest of in motion based upon whether or not there is a change in the position A1, A2, A3 of the obstacle
D repeatedly detected at a predetermined time interval t_0.	D repeatedly detected at a predetermined time interval t_0.

3. Considerations

The following may be inferred from the above comparison.

In Japan, when functional expressions exist in a claim, the examiners are inclined to require that such expressions be fully supported in the "detailed description of the invention". Further, the judgment criteria in a lawsuit seem to be somewhat more lenient.

Concerning the examination practice for functional expressions in claims in Japan as compared to that in the U.S., one opinion[5)] holds it to be more strict, while another opinion[2)] holds it to be more lenient. Our study showed, however, that as long as the technical means are judged to be clear, it can be said that the functional expressions in the claim(s) shall be permitted. Notwithstanding, it is difficult to provide a general criteria for judging whether or not the technical means is clear because a difference will arise case by case as to how fully a statement must be made in the "detailed description of the invention".

On the other hand, in examination in the U.S., it appears to be sufficient that the specific construction which exhibits the claimed function be supported by a single embodiment even when the constitution of the claim is stated in functional expression, and it may be supposed that the main point to be examined is whether or not the difference between constituent elements in the claim and those in the reference cited is significant.

The major cause of differences in examination result in Japan and the U.S.A. for the same application may reside in the fact that stipulation providing the scope of the invention expressed in functional terms in a claim must be limited to identical or equivalent to that specifically described in the specification exists in the U.S., while in Japan any technology in question which satisfies the definition given in the claim is generally interpreted to fall within the scope of the invention.

Considering the above circumstances, when a comparison is made of claims recited using functional expressions which are permitted on the basis of identical embodiments, it could be said that the scope thereof are broader in the U.S. than in Japan.

Nevertheless, it cannot be easily assumed that the judgments regarding the enforcement of rights based on the claims stated using functional expressions are broader in either country.

VI. PROPOSAL

The functional expression in claims offers to the applicant an extremely expedient method for expressing the invention as a technical idea in easy, comprehensive and broad-ranging terms.

On the other hand, such an expression is unavoidably abstract, and due to their broadness it is liable to provoke a rejection during examination on the grounds that they include the prior art. Further, in cases where the validity of the patent is in dispute in patent infringement lawsuits, etc. after the patent has been issued, it is likely in some cases that the claim is construed as encompassing not the exactly identical scope to that literally stated in the claim but the narrower scope limited to the embodiments.

Therefore, when expressing claims in functional terms in Japan, it would be advisable to take the following points into consideration.

1. Drafting of the Specification

(1) As regards the points featured in an invention, unnecessary functional expressions should be avoided, and it should be remembered that "the range within which functional expressions are permitted is the range encompassing technical matters stated in the 'detailed description of the invention' and in the drawings". Concerning the other constituent elements, if a person skilled in the art easily hits on specific technical means for performing the function then functional expressions may also be used, but it is preferable not to overuse them.

(2) Expressions should be created so as to stepwisely modify the level of abstractness as much as possible, by the use of multiple claims.

(3) Embodiments for different technical means having the same function which support functional expressions should be increased as many as possible and stated in the specification.

(4) In order to make it sure that examiners conclude that the specific technical means for performing a function stated in the claims(s) is easily thought of by any person skilled in the art, the applicant must consider the following points.

(a) For description of embodiments, materials, equipments and processes, etc. with which the technical means should be provided to achieve the purpose of the invention, as well as the reason for use thereof, should be clearly stated.

(b) In the section "Detailed Description of the Invention" of the specification, the operation of the technical means for achieving the purpose of the invention, as well as its function, should be clearly stated.

2. **Response to a Ground of Rejection**

(1) Functional expressions in the claims are usually abstract and thus the subject matter of the invention is difficult for the examiner to understand. Therefore, applications are liable to be rejected. When a notice of rejection is issued, the contents of the office action from the examiner should be duly contemplated (an interview may even be preferable if occasion demands). It is possible to avoid the final rejection by making a proper amendment.

3. **Application in a Foreign Country**

In filing an application for patent in a foreign country, the following matters should be taken into consideration.

(1) In filing an application for patent in a country where examination practice is different from the homeland, it is essential to make every effort to prepare a claim(s) in compliance with the examination practice of the country in which the application is planned to be filed, for example, by substituting an apparatus claim with a claim expressed in means plus function, or vice versa.

(2) It would be considered preferable to afford adequate time to an agent in the country where an application is planned to be filed to pre-examine and translate the specification, even when restriction is imposed on a period allowed for claiming the conventional priority, etc.

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PIPA Database Cover Sheet

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Observations and Synopsis of Major Legislative Changes in U.S. Trademark and Copyright Laws Since 1987

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September 2, 1992

Americans love to compete. Whether it be in sports such as baseball or business, Americans want to be part of the game, to know the rules and to test their skills. Given a level playing field, Americans are cautiously willing to learn about and experiment with new competitive ideas. In American baseball, from about 1845 until 1886 "pitching" was defined as throwing the ball to the batter underhanded. Changing that rule made the entire game far more commercially successful, exciting and enjoyable.

When the passage of time causes something to become an arbitrary obstacle to the success of a sport or venture we Americans usually "tinker" with the rules with the view to overcome the obstacle. In major league baseball for example, different baseball teams routinely adjust the distances between the home plate and the outfield walls between seasons to increase the number of home runs hit at the park and the excitement of the games played on the field. Since both the home and visiting teams have the same opportunity for a home run the adjustment is a fair improvement.

Our United States trademark and copyright laws are not immune from this process of "tinkering" and removing arbitrary obstacles to improve performance. During the past five years there have been many proposals introduced into Congress to enhance these two areas of our laws. In the back of the room I will leave a handout listing the proposed U.S. federal legislation since 1987 affecting U.S. trademark and copyright law and practice since 1987. These lists will be available to you as you leave today.[1] As you will note our efforts to legislate fair improvements in these two areas is substantial. Many of the listed proposals eventually became part of our federal laws. Due to the time constraints we have I will limit my remarks to what I consider to be the most significant piece of legislation in each of these two areas.

In the trademark area, clearly the most important piece of enacted legislation has been the Trademark Law Revision Act of 1988, Pub. L. No. 100-667, 102 Stat. 3935 which became effective on November 16, 1989, one year after being signed by President

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[1] This information is compiled from the annual reports of Committee 601 (Legislation) in the Section of Patent, Trademark and Copyright Law, the American Bar Association, chaired by Herbert C. Wamsley.

Ronald Reagan. [2] The Trademark Law Revision Act of 1988 (TMLRA) made three major changes in federal trademark law. The three changes are:

- The term of a federal trademark registration was reduced from 20 years to 10 years;
- Trademark rights of national scope can be initiated by the filing of an "Intent-To-Use" trademark application in the U.S. Patent and Trademark Office without actual "use" of the mark; and
- The quality of trademark "use" required to obtain and maintain rights in a federal trademark registration was increased and "token use" was abolished.

Let's start this review of these three major changes beginning with the easiest change first. Under the TMLRA, the registration and renewal term of all new federal trademark registrations was reduced from 20 to 10 years. Under the Lanham Act, an affidavit of use of a registered trademark is required to be filed between the fifth and sixth anniversary of the registration or the registration is abandoned. Prior to the TMLRA, "deadwood" in the form of registered trademarks which fell into non-use after a use affidavit was filed, accumulated and cluttered the register. They became obstacles to the effectiveness of the federal registration system. If a business changed its marketing plan and dropped its use of a particular registered trademark, there was no requirement that the company which owned an abandoned trademark registration file an express notice of abandonment. This "deadwood" or non-

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[2] The United States Trademark Association (USTA) established a Trademark Review Commission in March 1985 to conduct a study to determine if the United States trademark system was effective to: 1) Fulfill the objectives of the Trademark Act of 1946 as set forth at the time of its enactment; 2) Accommodate present day business and commercial practices and realities; 3) Implement the public policy objectives of the United States; 4) Further the principles and objectives of the trademark concept and an optimal trademark system; and 5) Adapt to potential future changes in business practices and commercial relationships. Thirty-eight experienced trademark practitioners from academia, the corporate sector and the private bar spent two years reviewing and making recommendations for changes in the Trademark Act of 1946, also known as the Lanham Act. In August, 1987 the Trademark Review Commission issued its final report and recommendations. That report became the cornerstone for S. 1883 introduced by Senator DeConcini in November, 1987. Representative Moorhead introduced identical legislation in March, 1988 in the House of Representatives as H.R. 4156. Changes to H.R. 4156 were made and a clean bill sponsored by Representative Kastenmeier as H.R. 5372 was reported out of the Judiciary Committee in September, 1988. Several compromises were reached between the House and Senate versions and S. 1883 as amended was passed by both the House and Senate in October, 1988. See The Trademark Law Revision Act of 1988 published by the USTA for a detailed examination of the legislative history.

used trademark prevented many companies from using similar marks for the remainder of the 20 year initial term. If a company filed an application to register a similar trademark it ran the risk of having the "deadwood" registration cited against it. Under Section 2(d) of the Lanham Act the U.S. Patent and Trademark Office's (USPTO) trademark attorneys are required to cite prior registered trademarks which are confusingly similar to the subsequently created trademarks during the formal examination of all trademark applications. If that happened, the Applicant would have to attempt to overcome the citation or abandon his trademark. If he could distinguish his mark from the prior mark to the satisfaction of the trademark attorney in a formal written reply to the Office Action his application could proceed. If this was not possible and he could not find any use of the cited trademark or its owner to obtain either an assignment or express letter of abandonment then the applicant was forced to institute formal cancellation proceedings before the USPTO's Trademark Trial and Appeal Board.

The USPTO did not know or have the resources to determine when and if a registered trademark was "deadwood." This caused needless expense and delays for all trademark applicants. By reducing the registration term to 10 years these prior but abandoned "deadwood" registrations are marked abandoned. This major change enhances the federal system by making it more reliable, easier and less expensive to use. It also brought the U.S. trademark registration term into step with the registration terms in most foreign nations.

To review the second major change brought about by the TMLRA, the creation of national trademark rights by the filing of an "Intent-To-Use" trademark application, we need to briefly look at the history and recent developments in U.S. trademark practice. Historically, U.S. trademark rights were protected under three separate but overlapping systems, the federal registration system, state registration systems and the common law of unfair competition. The most important of these three systems in my opinion was the federal registration system embodied in the Lanham Act, 15 U.S.C. Sections 1051 et. seq. A trademark registered under the Lanham Act provides its owner many procedural advantages including (a) national constructive notice of the registrant's claim of ownership of the trademark and his exclusive right to use the mark in commerce on the specified goods or services; (b) the USPTO's rejection of subsequently filed federal applications for confusingly similar trademarks and (c) the exclusion of U.S. imports bearing confusingly similar trademarks.[3] Most states have

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[3] The TMLRA supplements the procedural advantages of federal registrations by making all registrations on the Principal Register prima facie evidence of the validity of the registered mark. After a registration of a mark on the Principal Register becomes incontestable under Section 15, all of the presumptions become conclusive. This is a substantial incentive to

laws protecting trademarks under principles similar to the Lanham Act. About half the states have as part of their state law "antidilution" statutes intended to protect certain "famous" marks under a different principle.

The nature of the protection afforded trademarks under the federal, state and common law is protection against the likelihood of confusion as to the source, sponsorship or quality of branded goods or services. This is "traditional" trademark protection. Common law trademark rights were created the instant the mark was used in commerce and those rights could be subsequently registered in either or both the federal and state systems. The social purposes for granting enforcement for trademarks include protecting consumers rights to be free to choose between competing goods and services without being confused and protecting merchants and manufacturers' reputations for dependability, integrity and quality for the branded goods and services they offer. Conversely, state "antidilution statutes" do not require any likelihood of confusion in the consumer's mind, but only the "watering down" of a "famous" mark, even if no reasonable person would be misled as to the source, sponsorship or quality of goods or services bearing the allegedly diluting brand name. For example, the famous mark "Coca-Cola" would be protected under state antidilution statutes if that trademark were used by an unrelated third party on its bar soap without permission from the Coca-Cola Company. Under state antidilution statutes no competition between the plaintiff and the defendant is required.[4] Under "traditional" trademark law, for infringement to arise there must be a likelihood of confusion in a particular industry for particular goods or services between the plaintiff and the defendant.

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apply for federal registration of one's trademark.

[4] In an effort to gain a degree of national uniformity for trademarks vis-a-vis the various state antidilution statutes, in August 1992 the Section of Patent, Trademark and Copyright Law of the American Bar Association passed a resolution favoring in principle that the owner of a famous mark federally registered on the Principal Register be entitled, subject to the principles of equity, to an injunction against another's use of a mark, beginning after the registrant's mark becomes famous, that causes dilution of the distinctive quality of the registrant's mark, regardless of the presence or absence of (a) competition between the parties, or (b) likelihood of confusion, mistake or deception. It also passed a resolution favoring in principle that ownership of a valid federal registration on the Principal Register should constitute a complete bar to an action brought by another person, under the common law or state statute seeking to prevent dilution of the distinctiveness of a mark , but that any federal dilution legislation otherwise should be in addition to and should not affect those remedies available under the common law or pursuant to state statute. This area deserves further watching.

Under the pre-TMLRA federal laws, the only way a domestic applicant could obtain trademark rights was to use a given trademark in commerce. A foreign applicant or registrant could acquire a federal trademark registration under Section 44 of the Lanham Act without alleging use of the mark in U.S. commerce but the foreign applicant had to state that the trademark was in use somewhere and submit specimens showing the mark in use somewhere.[5] However, a domestic applicant who filed a trademark application for the registration of a trademark which had not yet been used in commerce routinely received notice from the USPTO that the application was void ab initio; the filing fee was not refunded. The saying for domestic applicants was, "First the trade, then the trademark." Today, this is no longer absolutely true.

Why did the Trademark Review Commission recommend changing the U.S. laws to include "Intent-To-Use" trademark rights you might ask? There were several good reasons for arriving at this significant change in the law. The traditional rule requiring use of the trademark in commerce before protection seemed reasonable since all rights were based on the thought that the protectible right was the identification by consumers of a particular entity's trademarks with its goods and services. In other words, consumers had the right not to be deliberately confused by unscrupulous traders palming off bogus goods and services under misleading brands. The traditional rule, while still valid, no longer covered all situations in the complex U.S. marketplace.

Basing all U.S. trademark rights on prior use of a trademark in commerce involved substantial risks to the investment of time and money for domestic entrepreneurs. For example, when a domestic company wanted to launch a new branded product, it first had to conduct a trademark availability search to detect any prior users of an allegedly confusingly similar brand for the goods in question. Just as baseball base runners must avoid running too closely to one another, under U.S. law any entity entering a market with a branded product for the first time must avoid creating a likelihood of confusion with all prior brands on related products in use in that market. A legal opinion was given that there were or were not prior rights in other's brands. In the former case, the domestic company had to select a different trademark. If there were no detected "confusingly similar" brands or trade names for the

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[5] The TMLRA amends Section 44 by requiring all foreign applicants basing their U.S. trademark application on the ownership of a foreign application or registration to state that it has a bona fide intention to use the mark in commerce (and "commerce" means all commerce which may lawfully be regulated by the U.S. Congress). However, since use of the trademark in commerce is not required prior to the issuance of a federal registration. foreign applicants are not required to submit specimens of the use of the trademark.

same or similar goods and no likelihood of confusion, then the company could adopt, use and register the trademark for its new product. However, there was always some degree of risk that the opinion was wrong perhaps because the search report had overlooked an allegedly confusingly similar prior trademark. If the report was incomplete, the company risked being sued for trademark infringement by the prior trademark owner. If this situation occurred the newly branded product could be enjoined from further sales and the success of the new product was in extreme jeopardy. The entire commercial success of a new product might turn on one missed prior reference.

To add to these risks, in 1984 the Trademark Trial and Appeal Board issued a decision in Crocker National Bank v. Canadian Imperial Bank of Commerce, 223 USPQ 909 (TTAB 1984), 29 PTCJ 3. The case held that qualified foreign applicants under § 44(b) of the Lanham Act could file U.S. trademark applications based on §§ 44(d) and (e) of the Act, 15 USC 1126(d)(e), without alleging prior use of the trademark in commerce. The rationale for this unexpected major change in U.S. trademark practice was that to require foreign applicants to allege use of their trademark anywhere and require specimens of such use was inconsistent with the United States' obligations under the Paris Convention as implemented by § 44 of the Lanham Act. Under Article 4 of the Paris Convention a trademark applicant in one country of the Union has a right of priority of up to six months from his initial filing date in which to file a subsequent application for the same mark in a second country of the Union. In most foreign nations a trademark registration can be obtained before the trademark is ever used as long as the applicant states an "Intent-To-Use" the trademark. The validity of the resulting foreign trademark registration depends upon subsequent actual use of the trademark within a specified time frame of between two to five years directed by the foreign national law. In this case a Canadian applicant did not allege any use of its trademark or submit any specimens as had previously been required by the USPTO. By reversing the prior practice, this decision allowed foreign nationals the right to register their foreign marks in the U.S. without ever using the mark in commerce.

How could a domestic applicant know when a foreign entity had applied to register its mark in its home country five months before the U.S. company selected the exact same trademark for the same product in the U.S. market? The foreign company could file its trademark application in the U.S. after the U.S. company adopted and used the same mark and the foreign company would have U.S. priority. Based on the foreign application the foreign applicant would be granted a U.S. registration. Domestic users of the federal trademark registration system viewed this decision as unfair. This was an arbitrary obstacle to their use of the federal trademark registration system and it created different rules for foreign and domestic applicants. These problems lead to the 1987 USTA Trademark Review Commission's final report and recommendations and the

introduction of S. 1883 containing the intent-to-use provisions. The intent-to-use trademark application provisions introduced into the federal system were intended to lessen if not eliminate the preferential treatment afforded foreign trademark applicants over domestic applicants.

The TMLRA amended the Lanham Act by creating a second path for federal applications filed by domestic applicants. The prior use-based trademark application procedure requiring dates of first use and specimens of the mark as used in commerce remains intact. The verified, written "Intent-To-Use" application may be filed based only on a "bona fide" intention to use the trademark in commerce at some future date for specific goods or services.[6]

When the "Intent-To-Use" application is filed, the USPTO examiner reviews the application to see that it complies with the Lanham Act and issues an Office Action either (1) identifying prior references against the applicant's mark and/or (2) requiring amendments to the application as filed or (3) stating that the application is complete and ready for publication. If the Office Action contains items (1) and/or (2) the applicant has six months in which to submit a written reply.

After all formalities are complied with, the "Intent-To-Use" application is published for opposition in the Official Gazette of the USPTO. Should someone think the mark is confusingly similar with their prior trademark rights they may file an opposition against the "Intent-To-Use" application. This announcement to the U.S. public of the bona fide intention by applicant to register and use his trademark on his goods and services prior to expending large sums of time and money on the actual commercialization of the trademark is a great benefit to the domestic applicant. Should the facts develop that the "Intent-To-Use" applicant selected a mark too close to prior undetected trademark rights for the same or

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[6] All "Intent-To-Use" applications must specify:
- the applicant's domicile and citizenship;
- state that the applicant has a bona fide intention to use the trademark in commerce;
- describe the goods or services on or in connection with which the trademark is intended to be used;
- submit a drawing of the trademark as it will be used;
- state the mode or manner in which the trademark will be used on or in connection with the goods or services; and
- be supported by a verified statement that to the best of applicant's knowledge and belief, applicant is entitled to use the mark in commerce, and that no other person has the right to do so, either in a form identical to the mark or in a form so nearly resembling the mark as is likely to cause confusion, mistake or to deceive.

similar goods or services, the applicant can abandon the trademark and not have to waste all the time and money involved in advertising the mark and printing brochures.

If the "Intent-To-Use" trademark application is not opposed within thirty days of the publication date the examiner issues a Notice of Allowance in the case. The applicant has 6 months from the mailing date of the Notice of Allowance to begin using the trademark in commerce and to file a verified Statement of Use with three specimens evidencing use of the mark displayed in the "Intent-To-Use" drawing. If the "Intent-To-Use" applicant does not or cannot begin using the mark in commerce within 6 months of the Notice of Allowance, it can file a request for a six-month extension of time in which to file the Statement of Use. That request must contain a verified statement that the applicant has a continued bona fide intention to use the mark in commerce on the goods or services in the "Intent-To-Use" application. It also must state applicant's ongoing efforts to make use of the mark in commerce or give a satisfactory explanation for the failure to make such efforts. As with most papers filed in the USPTO there is a fee which must accompany this request. Extensions of time will be granted only in six-month increments and may not aggregate more than 24 months. If the Statement of Use is not filed within 30 months of the Notice of Allowance, the "Intent-To-Use" application will be held abandoned.

Once the verified Statement of Use is filed in the USPTO stating that the mark was used in commerce on a given date and accompanied by the three specimens or facsimiles of the mark as used and accepted by the USPTO, the "Intent-To-Use" application is complete. The USPTO issues the federal trademark registration certificate in the applicant's name. The trademark rights reflected on the certificate date back to the filing date of the "Intent-To-Use" application. Notice of the registration is published in the USPTO's Official Gazette.

This "constructive use date" as of the filing date of the "Intent-To-Use" application significantly lessens the risks facing domestic applicants. By publishing the application before the trademark is placed in use, an applicant can give national constructive notice of its bona fide intent to use the mark on specified goods. Third parties have the opportunity to oppose the mark prior to applicant going to the expense of placing the mark in commerce. An applicant with a bona fide intent to use the most successful of several trademarks in a consumer survey may file applications for the marks with respect to a given product. Once the survey is concluded, the applicant should expressly abandon those applications for those marks which it no longer intends to use.

The TMLRA contains a specific provision concerning the assignment of an "Intent-To-Use" application. An "Intent-To-Use"

application cannot be assigned prior to the filing of the Statement of Use, except to a successor of the applicant's business or the portion to which the "Intent-To-Use" trademark pertains. The purpose of this provision is to prevent the trafficking of trademarks. It conforms with the principle that a trademark cannot be validly assigned apart from the business or goodwill with which it is associated.

Finally, the TMLRA abrogated the concept of "token use" of trademarks which had evolved over the years by judicial interpretation of the Lanham Act's use requirements.[7] "Token Use" was the degree of use courts believed the Lanham Act required to recognize common law rights and resulting federal trademark rights. In De Mert & Dougherty, Inc. v Cheesebrough-Pond's Inc.,[8] the federal district court in Chicago stated:

> [A]lthough there has been some hostility to the use of interstate transactions that were contrived specifically for the purpose of obtaining federal registration, the current state of the law is that an initial transaction can be made primarily for federal registration purposes provided that the registrant intends to continue using the mark in commerce.

An "intent to continue" was inferred by the registrant's continued use of the mark on goods sold. However, continuing sporadic, casual and nominal shipments or few uses of a trademark followed by a cessation of all use of the mark thereafter was held not to be sufficient to support the existence of trademark rights. The line between "token use" on the one hand and continuing sporadic, casual and nominal shipments on the other was not well defined or sharp. Costly litigation was engaged in to determine whether a particular marketing practice under a brand name fell on one side or the other of this faint line. Each case turned on its

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[7] In Fort Howard Paper Company v. Kimberly-Clark Corporation, 390 F.2d 1015 (C.C.P.A. 1968) the Court was asked whether the shipment by Fort Howard of 6 boxes of branded facial tissues, toilet tissues, paper napkins and towels followed by 18 months of no sales was sufficient to have the mark in bona fide use in commerce prior to Kimberly-Clark's trademark application for the same mark for similar goods. In answering the question in the affirmative the Court stated that even though the first sale by Fort Howard was deliberately made "expressly for federal registration purposes", that fact did not mean the transaction was not bona fide use for federal trademark application purposes. The record showed that Fort Howard intended to continue use of the mark, conducted marketing and advertising tests in preparation for production and national distribution and in fact continued using the mark after the 18 month hiatus in sales.

[8] 348 F Supp 1194, (1972, ND Ill), 175 USPQ 460.

own set of facts and a better and brighter definition was needed. It was not enough for the trademark use to be public and more than de minimis, it had to be continuous commercial use. Without this continuous commercial use, the trademark owner exposed itself to claims that it was "warehousing" trademarks and had abandoned the trademark rights. The word "commerce" is defined as all commerce which may be lawfully regulated by Congress. The legislative history of the TMLRA specifically states that the new definition of "use in commerce" in Section 45 was to "eliminate the commercially transparent practice of token use." Section 45 as amended by the TMLRA reads as follows:

> Use in commerce. The term "use in commerce" means use of a mark in the ordinary course of trade, commensurate with the circumstances, and not made merely to reserve a right in a mark. For purposes of this Act a mark shall be deemed to be used in commerce (1) on goods when it is placed in any manner on the goods or their containers or the displays associated therewith or on the tags or labels affixed thereto, or if the nature of the goods makes such placement impracticable then on documents associated with the goods or their sale, and the goods are sold or transported in commerce, and (2) on services when it is used or displayed in the sale or advertising of services and the services are rendered in commerce, or the services are rendered in more than one State or in this and a foreign country and the person rendering the services is engaged in commerce in connection therewith.

This new definition is deliberately a flexible standard. The legislative history clearly shows that the "use in commerce" requirement should be interpreted to mean "commercial use which is typical in a particular industry." It encompasses genuine uses such as test market uses, infrequent sales of large or expensive items or ongoing shipments of new drugs awaiting FDA approval to clinical investigators. This new "use in commerce" standard applies to all aspects of the federal registration system under the Lanham Act including use-based applications, "Intent-To-Use" applications, Statements of Use, the filing of the affidavit of use required under Section 8, the affidavit of incontestability which may be filed under Section 15 and all future renewal applications required under Section 9.

Turning to the area of Copyright Law, with the passage of the Berne Convention Implementation Act of 1988, the United States became a member of the Berne Union by entering into an international treaty known as the Berne Convention. The Berne Convention is a treaty covering broad exclusive rights in categories of copyright work.

Dating from 1887, the Berne Convention has been revised five times in order to address changed conditions and advances in technology affecting the rights of authors. Each revision has strengthened and extended authors' and copyright proprietors' rights. All members of the Berne Union agree to treat nationals of other member countries just like they treat their own nationals for purposes of copyright protection. In addition, certain minimum levels of copyright protection are guaranteed to the nationals of all member countries. For example, all member states of the Berne Union provide that works have a copyright duration of the life of the author plus 50 years. United States authors and copyright proprietors actively supported the Berne Convention Implementation Act of 1988 (BCIA) which took effect on March 1, 1989. The move allowed the U.S. to formally establish copyright relations with 24 countries with whom it previously had no copyright relations. As the U.S. is one of the leading exporters of copyrightable materials, including films, tapes, records, videos, computer software and books, the Berne Convention serves U.S. authors and copyright proprietors by enhancing their remedies against foreign copyright piracy. As of March 1, 1989, the copyright of new works by U.S. authors is automatically protected in all member countries. Works of foreign authors who are nationals of a Berne Union country and first published in a Berne Union country are automatically protected in the U.S.

The BCIA required several changes in U.S. copyright law. Following are some of the significant changes:

1. Mandatory deposit in the Copyright Office of two complete copies of the best edition of the work publicly distributed in the United States is required, independent of copyright registration. However, copyright registration satisfies this legal requirement.

2. On U.S. works published on or after March 1, 1989, mandatory copyright notice is no longer required. Failure to place a notice of copyright on copies or photographs of such works will no longer result in the loss of copyright. The BCIA is not retroactive, and therefore notice requirements that were in place before March 1, 1989 govern all works first published during that period, regardless of national origin. Notice is required for works first published between January 1, 1978 and February 28, 1989 on copies distributed in the United States, including copies which inadvertently omit the proper notice, to be entitled to protection under the Copyright Act. For works first published before January 1, 1978 without the requisite copyright notice, copyright was lost immediately.

3. Before a copyright infringement action may be filed in the United States for a work of U.S. origin, it must be submitted to the Copyright Office for registration. Works not of U.S. origin but which are Berne Convention works, are exempt from the registration requirement prior to the institution of legal action.

The person seeking the exemption bears the burden of proving that the Berne Convention work is not subject to the registration requirement.

4. Timely registration of the work within three months of the publication, or before infringement, provides the copyright owner the possibility of award of attorney's fees and statutory damages.

5. The copyright owner who registers before or within five years of the first publication receives the benefit of a legal presumption that the facts stated in the copyright certificate of registration are true and that the copyright is valid.

6. Finally, as a result of the BCIA, the copyright owner is no longer required to record a transfer before instituting a copyright lawsuit in the owner's name. However, recordation does offer certain benefits, including establishing priority between conflicting transfers and exclusive licenses and establishing a public record of the contents of the transfer or document.

The BCIA of 1988 removed one of two historical obstacles to U.S. adherence to Berne, namely, the Convention's requirement that the enjoyment and the exercise of Berne Convention rights should not be subject to any formality. By repealing the formalities of rigid copyright notice, registration and recordation of transfers, the U.S. complied with this requirement.

The other obstacle to U.S. adherence to Berne was removed by a formal opinion from the Director General of WIPO concerning "moral rights" in works. That formal opinion stated that the United States did not need to enact statutory provisions on "moral rights" in order to comply with Berne. The Director General opined that such rights already existed in the U.S. under statutory and common law. The Director General pointed to the Lanham Act's Section 43(a) which constitutes the general federal law of "unfair competition", the state common law and statutory provisions against libel, defamation, misrepresentation, and unfair competition. The Berne amendments make it clear that U.S. adherence does not expand or reduce the availability under U.S. law of whatever "moral rights" an author may have and that no claimant in the U.S. court can rely on the Berne Convention itself for protection on such a theory absent the existence of an applicable domestic law. States, such as California, Massachusetts and New York, have statutes that protect what is called an author's "moral rights" notwithstanding the fact that the author may have sold or otherwise disposed of all ownership rights in the work. Under the statutes and "moral rights" provisions in other countries, the author of the work has a bond with his work based on the fact that works of authorship express the author's "personality". Among other things, an author exercising his "moral rights" in his work may control subsequent modifications to the work for example.

In conclusion, change is necessary and inevitable if growth and improvement is to occur. For example, in U.S. baseball two new major league teams, namely the Colorado Rockies and the Florida Marlins will be added to the National League next season. The Trademark Law Revision Act of 1988 and the Berne Convention Implementation Act of 1988 are two shining examples of a willingness on the part of the U.S. to change its domestic laws to allow its citizens to compete more effectively under its trademark and copyright laws.

(1) Title: Protection of Well-known Marks

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(3) Source:
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3. Committee: 1

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(6) Statutory Provisions: Japanese Trademark Law
Article 4 (1) 8,10,12,15
Article 64, 67
Unfair Competition Prevention Law
Article 1 (1)

(7)Abstract :

We have conducted investigations and researches on provisions of the Trademark Law and the Unfair Competition Prevention Law as well as recent decisions and judgments in connection with protection of some of well-known marks.

If an application is filed in Japan by an unauthorized person or entity for registration of any unregistered well-known trademark, an opposition may be filed against it in accordance with the provision of Article 4 Par. 1 Sub-par. 10. Decisions granted endorse the protection, as it is actually provided as contemplated.

The defensive mark registration system in Japan is widely made use of by not only Japanese businesses but business entities from abroad.

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I. Introduction

The Japanese Trademark Law is on a first-to-file and registered basis. Thus, if you want to protect a trademark which you either intend to use or have in use, you must first apply to the Patent Office and have it registered there. Also, if, with respect to any unregistered trademark you may have in actual use, any other person applies to the Patent Office and register it before you do, your use of that trademark will constitute an infringement of the trademark right held by that another person.

The above does not necessarily mean that the very fact that you have a trademark in actual use is not sufficient enough for protection at all. The trademark is protected under the Trademark Law and the Unfair Competition Prevention Law subject to certain conditions. An example of the protection would be the case that a trademark which has become well-known in Japan as the result of use thereof. Hence, a trademark which is well-known overseas but is not so in Japan is not qualified for the protection. For this reason, owners of the overseas well-known trademarks are likely to complain that protection of their trademarks in Japan is not enough.

From the above viewpoint, we would like to report to you in the light of the past decisions and judgments how the well-known trademarks in Japan are afforded protection. This report will further outline the defensive mark registration system for the protection of the well-known trademarks.

II. What is "a Well-Known Mark"?

1. Necessity for Protection of Well-Known Marks

Supported by diversified business activities during the recent years, those marks which have become famous through mass media publicity and advertisements now penetrate deeply into the public. As a result, if used for goods other than those for which it was originally used and became so famous, the mark is very likely to be taken by the public as being used by the legitimate owner of the mark or its authorized affiliates.

Under the Trademark Law, use of a trademark similar to a registered trademark within the scope of similarity of goods constitutes an infringement of the trademark rights. The scope of similarity is, however, restricted to that to those goods reasonably related to the goods for which the trademark is registered. Thus, here is one of the grounds for the special protection to be provided for the well-known marks. Thus, it is essential that the owner of a registered trademark reserve the power to exercise his right against the use for goods which are remote in their relations with, and would not normally be considered similar to, that of registered mark.

While the Japanese Trademark Law requires registration of a trademark in order for it to be effective against third parties, a third party could apply for registration of an unregistered trademark which has become famous, in an attempt to get a free ride on it. Should such situation be left as it is, the goodwill of the legitimate user of the mark will be impaired. Thus, any such application made by third parties must be excluded on the ground of existence of the well-known trademark.

For the reason stated above, the Trademark Law and the Unfair Competition Prevention Law of Japan afford special protection for well-known trademarks.

2. What is a Mark "Well-Known "?

Well-known trademarks may vary in their extent, ranging from those applicable in a specific area, such as the Kanto area (consisting of Tokyo and surrounding prefectures), to those on a nationwide basis, or from those well-known only among specific consumers to those known to the general public.

In this paper, the level of the well-known in the sense of its protection is the state of its being widely known among consumers. Territory-wise, it is taken well-known as long as it is so widely known in a certain area, and not necessarily throughout Japan.

III. Protections in Japan

1. Trademark Law

In Japan trademarks are basically subject to registration in order for the rightful owner or licensees to set up against third parties. For this reason, owners of well-known trademarks generally apply for registration thereof for the protection under the law. Those who have so applied for and become the owner of the well-known trademarks are entitled to exclude infringements thereto by third parties.

Infringements of a trademark would take place not only when a trademark identical to the registered trademark is applied to other goods identical thereto, but when it is applied to similar goods, and further when a similar trademark is applied to identical or similar goods. Thus, it may be said in Japan that it is an effective means of protection of well-known trademarks to have them registered for as broader scope of goods as possible.

A trademark, once registered, can exclude applications by others of similar trademarks. Well-known marks, if unregistered or because of dissimilarity of goods, may not successfully exclude an application for registration by others. The Trademark Law has provisions, as discussed hereinafter, to protect the unregistered well-known trademarks.

Incidentally, there is a special registration system, known as the "Defensive Mark" system, to safeguard well-known trademarks. It will also be discussed hereinafter.

(1) Prevention of Confusion with Well-known Marks of Others

Any trademark applied for registration which is likely to be confused with a well-known mark shall be refused on the following grounds:

To Protect Well-known Trademarks (Article 4, Par. 1 Sub-Par. 10)

"Trademark registration shall not be effected with respect to any trademark which is widely known among consumers as indicating goods pertaining to another person's business, or any trademark similar thereto, and which is used on such goods or similar goods."

This provision is intended to prevent confusion of origin and to protect unregistered famous marks. A mark widely known among consumers as indicating goods pertaining to business may prevent registration thereof by any other person as its trademark. Except as provided for under the Unfair Competition Prevention Law, the Trademark Law does not provide injunction with respect to use of such unregistered famous mark by another person.

Prevention of Confusion (Article 4 Par.1 Sub-Par. 15)

"Trademark registration shall not be effected with respect to any trademark which is likely to cause confusion with goods pertaining to another person's business."

The purport of this provision is to prevent confusion in general which does not fall under the provision of Article 4 Par. 1 Sub-par. 10 as quoted above. This provision is so construed as to apply also where goods for which an application for registration is filed is beyond the scope of similarity.

(2) Names of Other Persons (Article 4 Par. 1 Sub-par. 8)

Famous names and their abbreviations could well indicate origin, in the same manner as trademarks applied to goods. Thus, any unauthorized use of famous names and their abbreviations by another person will cause confusion of origin. For this reason, the following provision is contained in the Law:

"Trademark registration shall not be effected with respect to any trademark which contains another person's portrait or name, famous pseudonym, professional name or pen name of another person, or famous abbreviation thereof (except where such use shall have been approved by such another person)."

This provision is construed as a regulation for protection of a personal right. The famous pseudonym and its famous abbreviation are considered to identify a specific person.

(3) Other Provisions Relating to Well-known Marks

The Trademark Law contains the following provisions with respcet to well-known marks:

Right to Use Trademark by Virtue of Prior Use (Article 32)

"Where, from a time prior to the filing by another person of a trademark application and without any intention of unfair competition, a person has been using in Japan the trademark in the application or a similar trademark on goods designated in the application, or on similar goods, and, as a result, the trademark has become widely known among consumers as indicating the goods as being pertaining to his business at the time of filing of the trademark application, he shall have the right to use that trademark on the said goods, provided that he continues to use that trademark in respect of the goods."

This is the so-called "Prior Use" provision, and intended to protect, as having legally been acquired by virtue of that provision, those trademarks qualified as the well-known trademarks, to the extent that it continues to be used as such.

Any such well-known trademark should exclude registration thereby by another person pursuant to Article 4 Par. 1 Sub-par. 10. The intent of this provision is to allow such unregistered well-known mark to be used continuously, without requiring any decision to be made for invalidation of any trademark registration effected by mistake in favor of the said another person.

Right to Use Trademark Due to Use Prior to Registration of Demand for Invalidation Trial (Article 33)

"If, in the event the original owner of two or more registered trademarks as identical or similar trademarks for use with identical or similar designated goods has caused or permitted one of the registered trademarks to be invalidated and, without the knowledge that the trademark registration is invalid and, prior to registration of a demand for a trial for the invalidity thereof, used the registered trademarks or similar trademarks in Japan in respect of the designated goods or similar goods, and the trademarks have become widely known among consumers as indicating goods pertaining to his business, he shall have the right to use the trademark in respect of the goods, provided that he continues to so use the trademark."

This is known as "Right to Use Trademark due to Use Prior to Registration of Demand for Invalidation Trial." A trademark registered by mistake may be invalidated by a trial. The purport of this provision is to protect the reputation of a trademark right built up by a trademark owner from destruction as the result of invalidation of the registered trademark, if a trademark is registered by mistake notwithstanding grounds preventing such registration, and the trademark owner, without the knowledge of its being invalid, used the registered trademark and, as a result, the trademark has become widely known and famous.

(4) Defensive Marks

The Trademark Law provides in respect of the Defensive Marks, as follows:

"If a registered trademark is widely known among consumers as indicating the designated goods pertaining to business of the owner of that trademark and, because of use of the registered trademark by another person in respect of goods, other than the designated goods pertaining to the registered trademark and similar goods, there is a likelihood of confusion between such goods and the designated goods pertaining to the business of the owner of that trademark, then the owner of that registered trademark shall be entitled to a defensive mark registration of a mark identical to the registered trademark in respect of the goods of which the said likelihood of confusion is present." (Article 64).

"Use of a registered defensive trademark in respect of the designated goods shall be deemed to be an infringement of the rights pertaining to the defensive mark (the right of the owner of the defensive trademark shall not extend to any similar mark, however)." (Article 67).

1) It will not be sufficient for protection of a famous trademark to simply exclude similar trademarks for similar goods. If a famous trademark is registered with respect to goods for which it is used, the effect of the registration shall not extend to any dissimilar goods. Although it would be possible under the registration principle to obtain a trademark registration for goods not in use, the trademark registration so effected will be subject to the danger of cancellation from the viewpoint of the burden of proof of use.

Because of its famousness, a famous trademark is very likely to be registered or used by third parties on dissimilar goods, leading to confusion among general consumers and possibly to dilution of the effectiveness of the trademark. To safeguard such famous trademark, some sort of protection is deemed necessary. It is this Defensive Mark System that is intended to satisfy that necessity.

2) The Defensive Mark System has the following advantages:

a. Applications for trademark registration which could give rise to confusion with a well-known trademark are supposed to be rejected in accordance with the provision of Article 4 Par. 1 Sub-par. 15, as previously referred to. The scope within which such confusion could take place is very hard to be defined, however. It is the registration of a defensive mark that clearly defines the scope within which the confusion could take place.

b. Because of the fact that the scope of confusion is made clear by adoption of a defensive mark, it would be easier to satisfy the requirements of the burden of proof under the Unfair Competition Prevention Law. In other words, you are supposed to be able to effect injunction under the Unfair Competition Prevention Law against use of your trademark by others but, as a matter of fact, it is not easy to prove confusion that necessarily takes place.

c. You can prohibit use of your trademark by others by virtue of a registered defensive trademark (you can not prohibit use of marks similar to your registered defensive mark, however).

d. Registration of a defensive mark is not conditioned upon use, hence can not be canceled because of non-use.

e. A registered defensive mark may exist in parallel with a registered trademark of another person, each covering the same mark. For example, trademarks may be afforded registration in favor of a person on the assumption that it would not create confusion. At a later date, when one of them becomes famous, it may give rise to confusion, in which case you are entitled to registration of a defensive mark.

3) In connection with the defensive mark registration system, the Trademark Law contains a provision as cited below:

"Trademark registration shall not be effected with respect to any trademark which is identical to a registered defensive mark (meaning a mark registered as a defensive mark) of another person and used in respect of the designated goods covered by the defensive mark registration." (Article 4, Par. 1 Sub-par. 12)

The above represents a provision, prohibiting registration of a trademark, incorporated in connection with the defensive mark system. Article 4, Par. 1 Sub-par. 11 prohibits registration of a trademark in conflict with a trademark of another person. Likewise any trademark identical to the defensive mark cannot be registered in respect of the designated goods. Registration of a similar trademark may not be excluded by the registered defensive mark.

4) Taking this opportunity, the Trademark Group has conducted a survey as to the extent to which owners and licensees of well-known trademarks make use of the defensive mark system. You will see that there are many companies overseas registering the defensive mark on an active basis.

Table 1

Examples of Defensive Mark Registrations

◎ — classes covered by original registration
○ — classes covered by defensive mark registration

1. Well-Known Marks in Foreign Countries

Mark \ Class	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
adidas reg. 1499855	○		○		○			○	○	○	○	○				○				○			○	◎		○								
BRAUN reg. 500373				○							◎		○								○					○	○							
CARTIER reg. 1357886		○	○			○	○	○	○		○	○		○	○						◎	○					○	○	○	○	○	○	
セリーヌ (CELINE) reg. 878863													○				◎	○	○				○			○	○							○
CHANEL reg. 785680													○						○	○	◎	○	○	○	○		○							
Coca-Cola reg. 106633	○																											○	◎	○	○	○	○	
dunhill reg. 415202	○	○	○			○		○	○		○	○		○	○			○		○	◎					○			○	○	○	○	○	○
FANTA reg. 498388																												○	◎			○	○	
IBM reg. 1226278	○	○	○	○	○	○	○	○			◎	○	○	○	○	○	○	○	○	○	○	○	○				○	○	○	○	○	○	○	○
Levi's reg. 1222156																	◎															○		

Mark / Class	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Maggi reg. 1477576	○			○														○	○					○	○	○		○			◎			
MAX FACTOR reg. 764488	○			◎											○	○	○	○		○				○	○	○	○							
Newsweek reg. 384508											○					○				○			○			◎	○							
PEPSI reg. 1353411											○						○			○	○			○	○			○	◎	○	○	○	○	
reg. 1273244	○	○	○	○	○	○	○	○		○	○	◎	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Sunkist reg. 290827			○			○	○			○		○		○		○																◎	○	
VOGUE reg. 655209				○																				○		◎								
VOLVO reg. 477334								○		○		◎	○				○		○	○		○	○	○	○	○	○							
XEROX reg. 973892						○		○			◎	○				○	○				○	○						○				○		
reg. 533225	○											◎				○		○		○	○			○	○	○	○							

2. Well-Known Marks in Japan

Mark \ Class	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
BRIDGESTONE reg. 1877890		○	○	○	○	○		○		○	○	◎	○	○	○	○		○					○		○	○	○	○	○	○	○	○	○	
OLYMPUS reg. 2035878	○	○	○	○	○	○				◎		○	○				○	○			○	○	○	○			○	○	○	○	○	○	○	
Panasonic reg. 1327604									○	○	◎		○				○	○	○			○												
SEIKO reg. 175840	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○	◎	○	○	○	○	○	○	○	○	○	○	○	○	○
YAMAHA reg. 1252176	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	◎	○	○	○	○	○	○	○	○	○	○
YANMAR reg. 682388	○	○	○	○	○	○	○	○	◎	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○	○	○
味の素 reg. 641075	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	◎	○	○	○
reg. 493017	○	○	○	○	○	◎	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
reg. 50131	○	○	○	○	○		○	○	○		○	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	◎	○	○	○
reg. 105993	○	○	○	◎	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○	○	○

* The above classification of goods are those of former one and the details are as follows.

In the meantime, International Classificaiton has been used in Japan since April, 1992.

Class 1: Chemicals (Excluding Those Belonging to Other Classes), Pharmaceuticals, Medical Treatment Accessories

Class 2: Fertilizers

Class 3: Dyestuffs, Pigments, Painting Materials (Excluding Electrical insulating Paints), Printing Inks (Excluding Inks for Stencil Use), Shoe polishes, Polishing Agents

Class 4: Soaps (Excluding Those Belonging to Pharmaceuticals), Dentifrices, Cosmetics (Excluding Those Belonging to Pharmaceuticals), fragrances and Flavorings

Class 5: Fuels, Industrial oils, Inedible oils and Fats, Waxes, Higher Fatty Acids

Class 6: Metals (Excluding Sodium, Potassium and Calcium), Ores(Excluding Those Belonging to Fuels)

Class 7: Materials Used Exclusively for Buildings or Construction, Cement, Lumber, Stone, Glass

Class 8: Firearms, Ammunition and Projectiles, Gun Powder, Explosives, Munitions and Their Auxiliaries, Parts and Accessories Thereof

Class 9: Industrial Machines and Tools, Motive Power Machines and Apparatus (Excluding Electric-Motors), Pneumatic and Hydraulic Machines and Apparatus, Office Machines and Equipment (Excluding Those Belongings to Aplied Elctronic Machines and Apparatus), Other Machines and Equipment not Belonging to Other Classes, Parts and Accessories Thereof (Excluding Those Belonging to Other Classes), Machine Elements

Class10: Physical and Chemical Apparatus and Instruments (Excluding Those Belongings to Applied Electronic Machines and Apparatus), Optical Apparatus and Instruments (Excluding Those Belonging to Applied Electronic Machines and Apparatus), Photographic Apparatus and Instruments, Motion Picture Apparatus and Instruments, Measuring Apparatus and Instruments (Excluding Those Belonging to Applied Electronic Machines and Apparatus and Electrical and Magnetic Measuring Instruments), Medical Apparatus and Instruments, Their Parts and Accessories (Excluding Those Belonging to Other Classes), Photographic Materials

Class11: Electrical Machines and Apparatus, Electrical Communication Machines and Apparatus, Applied Electronic Machines and Apparatus (Excluding Those Belonging to Medical Apparatus and Instruments), Electrical Materials

Class12: Tranportation Equipment, Parts and Accessories Thereof (Excluding Those Belonging to Other Classes)

Class13: Sharpened Hand Implements, Hand Tools, Metal Fittings (Excluding Those Belonging to Other Classes)

Class14: Raw Fibers

Class15: Yarns (Excluding Sutures and Fishing Lines)

Class16: Woven Fabrics, Knitted Fabrics, Felt, Other Cloth

Class17: Clothing (Excluding Special Sporting and Gymnastic Clothing), Fabric Apparel Accessories (Excluding Those Belonging to Other Classes), Bedding (Excluding Beds)

Class18: Cords (Excluding Those Belonging to Clothing and Cords for Footwear or Sporting and gymnastic Goods), Ropes (Excluding Those Belonging to Sporting and Gymnastic Goods), Nets (Excluding Those Belongings to Sporting and Gymnastic Goods), Containers

Class19: Kitchen Utensils (Excluding Those Belonging to Electrical Machines and Apparatus, Sharpened Hand Implements, and Hand Tools), Daily Use Articles (Excluding Those Belonging to Other Classes)

Class20: Furniture, Matting, Fittings, Indoor Items (Excluding Calligraphy and Paintings and Sculptures), Outdoor Items (Excluding Those Belonging to Other Classes), Trophies, Morticians or Festival Goods

Class21: Personal Accessories, Buttons, Bags, Pouches, Jewels, and Their Imitations, Artificial Flowers, Toiletry Articles

Class22: Footwear (Excluding Special Sporting and Gymnastic Footwear), Umbrellas and Parasols, Canes, Their Parts and Accessories

Class23: Hological Instruments, Glasses, Their Parts and Accessories

Class24: Toys, Dolls, Recreational Equipment, Sporting and gymnastic Goods, Fishing Tackle, Musical instruments, Musical Performance Accessories, Gramophones (Excluding Electric Phonographs), Records, their Parts and Accessories

Class25: Papers, Stationery

Class26: Printed Matter (Excluding Those Belonging to Stationery), Calligraphy and Paintings, Sculptures, Photographs, Their Accessories

Class27: Tobacco, Smokers'Articles, Matches

Class28: Alcoholic Beverages (Excluding Medicated Alcoholic Beverages)

Class29: Tea, Coffee, Cocoa, Soft Drinks Fruit Juices, Ice

Class30: Confectionery, Bread and Buns

Class31: Seasonings, Spices, Edible Oils and Fats, Dairy Products

Class32: Meat, Eggs, Edible Marine Products, Vegetables, Fruit, Processed Foodstuffs (Excluding Those Belonging to Other Classes)

Class33: Grains, Pulses, Flour, Animal Feed, Seeds, Other Plants and Animals not Belonging to Other Classes

Class34: Plastics, Rubbers, Leather, Pulps, Other Base Materials not Belonging to Other Classes

2. Unfair Competition Prevention Law

While the Trademark Law protects registered trademarks, the Unfair Competition Law safeguards free and fair business activities by regulating unfair activities.

The Unfair Competition Prevention Law, therefore, controls, without involving registration, unfair practices themselves relating to well-known marks, including trademarks, which have become well-known.

The question of whether a given mark is well-known is judged basically on the basis of whether it is well-known in Japan. As economy and means of communication is internationalized, the judgment whether a mark is well-known seems to be made recently somewhat leniently with respect to internationally famous marks.

We will discuss in brief the protection of famous trademarks under the Unfair Competition Prevention Law:

(1) Right of Claim for Injuction (Article 1 Par. 1)

"Any person whose business interest is likely to be impaired by an act of another person which falls under any of the following may claim such action to be ceased:"

In the case of unfair competition practice, the injured may seek injuction as long as objective requirements are met and his business interest is likely to be impaired by it, regardless of subjective intention of the wrongdoer.

1) Confusion of Goods (Article 1 Par. 1 Sub-Par. 1)

"Act causing confusion with goods of another by using his name, trade name, trademark, container or package widely known as such or an indication identical or similar to the one showing his goods, or by selling, distributing or exporting goods for which such name, trade name, trademark, container or package or indication is used, within the jurisdiction in which this law is enforced;"

This provision regulates actions in Japan which give rise to confusion with goods of others by use of identical or similar marks to those of others well-known as such. For the purpose of this provision, the state of being well-known is considered to be relative and represents economic, factual evaluation and, therefore, should include the state of being well-known in a particular area.

2) Confusion of Origin (Article 1 Par. 1 Sub-Par. 2)

"Act causing confusion with business establishments or activities of another by using his name, trade name, trademark or an indication identical or similar to the one showing his business, within the jurisdiction in which this law is enforced;"

This provision serves to regulate acts causing confusion with goods of others in Japan by use of identical or similar marks of others well-known as such. The scope of protection, therefore, is broader than under 1), and services may be protected under this provision pending completion of registration of the service mark.

3) Protection of Trademarks of Signatories to Paris Convention (Article 1 Par. 2)

"Any person who is entitled to a trademark in any signatory to the Paris Convention may claim cessation of sale, distribution or export of goods identical or similar to those in which any trademark identical or similar to that to which he is so entitled is or was used, without a consent with no valid reasons of any person who is or was his agent or representative and who is entitled to that trademark, by the person who so sells, distributes or exports. This provision shall also apply with respect to any person who was the agent or representative and ceased to be as such within one (1) year before he commenced the sale, distribution or export."

(2) Right of Claim for Damages (Article 1-2)

1) "Any person who has willfully, knowingly or negligently practiced an act falling under any of sub-paragraphs of Par. 1 of the preceding Article shall be liable for damages sustained by any person whose business interest has been impaired thereby."

2) "Any person who is, or was within one (1) year before, an agent or representative who has willfully, knowingly or negligently practiced any act falling under Par. 2 of the preceding Article shall be liable for damages sustained by any person who is interested in the trademark under the said paragraph, business interest in which is so impaired thereby."

3) "With respect to any person who has impaired business reputation of another person by any act under Sub-par. 1 or 2 of Par. 1, or Par. 2, of the preceding Article (or unfair practice pertaining to business secret), the court may, upon claim of the injured party, order, in lieu of or in addition to an award for damages, such disposition as shall be necessary for restoration of the business reputation."

Different from the claim for injuction, the claim for damages requires willfulness, knowingness or negligence. This is because the negligence principle is considered equitable as the point of accord at which the general principle of freedom of business and the proposition for prevention of unfair competition should meet.

IV. Case Study on Decisions and Judgments on Protection of Well-known Marks

In the trading of goods or services, it is not seldom that a mark identical or similar to a well-known trademark, trade name or name is or happens to be used or applied for registration by another person.

In Japan, there are the Trademark Law and the Unfair Competition Prevention Law to protect well-known marks. These laws do not protect any and all well-known marks on an unconditional basis. It is important that requirements for the protection under these laws are fully understood.

In this section, we will review issues raised, requirements of the law, and how the laws are actually administered, in respect of relatively recent trial and court cases involving the Trademark Law and the Unfair Competition Prevention Law, in an attempt to find out what we should bear in mind and what we should do to cope with them. We have selected as example mainly those well-known marks, because the members should be interested in them and also in the hope of introducing cases that could be easily described in English.

* Please bear in mind that Japan has diversified letter characters in use, and there are different ways to express the same phonetic sound, i.e., Katakana, Hiragana, Chinese Characters and the English alphabets.

1. Trademark Law

(1) Prevention of Confusion with Well-known Marks of Others

1) With respect to the table given hereinafter (Table No.2), "Category A" includes those cases in which the state of being well-known was supported, while "Category B" shows those in which the state of being well-known was not supported or, if it was supported, the trademarks or goods were dissimilar each other, so, as a result, it was judged that there would be no likelihood of confusion.

2) In each of the cases listed in the "Category A," except Cases Nos. 24 and 25, registration of an identical or similar trademark by a third party was rejected or, after registered, invalidated by an judgment, on the ground that such trademark would (or was likely to) give rise to confusion with the well-known mark.

3) Cases Nos. 24 and 25, on the other hand, are examples in which, when trademarks and goods were found similar between the prior application and the latter, the one under the latter which was famous enough was registered on the ground that, because of its famousness, it would be identifiable as such and have no danger of confusion with the one under the prior application.

4) Whether, when the state of being well-known or famousness of a trademark is found to be fully present, trademarks identical or similar thereto are barred from registration will depend largely on how these goods are related each other and how close their distribution channels are. Because of recent diversifying trend of corporate activities and abundant information available, the exclusive effect of the well-known trademark seems to be extending to such areas of industry as have been regarded as being of less relativity in the past.

5) It is not seldom that a trademark identical or similar to a well-known mark is published or registered because of inadvertence or lack of knowledge on the part of examiners. The fact that most of the cases have gone through oppositions or invalidation decisions, shows the importance of usual watching in the part of owners of well-known marks.

6) It will also be an effective countermeasure available that you make yourself fully prepared for proving the state of your being well-known or famous against opposition to or at a trial for invalidation of your mark. Thus, it will prove to be very useful if you correctly record and keep advertisements, publicity data, and mass media articles. In Case No. 6, it was held that the date of documents submitted in connection with opposition, which was after the application for the trademark was filed did not affect the overall judgment in any way. It may, however, be an unusual exception provided, based on general circumstances particularly warranting it.

7) Comments on Table No. 2:

a. Data Investigated: Trial decision gazette issued during 4 calendar years ending 1991.

b. Figures in Trademark Law Article numbers show the numbers of sub-paragraphs involved of Article 4 Paragraph 1 (e.g. "8" means Article 4 Par. 1 Sub-par. 8; "8/15" means Article 4 Par. 1 Sub-par. 8 and 15).

c. Applicant for trial (or plaintiff in the case of lawsuit) is:

"Applicant for trademark registration" with respect to "Protest against rejection."

"Owner or its agent, custodian or other interested parties" with respect to "Opposition" or "Invalidation of Registration."

(CASE STUDY - TRADEMARK LAW/ART. 4-1)

CATEGORY "A"

TABLE 2

No.	CASE NO.	CAUSE	TM LAW ART. (4-1-)	APPLICATION/THIS CASE TRADEMARK	GOODS	CITED FAMOUS MARK	GOODS OR FIELDS OF FAME	RESULT	REASON FOR CONCLUSION
1	S59-10257	Invalid'n of Reg'n	8	JOLLY CARTIER in Katakana	Soap, Toothpaste, Cosmetics	CARTIER	Jewelries, Valuables	Invali-dated	Implying relationships with famous "CALTIER" - Confusion of source
2	S59- 2847	Protest for Rejec'n	8	Hillary	Clothing	Edmond Hillary	Name of a famous Alpinist	Rejected	Name of Famous Person
3	S58- 5062	Protest for Rejec'n	8	AMPEX with Katakana	Clothing, Fabric Apparatus	AMPEX	Electric Appliance Manufacturer	Rejected	Cause for Confusion of Source
4	S58- 3241	Protest/ Opposition	8	VALENTINO with Katakana	Yarns	Mario Valentino	Bags, Other Leather Goods	Rejected	「VALENTINO」understood to stand for Mario Valentino
5	S57-17621	Invalid'n of Reg'n	8	HILTON with Katakana	Grains, Beans	HILTON	Hotel Chain	Invali-dated	Famous Hotel Chain
5A	H1(行ケ)37	Cancel'n of No.5	8	HILTON with Katakana	Grains, Beans	HILTON	Hotel Chain	Invali-dated	Famous Hotel Chain
6	S56- 6648	Protest/ Opposition	8	HILTON with Katakana	Seasonings, Spices	HILTON	Hotel Chain	Rejected	Hotel Chain. Opposition documents dated later than the application
7	S58- 9828	Protest/ Opposition	8/15	CARTIER with Katakana	Confectionery, Bread	CARTIER	Jewelries, Accessories	Rejected	Consusion of source
8	S55- 5948	Invalid'n of Reg'n	10	PARADE in Katakana	Vegetables, Sugar Cane	PARADE	Lemon	Invali-dated	Well-known with 「SUNKIST」 Invalidated for Fruits
9	S61-15837	Protest/ Opposition	15	The King of Kings with Katakana	Confectionery, Bread	KING OF KINGS	Scotch Whiskey	Rejected	Confusion of Source (Possibly used for Whiskey Bonbon)
10	S60- 5228	Invalid'n of Reg'n	15	CRYSEVER with Katakana	Clothing	CHRIS EVERT (Tennis Player)	Clothing (non-registered)	Invali-dated	Name of a famous tennis player Confusion of source
11	S60- 4659	Protest for Rejec'n	15	NIKON	Valves, Pipe Fittings	NIKON	Camera, etc.	Rejected	Confusion of source
12	S59- 1666	Protest for Rejec'n	15	Rado (design)	Footwear	RADO	Watches	Rejected	Confusion of source

CATEGORY "A"(Cont'd)

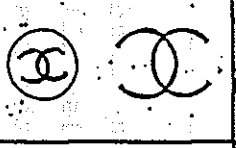
No.	CASE NO.	CAUSE	TM LAW ART. (4-1-)	APPLICATION/THIS CASE TRADEMARK	APPLICATION/THIS CASE GOODS	CITED FAMOUS MARK	GOODS OR FIELDS OF FAME	RESULT	REASON FOR CONCLUSION
13	S58- 8570	Protest for Rejec'n	15	Kevlar	Skiing Equipment	KEVLAR	Chemical Textile	Rejected	Name of chemical textile of Du Pont - Confusion of source
14	S58- 7866	Protest for Rejec'n	15	BLIZZARD with Katakana	Bags	BLIZZARD	Skiing Equipment	Rejected	Confusion of source
15	S58- 2891	Protest/ Opposition	15	WHITE HORSE	Canned Fishmeat	WHITE HORSE	Whiskey	Rejected	Possibility of trading at the same place
16	S57-14807	Protest for Rejec'n	15	YAMATOYO FUJICOLOR in Katakana	Fishing Equipment	FUJICOLOR	Photo Films	Rejected	Recognized in 2 parts. Latter half is well-known. Conf'n of source
17	S57-11450	Protest for Rejec'n	15	GUERLAIN with Katakana	Personal Accessories	GUERLAEN	Perfume, etc.	Rejected	Name of famous perfume, cosmetics
18	S57-10357	Protest/ Opposition	15	VOGUETEX	Woven Fabrics Other cloth	VOGUE	Magazine	Rejected	Famous magazine. Goods possible to be contained in magazine
19	S57- 7630	Protest/ Opposition	15	GUERIN with Katakana	Personal Access. Toiletry Articles	GUERLAEN	Perfume, etc.	Rejected	Famous perfume. Same trading channel, manner of use
20	S57- 1305	Protest/ Opposition	15	PERSONY in Katakana	Toys, Dolls Recreation Goods	SONY	Electric Appliances	Rejected	Contains famous name "SONY" Implies relationship
21	S55-16034	Protest/ Opposition	15	SKY JUMBO-CHAN (see below)	Bags, etc.	Picture of DUMBO (Disney's)	Various Character Goods	Rejected	Confusion of source
22	D55- 2618	Protest for Rejec'n	15	JUPON in Katakana		DU PONT	Chemical Manufacturer	Rejected	Reminds of U.S. big chemical manufacturer
23	H2(Ke)183	Invalid'n of Reg'n	15	Polo Club	Clockes, Watches, Glasses	Polo (Ralph Lauren)	Clothing	Invalidated	[Club] is a generic term. Reminds of POLO of Ralf Lauren
24	H2(Ke)7	Protest for Rejec'n	11	LANBAN in Katakana	Clothing, Bedding Articles	LARBAN	Polo by Ralph Lauren	Registerd	Although similarity recognized, no confusion for its well-knownness
25	H2(Ke)72 73,74	Protest for Rejec'n	11	KODAK	Chemicals	KOZAK	Medicine	Registerd	No similarity recognized. Both are well-known. No fear of conf'n



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CATEGORY "B"

No.	CASE NO.	CAUSE	TM LAW ART. (4-1-)	THIS CASE TRADEMARK	THIS CASE GOODS	CITED FAMOUS MARK	GOODS OR FIELDS OF FAME	RESULT	REASON FOR CONCLUSION
26	S62- 8883	Invalid'n of Reg'n	15	DORISSIMA	Clothing, Bedding Articles	DIORISSIMO	Soap, Perfume, etc	Registerd	Trademark not confusingly similar No relation in goods
27	S60- 9565	Protest for Rejec'n	15	LLOYD&HAIG	Kitchen Utensils Daily Sundries	H A I G	Whiskey	Registerd	To be recognized as one No relation in goods
28	S58-11106	Protest for Rejec'n	15	TRYDENT	Papers, Stationeries	TRYDENT (Warner Lumbert)	Chewing Gum	Registerd	Goods not close TRIDENT: Existing word
29	S60- 2165	Invalid'n of Reg'n	7/10/ 11/15		Soap, etc.		Soap, etc.	Registerd	Trademark not confusingly similar
30	S58-24635	Invalid'n of Reg'n	15		Tea, etc.		Perfume, Cosmetics Many other goods	Registerd	Trademark not confusingly similar No fear of confusion
31	S59- 9823	Invalid'n of Reg'n	10/11/ 15	シェーネル (CHAINEL in Katakana)	Synthetic leather	CHANEL with Katakana	Perfumes, etc.	Registerd	Trademark not confusingly similar
32	S55-16927	Invalid'n of Reg'n	10/11/ 15		Meat, etc.		Hamburger & Sandwiches	Registerd	Trademark not confusingly similar
33	S59-22204	Invalid'n of Reg'n	10/11/ 15	IRON HORSE	Alcoholic Beverages	WHITE HORSE & its label	Whiskey	Registerd	To be recognized as one Not confusingly similar
34	S57-16537	Invalid'n of Reg'n	15		Electronic Appliances	S O N Y with Katakana	Electric Appliances	Registerd	No necessity to recognize "Soni" independently
35	S58-12943	Protest/ Opposition	15	Three M in Katakana	Clothing, Coat		Testile Processing Treatment	Registerd	"3M" not well-known enough to be immediately associated

(2) Defensive Marks (Article 64):

1) With respect to the table shown hereinafter (Table No. 3), "Category A" includes decisions in which registration of the defensive mark was allowed, and "Category B" contains those in which registration of the defensive mark was not allowed because of the lack of famousness and the relation between goods or due to lack of formality requirements.

2) House marks or equivalent marks which have become well-known as the result of long nationwide use are granted registration of the defensive mark on the grounds of their being well-known and diversified operation of the business, without strict scrutiny into relations between the designated goods under the respective trademark and the designated goods under the respective defensive mark applied for (See Cases Nos. 1, 2, 3, 4, 5, 6).

3) A mark representing a brand name of goods, rather than the house mark, is also allowed registration, if found to be well-known as the result of long nationwide use, without reference to the relations of goods (See Cases Nos. 7, 8, 9).

4) If, after consideration of specific circumstances of past use of registered trademarks, such trademarks are found to be not well-known, the registration of a defensive mark as applied for is not allowed (See Case No. 10).

5) Even when a descriptive trademark is found distinctive because of its past use on designated goods and registered, registration of a defensive mark may not be allowed, if, in spite of the long use of that trademark in the past, distinctiveness of the mark is denied (See Case No. 11).

6) The last example (shown in Case No. 12) did not allow registration of a defensive mark on the ground that the appearance of the registered trademark is remarkably different from that of the defensive mark applied for. Article 64 makes "an identical mark to the registered mark" a requirement for registration of a defensive mark. Particular attention is required in this regard, because the identical mark requirement is strictly construed.

7) Comments on Table No.3

Data Investigated: Trial decision gazette issued during 4 calendar years ending 1991.

(CASE STUDY - TRADEMARK LAW/ART. 64)

TABLE 3

CATEGORY "A"

No	CASE NO.	DATE	TRADEMARK	GOODS FOR DEFENSIVE MARK	GOODS FOR ORIGINAL REGISTRATION
1	S58-19448	06/02/88	adidas	Cl.12: motor boats	Cl.24: sporting goods
2	S59-20344	03/14/91	ⓙ	03: dyestuffs	21: jewely
3	S60-15243	06/28/90	OLYMPUS	06: metals	10: cameras
4	S58-12483	10/04/90	セリーヌ(CELINE)	04: cosmetics	17: clothings
5	S60- 4209	06/13/91	HONDA	06: metals	12: motor cars
6	S56- 4381	10/18/90	⮜	25: papers	12: motor cars
7	S59- 5090	05/23/91	ELECTONE	22: bedcloths	24:musical instruments
8	S60- 2045	02/07/91	MAGGI	04: soaps	31: seasonings
9	S60-10266	11/21/91	Calorie Mate	25: papers	32: processed foods

CATEGORY "B"

No	CASE NO.	DATE	TRADEMARK	GOODS FOR DEFENSIVE MARK	GOODS FOR ORIGINAL REGISTRATION
10	S60-24835	10/18/90	CAMPARI	Cl.22: shoes	Cl.28: liquor
11	S59-17957	07/12/90	GOLD BLEND	30: snacks	29: instant coffee
12	S57-12685	11/17/88 defensive mark MERCEDES-BENZ original registration „Mercedes-Benz“		18: strings	old Cl.20: motor cars

2. Unfair Competition Prevention Law

Subjects Covered: Cases on Well-known Overseas Marks
Court Decisions Made Between 1986 and 1991

If a mark identical or similar to your well-known mark is used by another person and if your mark is a registered trademark and the mark used by another person is used in connection with goods identical or similar to your goods for which your mark is authorized to be used, you may claim your right basically under the Trademark Law or, otherwise, under the Unfair Competition Prevention Law.

The Unfair Competition Prevention Law provides for injuction (proviso of Article 1 paragraph 1) in favor of any person whose business interest is likely to be impaired, and claim for damages (Article 1-2 Par. 1), in respect of such act as gives rise to confusion with goods (Article 1 Par. 1 Sub-par. 1) or business (Article 1 Par. 1 Sub-par. 2) of another person by using the name, trade name, trademark or the like identical or similar to the one widely known as indicating goods or business of another person.

Requirements in order for a claim to be admitted:

1) Indication of goods (or business) of the plaintiff is widely known;
2) Defendant uses indication of goods (or business) identical or similar to the indication under (1); and
3) As a result, confusion takes (or, is likely to take) place.

a. Out of 11 recent judgment precedents on overseas well-known marks under the Unfair Competition Prevention Law, as quoted hereinafter, each of nine cases in which the claim was admitted (Cases Nos. 1-9) satisfied all three requirements as quoted above, while each of two cases (Cases Nos. 10 and 11) was dismissed because of lack of one of the above requirements.

b. The requirements, for lack of which the two cases were dismissed, were similarity of marks with respect to Case No. 10 and the state of being well-known with respect to Case No. 11.

c. The nine precedents in which the confusion was admitted to be existent included three, represented by Cases Nos. 3, 4 and 8, based on the "confusion," in a narrow sense, involved in competition in the course of business, and six, represented by Cases Nos. 1, 2, 5, 6, 7 and 9, not involved in competition in the course of business. The above would indicate trends of disputes involving the well-known (a "free ride" on them) toward an increase in the number and increased protection awarded.

Table 4

PRECEDENT CASES UNDER UNFAIR COMPETITION PREVENTION LAW
Involving "Protection of Overseas Well-known Marks" (1986 ~ 1991) (In the order of date of decision)

Cases in which protection was awarded:

Case No.	Plaintiff: Name Mark Business	Defendant: Mark Business	Court: Date of judgment; Identification number	Award of Judgment
1	Alfred Dunhill Limited "DUNHILL" Fashion products sales	"Supper Club Dunhill" and "Dunhill," both in Japanese, and in English Operation of a pub restaurant	Tokyo District Court November 14, 1986 61(Wa)11782	Injunction of use awarded: Claim awarded against defendant running a pub restaurant in the name of "Supper Club Dunhill" for prohibition of use of "Dunhill," in English as well as Japanese letters. Also prohibit to use it as indication of business, and for disuse of "Dunhill," in English as well as Japanese letters, as appearing in its signs (constructive confession).
2	Chanel Société Anonyme "Chanel" in Japanese "katakana" Perfumes and fashion products manufacture and sales	"Hotel Chanel" in Japanese "katakana" Hotel	Kobe District Court March, 25, 1987 87(Wa)94	Damages awarded: The name of "Chanel" is well-known in Japan as indication of business of the "Chanel" Group. Although the "Chanel" Group is not in competition with Defendant (hotel), use of the name of "Chanel" by Defendant gives rise to confusion with establishments or activities of Plaintiff's business with the result of damage and dilution of high class image of the indication of "Chanel."
3	Celine S.R.  "CELINE" Fashion products designing, planning and sales	"CELINE"  Belt sales	Tokyo District Court April 27, 1987 84(Wa)7791	Injunction of use and damages awarded: Letters of "CELINE" and "indication of figure" are well-known as indicating Plaintiff. The trademark used by Defendant is similar to Plaintiff's mark then causes confusion with Plaintiff's goods.

PRECEDENT CASES UNDER UNFAIR COMPETITION PREVENTION LAW
Involving "Protection of Overseas Well-known Marks" (1986 ~1991) (In the order of date of decision)

Case No.	Plaintiff: Name Mark Business	Defendant: Mark Business	Court: Date of judgment; Identification number	Award of Judgment
4	Reviyon Reviyon in Japanese "katakana" Fur, perfume, textile and shoes manufacture and sales	Kabushiki Kaisha Reviyon Shokai Shoes sales	Tokyo District Court April, 27, 1988 86(Wa)12712	Injunction of use, trademark registration cancellation, and damages awarded: The name of "Reviyon" is widely known in Japan as a world famous company with history and tradition, dealing with the highest class fur products. The trademark of Defendant, "Kabushiki Kaisha Reviyon Shokai" key word being "Reviyon" is similar to "Reviyon" which indicates Plaintiff's and his product. Also both products are leather products. (Plaintiff...fur product, Defendant ...shoes) Use of the trademark by Defendant gives rise to confusion with Plaintiff's goods/business and companies closelyaffiliated with Plaintiff.
5	Conde Nast Publications "VOGUE" Publishing fashion magazines and commercialization thereof	"VOUGE" Fashion products sales	Osaka District Court September 11, 1989 86(Wa)9077	Injunction of use awarded: The name of the magazine "VOUGE" published by Plaintiff is widely known in Japan as a high class fashion magazine from latest information on refined fashions in France and U.S.A. Defendant's trademark and Plaintiff's are similar in designation. Plaintiff and the authorized licensee uses this trademark for commercialization so that using this by Defendant gives rise to that Defendant represents Plaintiff and his goods.

PRECEDENT CASES UNDER UNFAIR COMPETITION PREVENTION LAW
Involving "Protection of Overseas Well-known Marks" (1986 ~1991) (In the order of date of decision)

Case No.	Plaintiff:Name Mark Business	Defendant:Mark Business	Court: Date of judgment; Identification number	Award of Judgment
6	King Features Syndicate Incorporated "POPEYE" character Commercialization business	"POPEYE" character Mufflers and neckties sales	Tokyo District Court February 19, 1990 84(Wa)10103	Injunction of use and damages awarded: The "POPEYE" character is widely known in Japan as indicating goods of Plaintiff and of those licensee. Use of the trademark by Defendant causes confusion with goods of Plaintiff's/group's licensees.
7	The Walt Disney Company "Mickey Mouse" character "MICKEY MOUSE" Commercialization business	"Mickey Mouse" character "MICKEY MOUSE" Clothing sales	Tokyo District Court February, 28, 1990 86(Wa)5911 Supported by Tokyo High Court January 30, 1991 90(Ne)991	Damages awarded: "Mickey Mouse" character and "MICKEY MOUSE" are widely known as indication of goods and business of Plaintiff. Use by Defendant of any similar indication causes confusion that Defendant belongs to a group conducting the same commercialization business as Plaintiff's.
8	Kellogg Company Japan Kellogg Company "Choco Crispy" in Japanese "katakana" Cereal manufacture and sales	"Choco Crispy" "Rice Choco Crispy" "Rice Florist Crispy" "Rice Crispy" "Crispy" Cereal manufacture and sales	Osaka District Court April 26, 1991 88(Wa)9368	Indication of use awarded as claimed: The trademark, "Choco Crispy" is widely known in Japan as showing goods of Plaintiff. The trademark used by Defendant is similar to Plaintiff's and gives rise to confusion with Plaintiff's goods.

PRECEDENT CASES UNDER UNFAIR COMPETITION PREVENTION LAW
Involving "Protection of Overseas Well-known or Famous Marks" (1986 ~1991) (In the order of date of decision)

Case No.	Plaintiff: Name Mark Business	Defendant: Mark Business	Court: Date of judgment; Identification number	Award of Judgment
9	The Walt Disney Company "DISNEY" in English and also in Japanese "katakana" Cinema and TV production, commercialization business, etc.	"Sansei Group Nishi Nippon Disney Kabushiki Kaisya" "Disney" in English and also in Japanese "katakana" Management of "Pachinko" parlor	Fukuoka District Court July 19, 1991 90(Wa)1732	Injunction of use, disuse of letters of "Disney" in Japanese "katakana," Cancellation of the "Disney" portion of the registered trademark, and damages awarded. Plaintiff is known in Japan as "DISNEY," in English as well as Japanese which is very famous as indicating its business activities. The key word of Defendant's trade name "Sansei Group Nishi Nippon Disney Kabushiki Kaisya," is "Disney" and it is easily imagined that consumers call it "Disney" in the abbreviated name. Defendant's trade name etc., are similar to the famous business indication of Plaintiff's. Plaintiff and Defendant both come under the leisure industry and have a common aspect in which their images duplicate. Hence use of the word "Disney" leads to confusion among general consumers and users that Plaintiff and Defendant are mutually affiliated or come under the same group, having close relations between themselves.

PRECEDENT CASES UNDER UNFAIR COMPETITION PREVENTION LAW
Involving "Protection of Overseas Well-known Marks" (1986 ~1991) (In the order of date of decision)

Cses in which protection was not awarded:

Case No.	Plaintiff: Name Mark Business	Defendant: Mark Business	Court: Date of judgment: Identification number	Award of Judgment
10	Ferreiro Societe Bell Attuioni "MON CHERI" Chocolates manufacture and sales	"Cherimore" "Cherimore chocolate" in Japanese "katakana" Chocolate manufacture and sales	Osaka District Court August 17, 1987 86(Wa)2526	Claims for injuction of use dismissed. Each of the trademarks of Plaintiff and Defendant must be taken as being integral as it is and inseparable. Although they are somewhat common each other in the conception, they are dissimilar each other when overall considerations, including among others, external appearance and designation, are taken into account. Hence, Plaintiff's claim has no valid grounds for injuction of use, with no necessity for any further scrutiny into other aspects.
11	Stefano Ricci Societe a Responsabilita Limiterta "STEFANORICCI" Neckties manufactrue and sales	"STEFANORICCI" Neckties sales	Osaka District Court November 30, 1987 84(Wa)4987	Claims for injuction of use and for damages dismissed: While Plaintiff alleges that the word, "STEFANORICCI," attached to neckties is widely known as indication of Plaintiff's goods, stores selling them are limited with not much sales and the extent of its efforts for advertisement is unidentifiable. Thus, the Plaintiff's trademark is not recognizable as having been widely known among general consumers, aside from the question of whether it is famous among part of the necktie industry or lovers of high class neckties. Therefore, Plaintiff's claim does not have valid grounds, with no necessity for further scrutiny into other aspects.

V. Conclusion

As often reported in newspapers, unauthorized use of famous overseas brands is attempted from time to time. While it is true that we must rely on promotion of consciousness of the public in respect of the intellectual property, we must face the situation strictly with respect to those cases in which an intention to copy or get a "free ride" on the legitimate property is clear. It will mean specifically that an opposition or application for a trial for invalidation must be filed with respect to application or registration by others of your own protected property or, with respect to any unauthorized use of your trademark, your trademark, if any unregistered, must be registered or an application for registration of a defensive mark must be filed.

In the foregoing, we have reviewed various protections afforded in Japan for unregistered well-known or famous marks or available under the defensive mark system. We hope owners and licensees of well-known or famous marks will find it useful to make use of these means of protection positively.

Incidentally, with respect to the service mark system made effective on April 1, 1992, we would like to add that the requirement of its being well-known is taken into consideration in the event of conflict of applications therefor based on use, for the purpose of protection of rightful owners or licensees of well-known marks.

(End)

PIPA Database Coversheet

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(7) Abstract: This paper provides practical hints and guidelines on how to protect a well-known mark.

New Paper

PROTECTION OF A WELL-KNOWN MARK

PRACTICAL HINTS AND GUIDELINES

By

Dee Ann Weldon-Wilson

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PROTECTION OF A WELL-KNOWN MARK

PRACTICAL HINTS AND GUIDELINES

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PROTECTION OF A WELL-KNOWN MARK

PRACTICAL HINTS AND GUIDELINES

The topic "Protection of a Well-Known Mark" is broad, but this paper will address some general guidelines in the searching, registration, and policing of a world-wide mark, with particular focus on the United States. For purposes of this paper, we will assume that the reader is or represents the owner of a mark that is well-known in most parts of the world. References to "you" will mean the legitimate owner of the well-known mark.

I. SEARCHING AND PROSECUTION

Trademark rights are generally territorial. Each jurisdiction has its own laws and regulations which apply to the trademarks within its boundaries. The trademark owner must convince the Registrar in each jurisdiction that its mark is registerable. It is important, therefore, for you, the trademark owner, to determine the countries in which the trademark will be used now and in the future. In addition you should identify those countries in which it is most likely that another party will attempt to acquire your trademark, countries in which the product is produced or used, and those countries in which your competitors are doing business.

Most jurisdictions are limited to one country, however, agreements such as the Benelux Uniform Marks Law, ratified by the Netherlands, Luxembourg, and Belgium, provide for a common Trademarks Office. The applicant files one application to protect the mark in all three countries. For clarity, in this paper, the term "country" will be used to indicate a jurisdiction.

A. Searching

Whenever you plan to expand the use of your well-known mark into new territories, you should conduct trademark searches for similar marks in those

countries. If the mark is available for your use, you should file an application for registration of the mark.

Trademark searches in some countries, such as Japan, reveal only registered marks, but in other countries the searches also include marks that are the subject of pending applications. In the United States, it is possible to obtain a search that includes registrations, pending applications, and common-law marks, marks that are being used without registration.

B. Registration

Although there is no actual worldwide registration, the Madrid Arrangement provides procedures which you can follow to obtain a registration that protects a mark in several countries. When obtaining a registration under the Madrid Arrangement, the applicant must still comply with the domestic law of each jurisdiction. As shown on Attachment A, Japan is a signatory to the Madrid Arrangement. The United States is not a party to the Madrid Arrangement, but negotiations are underway for it to sign the Madrid Protocol.

1. Paris Convention

Many countries, including the United States and Japan, have signed the International Convention for the Protection of Industrial Property, known as the Paris Convention. The Paris Convention addresses the protection of certain intellectual property law. The most used provision of the treaty provides that, as between treaty members, the owner of a registration in its home country, may apply for registration of that same mark in other member countries based on its home country registration. The applicant must comply with the laws of the country in which they are applying to the extent the national laws do not conflict with provisions of the convention. There are several amendments of the Convention, but generally, if the applicant files applications in member countries within six months of the date that the home

country application was filed, the applicant receives the earlier filing date in each member country. Both Japan and the United States are bound by the Stockholm Text of the Convention.

2. Defensive Registrations and Associated Marks

In some countries, you may file an application for registration of a "defensive" mark to prevent others from using your famous mark on goods for which you are not currently using the mark. Defensive registrations should be acquired when they are available, since use of the mark on those goods is not required to maintain the registration. In addition, many countries provide for the "association" of registrations when the marks covered by the registrations are similar. Some countries allow or require the association of registrations covering similar marks, despite the goods covered in the registration, while other countries will associate registrations only if they are in the same classification. Associated registrations may not be sold or assigned separately from one another. The marks are considered to be so closely associated in the minds of the public that use of the mark by two parties would be likely to lead to confusion. An advantage of associating marks is that the laws of many countries provide that use of one associated mark is sufficient to maintain all associated registrations. It is, therefore, possible to register your mark in three logo forms, use only one, but maintain registrations for all three, preventing the use of any of the logo forms by another party.

3. Service Marks

Not all countries provide for the registration of marks that are used in connection with the provision of services. If service mark registrations are not available in a country, it is particularly hard to maintain and enforce your rights in the mark. The United States and Japan each provide for registration of service marks. In both countries, it is necessary for the

owner to provide a separate service under the mark; it is not enough that normal support services be provided in connection with a product sold under the mark. In countries which do not provide for the registration of service marks, you should consider registering the mark for goods associated with or used in the provision of the service, and for paper goods, such as publications, brochures, napkins, bags, or menus associated with or used in the provision of the service. For example, the United Kingdom, Singapore, and Hong Kong, will not register a mark used in connection with retail store services. It is possible, however, to register the mark on goods which bear the mark, for example, shopping bags which are sold to the public.

4. Trade Names

Trade names are generally protected in a different manner and have a different scope of protection than trademarks. Some countries register trade names on the Trademarks Register, but most countries provide protection of a trade name through other mechanisms, such as unfair competition or passing off actions. Article 8 of the Paris Convention (Stockholm Text) provides that "A trade name shall be protected in all the countries of the Union without the obligation of filing or registration, whether or not it forms part of a trademark." This provision, however, is subject to interpretation of each countries laws and may be considered self-executing by some countries and not self-executing by others. It is wise, therefore, to take advantage of any local provisions for registration of trade names, even if the country is a party to the Paris Convention.

5. Specific Information on Applications

Classification: Most countries, including Japan and the United States, have adopted the international classification system. Some countries continue to use their own national classifications, e.g., Brazil, Dominican

Republic, Indonesia, Taiwan, and some countries still use no classification system, e.g., Canada. The significance of the classification of a good or service varies from country to country. In some countries an applicant may not obtain a registration in the same class in which a similar mark is registered, even if the goods are unrelated. In other countries, such as the United States, the classifications are not controlling when another party seeks to register or use a mark. One difficulty in enforcement may occur when a country requires the trademark owner to own a registration in the identical class to preclude another's use or registration of a mark in that class.

Identification of Goods: The current trend is for the respective Trademarks Offices to require the applicant to list the specific goods for which the mark will be used. This practice is already in place in some countries, including the United States and Canada. Some countries are requiring the applicant for renewal of a registration to identify the specific goods on which they are using the mark.

Intent to Use: The United States requires all applicants to state that they use or intend to use the mark in interstate commerce or foreign commerce with the United States. Although United States citizens must use a mark in interstate or foreign commerce prior to the issuance of the Certificate of Registration, an applicant filing under the Paris Convention must only state that it intends to use the mark in the United States. The registration certificate will be issued for a Paris Convention application even if the applicant has not used the mark in the United States.

Duration: The length of time a trademark registration is valid varies from country to country. For example, the term is seven years (fourteen renewal) in Australia, Hong Kong, Malaysia, and the United Kingdom; ten years in Benelux, Brazil, Germany, Japan, Taiwan, and the United States; and twenty

years in Switzerland. To maintain registrations for numerous countries with differing laws, most companies will use a database to docket the differing dates for renewal and proof of use.

6. Review of Application

In most countries, Trademark Examiners review applications and issue Actions setting out the flaws or faults in the application and the applicant has the opportunity to respond to the action by arguing against the objection or amending the application to meet the requirements. There is generally an administrative appeals process through which the applicant may argue that the rejection was not well founded. In addition, most countries provide for procedures by which other parties can oppose the registration of an application or petition to cancel a registration. Some countries, such as the United States, provide for an appeal to the appropriate Court to hear the case de novo or as an appeal.

C. Use Related to Rights

Most trademark laws provide that a trademark owner must use a mark to obtain or maintain a registration or enforceable rights. Some countries require the owner to prove use of the mark at the time of registration or renewal, and some during an interim period. In other countries, a specified period of non-use of a mark will cause the owner to lose rights in the mark and the registration and the registration will be cancelled upon petition of another party of the Trademarks Office.

In the United States, trademark rights are determined on a combination of the first to use and the first to register system. The first user of a trademark may develop common-law rights in a mark. These rights are limited to the geographic area in which the mark is used. If the mark was used prior to another's application for registration of the mark in the United

States, the first user will have the right to use the mark in its specific geographical area and the registrant will obtain rights in the remainder of the United States. It is the filing date which determines the rights in the mark. Therefore, if a person uses the mark in the United States and later, within the six month priority period, an applicant files under the Paris Convention for registration of the same mark, and its priority date precedes the first use by the other party, the applicant will receive rights throughout the United States, even if it has not used the mark in the United States.

Other countries, including Japan, also use the application date, rather than the registration date, as the date at which the rights to use the mark are determined.

In the British law countries, the owner must file Registered User Agreements for all parties that are authorized to use its mark in that country. Other countries require that trademark license agreement be recorded with the government. Compliance with these requirements may be mandatory prior to the filing of an action and is recommended so that the use by an authorized user may be used to show proper use of a mark in a country.

D. Proper Use

Trademark rights may be lost by misuse. There are some general rules that apply to most countries to help in avoiding the loss of rights. A mark should always be used as an adjective, never as a noun or as a verb, and never as a plural. The trademark should always be followed by the generic term for the product, the common descriptive term. If a mark is not used properly, it may become generic, just as ASPIRIN, CELLOPHANE, ESCALATOR have become generic in the United States.

As part of a protection program, a trademark owner should not permit others to use the trademark deceptively or to identify products not produced

under the control of the trademark owner. When appropriate, use the proper TM, SM designation prior to registration, and the R (in circle), M.R., Marca Registrada after registration.

E. Types of Marks - Inherently Distinctive or Not Inherently Distinctive

A well-known mark may be inherently distinctive or not inherently distinctive. Inherently distinctive marks do not require proof of secondary meaning. Inherently distinctive marks are often referred to as "strong" marks, indicating that they are more likely to be given a broad range of protection on products which are not directly competitive with the products for which the mark is registered. Marks that are inherently distinctive are either fanciful, arbitrary, or suggestive. A fanciful mark is coined for the purpose of functioning as a mark. An arbitrary mark is a common term that is applied to goods that are not commonly associated with the term. A suggestive mark suggests a character or quality of the goods, without describing it. The greatest variance in interpretation between countries is whether a mark is suggestive of descriptive.

Descriptive marks merely describe the qualities, ingredients or characteristics of a product. Common surnames or geographic terms are usually considered to be not inherently distinctive. If a mark is not inherently distinctive, it can acquire "secondary meaning," so that the descriptive quality of the mark is no longer the only meaning associated with the product, but a separate meaning, an indication of the source of the product, has developed.

The Trademark Offices of most countries treat foreign terms as the equivalent of the terms in their major language. Thus, marks which are descriptive in modern languages may not be registerable. Trademark Offices may allow the registration of terms that are descriptive in obscure languages.

II. ENFORCEMENT OF TRADEMARK RIGHTS

When we think of the enforcement of trademark rights, it is generally in connection with the infringement of a trademark or trade name. Part of enforcement of rights is positioning the trademark owner to discourage infringement of their marks and to respond to an infringement.

As we have mentioned, trademark rights are territorial, so there are separate laws for each jurisdiction. At the outset, the owner should analyze the markets they in which they are currently selling, as well as those markets which they will be entering - now, in the near future, e.g., the next five, ten, or twenty years. The trademark owner must plan in advance to avoid problems created by trademark pirates, people who register famous marks of others to trade off of the reputation that already surrounds the mark.

A. Discovery of the Unauthorized Use

There are many ways to discover an infringement of a mark. One common way owners discover infringements is through their business people working or travelling in that country or region. The business people are in the field, examining the competition, trade manuals, other publications, and the advertising and promotional materials in their field. Companies should have a program to make all of their employees aware of the correct channels to bring a questionable use of a trademark to the attention of the proper authorities in the company.

Companies also discover infringements of their marks through watch notices. Companies or their outside attorneys subscribe to watch services that look through trademark gazettes and advise them of marks similar to their major marks.

In addition, the in-house or outside counsel should look through relevant trademark gazettes to become aware of any possible infringements. The

owner should ask local counsel in each country to make it aware of any marks similar to their mark which are filed in the jurisdiction.

A search may reveal whether other parties are using or claiming rights to your well-known mark or a similar mark. The term "trademark pirate" or "pirate" is used to indicate a person who registers the famous marks of others to trade off of the reputation that already surrounds the mark. Some pirates intend to use the marks to enhance their business, but other pirates never intend to use the mark. Those pirates usually register the mark to force the trademark owner to settle with them or buy them out.

B. Handling the Unauthorized Use

Once a potential infringement is located, the attorney usually consults with their in-house client and local trademark counsel to develop a course of action. At times, counsel will recommend approaching the potential infringer with a warning letter, prior to filing suit, or may recommend filing cancellation actions immediately in those jurisdictions where prompt action is desired.

1. Investigations of Infringements

Often the first step in an infringement matter is investigating the actual line of business and the actual goods in connection with which the mark is being used. Upon investigation, the owner may find that the goods on which the mark is actually being used are in a distinct channel of trade from their own goods. In that case, it may be possible to ask the other party to limit the goods in the registration to reflect the actual goods on which the mark is used, rather than just covering an entire class of goods.

In many countries, even a famous trademark may only be enforced for those goods for which the mark is actually used or registered. In a jurisdiction in which trademarks are only valid for the goods on which the mark

is used or for which the mark is registered, the scope of the owner's registrations must be examined to determine if they include the goods which are similar to the owner's goods. Note that in those countries, it is perfectly acceptable for two companies can use the same mark on unrelated goods.

When investigating a potential infringement, there are a number of basic steps. First, determine whether the owner's mark is registered in that country. Rights in an action may differ for registered and unregistered marks in that country. Then, determine whether the owner is using the mark in that country and, if so which party used and registered the mark first.

If the other party was the first to use or register the mark, the case must be evaluated to determine whether it is in the owner's interest to mention the potential conflict. If the owner does not have priority to use that mark, the owner must determine whether it should stop using the mark to avoid a potential infringement. If the owner's mark was registered first, the other party may have had notice of its registration through a search or through an Office Action from the Registrar. This could be helpful in proving that an infringement was intentional.

An investigation will also help determine where the infringement is taking place. The investigation may show that although the owner's rights precede the other parties rights in a particular country, the other party may have rights that supersede the owner's rights in another country. It is, therefore, important to determine the countries involved, where the product is manufactured, distributed, and sold, and, if possible, the dates of use in each jurisdiction.

The business client, local affiliate, or local distributor may have additional information on the actual business of the infringer. A local associate or affiliate can conduct an investigation of business to determine

(1) how long it has been in existence, (2) the goods on which each mark is used, (3) how long the other company has been using the mark, and (4) the volume of their business. The local affiliate or distributor can be very helpful in counseling on what may be "obvious" to them, e.g., the fact that a term is commonly used or a word which has a particular meaning in the local language.

2. Evaluation of the Strength of the Mark

Evaluate whether the marks are similar. Marks can generally be considered similar if they are alike in pronunciation, appearance, or connotation (meaning). Common factors that countries consider are the type of mark and the strength of the mark, as discussed above. Another factor is the number of third party uses. If the owner has the exclusive use a particular element of a mark, the mark is considered stronger and the owner is more likely to prevail in an action against a party using that same element as part of its mark. If the marks or common parts of the mark are used by many different parties, the Trademark Office or Court may find that no one company is entitled to the exclusive use of the mark and that many companies may use that portion of the mark in connection with other words or phrases. For example, VIN or VYN may be common prefixes for goods made of vinyl. If the common part of the marks is descriptive, it may be possible for both companies to continue using the mark. Terms such as ULTRA may be considered descriptive in some countries, and suggestive in others.

The other party may be using a term in a descriptive way, even if it is not used descriptively in the owner's mark. For example, the mark SOFT TOUCH may be considered suggestive and the mark SOFT TOWEL may be considered descriptive.

Courts and Trademark Offices will also consider the fame of a mark in a particular country, especially if a mark could be considered somewhat descriptive of the goods. To prove secondary meaning or fame within a country, evidence of extensive sales, the length of your exclusive use, information on your advertising, and trademark surveys showing the fame of your mark must be produced.

3. Contact Infringer - Cease and Desist

Once it is determined that the owner has prior rights in the area, unless there is a known danger of a large shipment being sent immediately or there is a immediate danger of damage that can occur with the use of the incorrect product, trademark owners normally send a cease and desist or "warning" letter to the other party. The parties generally try to establish a dialogue to resolve the matter without the need for litigation.

There are many possible ways to settle or negotiate a change in the use of the mark. If an infringement was unintentional, the trademark owner may agree to assist in paying the expenses of the other parties change to another mark because it may be a more economical solution than litigation.

Different elements are important to different parties, depending on the businesses and the severity of the confusion arising from the use of the similar marks. In some cases, the trademark owner can allow a phase out period in which the infringer can use up existing stock or stationery. In other circumstances, it may not be necessary to change the entire mark, only the presentation of the mark. In many cases an infringer will go out of business before the conflict is resolved and the owner must then determine the best way to remove the mark or trade name from the Register.

If a conflict must go to litigation, the best evidence is often in the country in which the conflict arose. Local affiliates or distributors can

provide sales figures, advertising and promotion figure, samples of products, samples of advertising.

4. Pirates

If you find that a pirate has registered or is using your famous mark, you should investigate and address the problem as soon as possible. It is generally faster and less expensive to negotiate with the trademark pirate prior to introducing the legitimate product into a country. If you wait until the product is introduced, the trademark pirate may have a claim that you are infringing upon their mark.

As noted above, most countries require that a mark be used to maintain rights in a registration. If is possible, therefore, to cancel a pirate's registration of your mark on the grounds that the pirate has not made use of the mark during the period of time prescribed by that country. It is often easier to prove that the pirate has not used the mark than it is to assert that you are the proper owner of the mark. This knowledge can also help you in negotiating with a pirate. If the pirate's registration is subject to cancellation, they are more likely to settle for a small amount (e.g., the amount you would spend in a cancellation proceeding) and voluntarily cancel their registration. If practical, seek to obtain a judgment in connection with the pirate's use of your mark. This may discourage others from trying to register your mark in the future and, in most countries, will give you a means by which to enforce the agreement against the pirate.

Many countries now have laws that state that "famous" or "notorious" marks may be protected even if they are not registered. Some countries may allow an owner to protect marks if there is "spillover" advertising. Such advertising may equal prior use in their country.

5. Different Types of Actions

There are many types of causes of action to address improper or unauthorized use of a mark. The most common action is for infringement.

Infringement: In most countries an infringement action can only be brought by the owner of a registration. It is, therefore, important that a mark be registered in any country in which it is likely to be used. If the mark is not registered, there may be other remedies, such as unfair competition, passing off, or deceptive trade practices, discussed below.

If a mark is registered, most countries consider the registration certificate to be proof of the registrant's ownership of the mark and proof of the registrant's exclusive right to use the mark in that country. Thus, a certificate of registration can prevent the owner from providing evidence just to prove its ownership of the mark and the owner can concentrate on proving the other elements of the infringement instead.

Although most countries provide that the infringer must pay damages or profits, trademark owners are most concerned with obtaining an injunction against the future use of the mark. Many countries provide for preliminary injunctions during the pendency of the case, and permanent injunctions to be entered at the end of a case. Monetary payments may be calculated from the owner's loss or other party's profits or both.

Some countries provide that the losing party pay the attorney's fees of the prevailing party. This can be a considerable expense in most industrialized countries.

Counterfeiting: One type of infringement is often called "counterfeiting." The United States provides separate provisions for these situations in which a party is using "a spurious mark which is identical with, or substantially indistinguishable from, a registered mark" of another on the

goods for which the mark is registered. 15 U.S.C. 1116(d), 1117, and 1127. The Act provides for remedies similar to those provided for infringement actions, and gives the court discretion in awarding prejudgment interest.

Seizure: Many countries provide for the seizure of counterfeit goods when they enter the country. The rules of the countries vary greatly on what is a counterfeit good, for example, if the goods are legally produced in another country by the trademark owner's licensee, some countries will not prevent the importation of the goods into another country which is not covered by the license. See Paris Convention, Article 9.

Unfair Competition: The term unfair competition is used to refer to different types of actions. Among those actions are passing off or palming off which pled when someone is using a similar mark or trade dress which is not registered in the country. See Paris Convention, Article 10 bis.

The action of dilution, also known as erosion, is used when the mark is used on goods which are not related to the goods for which the mark is registered. The goods on which the mark are used are not similar and the consumer will not be confused by the use of the mark on different product, however the unauthorized use of the well-known mark on any goods is likely to "dilute" the distinctive nature of the mark and, therefore, the mark's owner is being damaged. Some countries provide for a separate action for dilution, but even if the country your are in does not have a separate action, courts will often include the concept of dilution under other causes of action, such as trademark infringement or passing off.

Other Actions: Other causes of action that may be available in your jurisdiction are actions to prevent the importation of unauthorized goods, misappropriation, false advertising, false labelling, deceptive or unfair trade practices, libel or slander, copyright infringement, and various criminal laws.

III. SUMMARY

The key to protection of a well-known mark is planning. Determine where the trademark will be used now and in the future. Search and register the mark in the countries you will be entering, as well as the primary countries in which your product is produced and used, and the countries in which your primary competitors do business. Obtain defensive registrations where they are available. Register the mark in other forms or in classes in which you will not be using the mark and associate the marks with the registrations which you will actually be using, in those countries which provide that use of one associated mark is sufficient to protect the associated marks which are not actually in use.

Educate your employees to police the mark. Advise them of information to obtain on potential infringements and the correct people to inform in your organization. Search for similar marks prior to entering new markets and try to resolve the problems prior to expanding your use into new countries. If negotiations are not successful, file suits under the local law, producing your best evidence, whether it is is evidence of your use and registration in other countries, advertisements showing use of the mark, trade shows at which the mark is shown, contacts or negotiations with potential distributors in that country, and any evidence of the other parties intent to trade off of your reputation.

Even when companies follow these procedures, there will be situations in which all of your efforts to plan and avoid problems are not successful. The number of problems, however, will be greatly reduced by taking pro-active steps rather than waiting for problem to surface at a later date.

Title of the Presentation

Issues Concerning Software Patent and Licensing Thereof

Date: October 16, 1992 (The 23rd Okayama Meeting)

Japanese Group, Committee No. 2-A

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Section 29, 79 and 101 of Japanese Patent Law, Section 26 of Japanese Design Law, Section 63 of Japanese Copyright Law, 35USC Section 102.

Abstract:

With the increase in software patents in recent years, the need has arisen for a study regarding the granting of patents and the influence thereof, and particularly regarding software merchandise which is distributed and traded under license based on the assumption of the protection hitherto provided by the Copyright Law. In the light of these circumstances, this paper makes a study of the comparison between the various aspects regarding presently conceivable software patents and their licensing and the old-fashioned (traditional) patents.

When comparing software patents and the old-fashioned (traditional) patents, the following areas may be highlighted:

(a) aspects unique to the development process and the manufacturing process;

(b) aspects unique to the completion of the invention; and

(c) aspects unique to the distribution method and secrecy agreements.

With these unique aspects in mind, we will discuss the various conditions of license contracts (calculation of royalty fees, and user agreements, etc.), effective periods of licenses by virtue of prior use, authorization of public knowledge and public use, licenses by arbitration, etc.

Introduction

During the last several decades, inventions relating to computer software have been protected to some extent under the Patent Law, however, requisites for granting patents and the scope of the protection have not always been clear, and have changed with the lapse of the time. Particularly these days confusion exists as the result of an intention on one side to extend the scope of the protection and an opposite intention to correct undue protection of the software patent. Though not decisively, however, it may be concluded that the scope of the protection of software by the patent law has enlarged. Under these circumstances, we should take into account of the existence of patent protection and its influence on software products when we license, deal in or distribute software products, even though we considered only copyright protection in the past.

In the light of these facts, this paper discusses the characteristic aspects and issues relating to patents and licenses of software in comparison with the old-fashioned patents.

1. Specific Aspects of Patents and Licenses of Software

The characteristic differences between patents related to software and the old-fashioned patents are discussed below. We should therefore keep these differences in mind when considering the conditions for licensing software patents (for example, such as calculation of royalty fees) and when discussing conditions for lawful use of a patented invention by a third party (such as license by virtue of prior use).

(1) Aspects Unique to the Development and Production of Software

The development of software often begins with a rough design of the system, detailed design of the programs and finally, coding of the programs. As software becomes ever larger in scope, greater efforts and higher cost must be expended for both the designing and the coding thereof. The manufacturing process for the product after the development entails, however, only copying of the programs, which is a low cost procedure. Further, it should be noted that there are many cases where much expense is required for debugging of the product after its shipping. Also customer service will be needed even well after the time of purchase. Thus, maintenance cost occur successively over a long period of time.

On the other hand, the developmental process for ordinary inventions relating to things involves many experiments required before they are put to practical use, wherein considerable money and labor is spent. In addition, even after the product is in use, cost for raw materials and labor must be borne to fully exploit the invention. We would certainly expect these unique aspects of development and production of software to influence the conditions for licensing of the same.

This aspect will be discussed in Chapter 6.

(2) Aspects Unique to the Completion of Inventions of Software

Generally speaking, inventions of software are considered to be virtually completed when a rough design of the system has been created. In contrast, most conventional inventions apparently result during repeated experiments in an early stage of the developmental process. We would expect the unique aspects of completion of inventions of software to influence the granting of licenses by virtue of prior use. This aspect will be discussed in Chapter 4.

(3) Sale of Programs Under Secrecy Agreement

Programs are oftentimes distributed under a secrecy agreement. Issues take place with respect to how such program distribution under a secrecy agreement relates to public

knowledge and/or public use under the Japanese Patent Law.

In the United States, there has been established a precedent in which, in connection with traditional inventions other than those on software, with respect to the question of whether a prior commercialization by an inventor could bar acquisition of a patent thereon, no patent shall be granted if the invention has been put in commercial use, even though under confidence, for not less than one year prior to the date of the patent application (known as the Doctrine of Forfeiture). (Note 1) How this precedent should relate to patents on software is an interesting issue.

Also there is a court decision in the U.S. that a junior inventor may be granted as a patent in the case where the prior inventor made the invention a trade secret and sold the invented product under secrecy agreement prior to the application by the junior inventor(see Note 2). The detail of how this subject is dealt with in Japan will be discussed in Chapter 4.

2. Classification of Software Patents

The patents relating to software may be classified into two Categories.

[Category A]

Invention in which program is embodied in a device or a computer:

This category includes inventions characterized by operating methods for the various devices with built-in microcomputers (CPU). An example would be the invention of a laundry machine wherein the washing, drying and draining operations are controlled with a built-in microcomputer. Other examples include word processors and multi function programmable electronic calculator.

In systems which embody inventions under this category, the microcomputer and the program are usually included as a single unit in the device by the manufacturer. Such inventions rely upon software only to a small degree and may be dealt with in almost the same manner as for conventional inventions for things

and methods as far as requisites for granting patent or licenses are concerned.

[Category B]

Inventions where the device thereof is a computer, but the substance thereof are programs only:

A typical example in this category is computer application software. The program which embodies the invention is loaded into the computer, which carries out the invention by executing the program. The Patent Offices in both Japan and the U.S. tend to grant a patent if the invention filed relates to software and its claims are drafted including several "means + function" elements and a nominal hardware element. In such patented inventions, the substance of the invention is a program, notwithstanding the language of the claim where the invention is defined as a device. General purpose first come under the scope of the patented device only upon the loading and executing of the program. It is assumed that such inventions rely heavily upon the software, and that each of the above points apply most directly to inventions in this field.

3. Infringement of Software Patents

(1) Effects of Patent

The principle of the Patent Law (exclusive right) is applicable to software patents, as well as to other patents, and an effect to exclude acts of infringements by others is granted. Accordingly, the concrete discussion is made from the two points of view that when the software patent in question relates to an invention of a thing (the category A where the software and the hardware are connected to each other in an integrated manner) and when the invention is a one of a method (the category B where the invention consists essentially of the software).

1) Direct Infringement

The acts of infringing software patents directly:

a. A case where the Software and the Hardware are Integrated to Each Other: (refer to category A)

In this case, reference should be made to the fact that the hardware is a requisite element of the invention when the infringement of the invention is considered. Namely, the exclusive right covers the operation of the hardware by which said software is executed, and thus a direct infringement problem will be caused by the act of producing, using, assigning, leasing, displaying for the purpose of assignment or lease, or importing the hardware which executes the software.

b. The case where the Invention Consists Essentially of the Software: (refer to category B)

The act of using said software will constitute a patent infringement. Accordingly, the act of buying and using said software will cause a direct infringement.

2) Indirect Infringement

The Patent Law admits a right to demand exclusion of acts by a third party to infringe the patent indirectly in addition to direct infringement. (Japanese Patent Law Section 101)

Concretely, in the case of an invention of a thing, an act of working things as vocation is deemed to infringe on the patent which are used only for the production of the patented thing. In turn, an act of working things as vocation which are used for the practice of the invention of a method will be deemed to infringe on the patent.

a. A case where the Software and the Hardware are Virtually Integrated: (refer to category A)

The acts of producing, selling, etc., the software used as vocation solely for the hardware will constitute an indirect infringement. However, this type of infringement seems to be rare, because such a unit, as an embodiment of the invention, is

usually integrated with the program by the manufacturers, and there are few cases where only software is sold. Accordingly, problems actually occur only when the unit and the software are produced by separate manufactures. Nevertheless, little significance will be found in consideration of indirect infringement. This is because installing software in a unit which is then sold will eventually constitute direct infringement.

b. A case where the Invention Consists Essentially of the Software: (refer to category B)

Acts of producing, selling, etc., should constitute an indirect violation of the patent except in cases where said software may be applicable to another use.

According to the statute, no indirect infringement problems exist when the software may be used elsewhere.

4. Requirements for and Scope of License by Virtue of Prior Use

(1) In this section, we will consider an inventor who has sold software products under a confidentiality agreement, without applying for a patent. We review whether he is subjected to any risk of being sales cessation or not when the third party filed a patent application for the same invention after the prior inventor's commercialization and owns the patent.

In Japan, if a prior inventor commercializes his invention under confidence, without making publicly known or use, that prior inventor cannot make void any patent application filed by a later inventor. However, the prior inventor is entitled, under a statutory license by virtue of prior use, to carry on his undertaking continuously after the patent is granted to the later inventor. The license by virtue of prior use is provided for in Section 79 of Japanese Patent Law. In the cases which involve the license by virtue of prior use, a prior inventor admits his infringement of a patent of a later inventor and seeks remedy available under the law. The precedent cases are very few.

(a) Conditions for License by Virtue of Prior Use:

The conditions for license by virtue of prior use requires the fact that at the time of application by the junior inventor the prior user actually had already reduced his own invention to practice or had been preparing for the commercialization of it "in good faith;" here "in good faith" concretely means that the prior user completed his own invention without knowing the contents of the invention of the application filed by the junior inventor or learned the invention from a person who did not know the contents of the invention of the application filed by the junior inventor. More concretely.

1) It is necessary that "at the time of application by the junior inventor" the prior user actually had reduced his own invention to practice or had been preparing for the commercialization of it. The license by virtue of prior use cannot be granted only for the fact that the invention was carried out prior to the application.

2) It is not necessarily clear on which steps the prior user is recognized "to have been preparing for the commercialization." Only planning or studying at a desk cannot satisfy the requirements, and it is required to present objective evidence supporting the fact of the preparation.

(b) Scope of the License by Virtue of Prior Use :

The license by virtue of prior use may be held even if the practice of the invention or the preparation therefor was discontinued after the time of filing the application concerned, so long as the related business is not abolished. The scope of the work by the prior user should be within that of the portions of the invention actually under practice or preparation and within that of the object of the business. The invention reduced to practice at the time of application is species of the patented invention, then the virtue of prior use cannot attain the genus. Further, the license by virtue of prior use cannot cover working of any product or any act different from that at the time of said

ADDENDUM TO " SELECTED ASPECTS OF LICENSING SOFTWARE PATENTS"

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COMPUTER PROGRAM PATENTS

U.S.PATENT	TITLE	DATE	CLAIMS
4,853,962	ENCRYPTION SYSTEM	AUG. 1, 1989	10
4,864,492	SYSTEM AND METHOD FOR NETWORK CONFIGURATION	SEPT. 5, 1989	10-14
4,896,291	VALUATOR MENU FOR USE AS A GRAPHIC USER INTERFACE TOOL	JAN 23, 1990	16-19
4,897,781	SYSTEM AND METHOD FOR	JAN. 30, 1990	16

	A LOCAL NODE AFTER RE-OPENING A FILE AT A REMOTE NODE IN A DISTRIBUTED NETWORKING ENVIRONMENT		
5,057,935	METHOD FOR CONFIRMATION OF DOCUMENT RECIPIENTS IN A DATA PROCESSING SYSTEM	OCT. 15, 1991	13-14
5,031,117	PRIORITIZATION SCHEME FOR ENHANCING THE DISPLAY OF RAY TRACED IMAGES	JULY 9, 1992	9-16

application, for example, producing the patented product by the prior user whose only act at the time of the application was selling. Relating to the "scope of invention" allowed to work under the license by virtue of prior use, an opinion was once prevalent limiting the scope to the particularly mode or design being carried out at the time of the application. But some recent judicial decisions seem to rely on another opinion that a change does not necessarily violate the boundaries of the technical scope of the patented invention, or that the technical level at the time of the application should be considered on the basis of the mode or design actually worked at that time to judge that the "scope of the invention" includes technical ideas which any person skilled in the art could positively grasp. (Nagoya district court, Feb. 27, 1984; "Mutai-shu (Collection of judicial decisions concerning intangible property), Vol. 16, No. 1, page 71, "case of furnace", the Supreme Court, Oct. 3, 1986, "Min-shu (Collection of decisions of civil cases)," Vol. 40, page 1068)

The foregoing is a summary of the license based on virtue of prior use in Japan. Practically, it should be pointed out that proving the prior use is not an easy matter, and a sealing of rotary public C may be used as reliable legal proof thereof.

(2) License by Virtue of Prior Use Regarding Software Patents:

In Japan, there is no judicial precedent of the statutory license by virtue of prior use converting software patent yet. Besides, no reliable theory has been established. In the following, we will discuss the typical category B as a example, a software patents in which the claimed invention relates to an automatic translation system and the patented invention is substantially reduced to practice solely through programs.

Further assume that the cost incurred by the enterpriser for the development of a program is about several hundred million yen. Table 1 shows possibilities of license by virtue of prior use according to the acts of the candidate prior users within their business at the time of the application. The possibilities listed in Table 1 are mere conjecture, and strictly speaking they should be determined on the substance of the development tools

for the developed software products, scale, etc.

No doubt license use will be granted based on prior use if someone were commercializing the invention as specified in the column of act 1 in Table 1. We cannot say, however, to what extent proof must be given in order to obtain such license.

The following may be inferred from the judicial precedent of a case where the design drawings were prepared before an order was given to prepare the initial production (Case on 8 mm moving picture cameras, Tokyo District Court, May 26, 1964; Hanrei Times (Judicial precedent times), vol. 162, page 164), and follows the opinion that the completion of the design drawings of an invention constitute preparation for its commercialization in the case where it may be carried out with already existing equipment.

"Completion of the program" listed at act 3 in Table 1 shows the case of trader W who manufactures a translation-aimed machine; however, a special design would appear to be necessary for the hardware in order to execute the completed program, and thus, this will not be deemed preparation for commercialization unless the hardware is proved to have satisfied the conditions for being entitled to "preparation for commercialization." Nevertheless, in the case of trader X who uses a general purpose personal computer, this may be deemed to be preparation for commercialization since he can use the translation program without any special facilities. Trader Y, a software house, is deemed to have satisfied the conditions for being entitled to "preparation for commercialization" only with the "completion of the program," as is user Z who maintains a personal computer which he uses for business. Here, although a license by virtue of prior use is granted, "preparation for commercialization" will not necessarily be recognized with only the "completion of the program specification" (act 5). Determination is made as to whether "completion of the module specification" (act 4) constitutes "preparation for commercialization," judging by the degree to which development of the program is completed. "Preparation for commercialization" will be recognized upon "completion of the request specification" (act 6) if one of the latest specification languages is used which easily completes the

program so long as the specification is determined.

The scope of the license by virtue of prior use is restricted to such undertaking as is carried on at the time the patent application is filed and does not extend to sale, by trader Z then using any program product of such program products so in use.

Table 1

Conditions for traders to be allowed their rights based on prior use relating to software patents

○: Allowed. △: Not sure. X: Not allowed.

Traders	Business Contents of business of traders demanding their rights based on prior use: *1: Inclusive of the cases where the program was commercially obtained or developed in the firm.	Forms of business Instances of the forms of business	Acts at the time of application*					
			①	②	③	④	⑤	⑥
W	Maker of program*1 and general purpose hardware	Sale of personal computers (for general purpose) with the translation program loaded therein	○	○	○	△	X	X
X,	Maker of program*1 and dedicated hardware	Sale of automatic translation machine (dedicated) with the translation program loaded therein	○	○	X	X	X	X
y	Maker of programs (software house)	Sale of floppy discs containing translation programs (development and sale of software)	○	○	○	△	X	X
Z	User of program*1 who has his own hardware	Use of the translation program-loading personal computer as vocation (translation service)	○	○	○	△	X	X

* ①Business in progress
② Preparation for business up to the equipment of hardware
③ Completion of the program
④ Completion of the module specification
⑤ Completion of the program structure specification
⑥ Completion of the request specification

W is type A, and X, Y, Z are type B

5. Public Knowledge and Public Use of Software Invention

(1) Public Knowledge and Public Use as Stipulated in the Japanese Patent Law:

The Japanese Patent Law provides Article 29, para. 1 which defines a public knowledge and a public use in Japan, and a public knowledge through a publication distribution in Japan or elsewhere. 35 USC ,Section 102 (b) is similar to said article. Under Japanese Patent Law, in cases where the condition of working of the invention is declared as "in use," it may not be hastily assumed that the invention falls under the category of being "worked publicly" simply because it is being publicly used. Only when the invention is "in use" in such a manner that the idea of the invention may be known to the public, it will be deemed that the invention is "worked publicly." Different from the foregoing cases, if the working is "assigning," then the invention is deemed to be "worked publicly" except under special circumstances. This is because the assignee can freely disassemble, break down and/or analyze the product to understand the invention. In the case of assignment, the assignor are hardly judged to have a will to make his invention a secret.

When the product is leased, usually the leased product is prohibited from disassembly, breaking down and inspection of the interior of the product, so "leasing" may not be dealt with in the same manner as "assigning" (see Note 1).

(2) Public Knowledge of Various Programs:

With respect to software source programs which are made public and those on sale in the form of object programs which are free from any contractual restrictions, it would be obvious that the ideas of inventions of such programs are publicly known (see Note 2).

Vice versa, software which is used only in each firm and those licensed to a certain user under strict confidential agreements are not publicly known.

Problems exist with mass-distributed packaged software whose source programs are not disclosed and which is sold as object

programs. Such packaged software is usually sold under a shrink-wrap agreement where a purchaser of packaged software is informed that by opening the shrink-wrapping on the package or sending back the enclosed card, he or she has agreed to possess the software under the terms of the license.

These shirk-wrap licenses often prevent the purchaser from selling the diskette, making copies, making alternations or reverse-engineering. In Japan no close investigation has been made of how the public knowledge problem stipulated in the Patent Law is considered for such software, nor does any judicial precedent exist. However, recently a view has been stated which holds that such software should be considered to have been publicly known (see Note 3).

The effectiveness of the shrink-wrap agreement is discussed from various points in view of the contents of agreement and the process leading to the agreement (see Note 4).

(3) Practical Countermeasures:

Anyway, at present, it is not clear whether software under obligation of shrink-wrap agreements as mentioned above is judged to have been publicly known or not. Under these circumstances, there are two possibilities for a software developer concerning the novelty issue of his packaged software. If his packaged software is found to be publicly known, he can invalidate the third party's subsequent software patent on the same invention.

If his packaged software is found to be confidential, he takes the risk that he might be allowed only the restricted license based on his prior use under the third party's subsequent software patent. As far as patent law in Japan is concerned, the latter case is more dangerous for an ordinary software developer than the former case.

Under the present judicial circumstances as mentioned above, in order for the software developers to eliminate such risk, it would be advisable to file a patent application prior to its sale or to make the software known publicly by any means for such software which is believed to have an inventive step capable of being entitled to a patent for which it is anticipated that a

third party intends to have a patent.

(4) Registration of Computer Programs Under the Japanese Copyright Law:

The same situation may occur in the area of the computer programs which are registered under the Copyright Law and are kept as trade secrets.

The Japanese Copyright Law provides for registration of copyright of computer programs. However, even registered programs are generally deemed not to have been publicly known for the reason that the inspection of their source program attached to the application for registration is not permitted save for that required in the course of judicial procedures. Accordingly, the registered programs are as risky as those under obligation of shrink-wrap agreements as mentioned above, so it seems that the developer of a registered program which involves an inventive step should file a patent application for the program before its registration under the Copyright Law.

Notes:

1. Kosaku YOSHIFUJI, "Patent Law Outline," (The revised 8th edition), p. 77, Yuhikaku.

2. With respect to technically protected computer software, the users could not reproduce them so that other problems would occur. However, in this article, such softwares are deemed capable of being disassembled, and thus the situation thereof is the same as mentioned above.

3. Masao TOYOTA, "Software and Patents," pp. 85-93 and pp. 136-140, 1992, Diamond Co., Ltd.

4. Zentaro KITAGAWA, "Software Use and Contracts - Criticisms on Shrink-wrap Agreements" in NBL, No. 435, pp. 6-13.

6. Features of Software Patent License

We suggested that following two categories as

"Classification of software patents":

Category A: Invention in which devices, computer and program are integratedly combined;

Category B: Inventions in which the unit is a general use computer and the patented invention is reduced to practice substantially solely through programs.

Of these two categories, the number of registered software inventions falling under category B have been increasing recently, and thus, they are believed to be appropriate for a study of problems peculiar to software patents. Therefore, discussion in this section will be pursued in respect of patent license agreements under category B. While many software of category B packages are likely to include copyright licenses in addition to patent license. Our discussion in the following will be focused on the patent license.

(1) Classification of License According to Parties thereto:

Licenses for software patents were analyzed based on the contractors and may be clarified as follows:

Sub-category (I): Registrant (licensor) and a software house (license).

Sub-category (II): Registrant and an end user.

Sub-category (III): Registrant and a maker of general purpose computer.

Sub-category (IV): Registrant and a computer selling agent who adds software to the computer.

Compared to the old-fashioned patents, software patents are characterized by the presence of a software house acting as a contractor independent of the computer maker who manufactured the hardware. In addition, the situation of sub-category (III) in which the general purpose computer maker who manufactures the device functions as the contractor is usually thought to be unnatural; this judgment may be somewhat correlated with the arguments concerning indirect infringement. On the other hand,

the situation of sub-categories (I) and (II), in which the software house and the end user functions as the contractor, is thought to be more natural. Further, when the sales agent for a computer maker sells the computer with the software added as an extra value, the situation of sub-category (IV) in which such a sales agent functions as the contractor is well with in the realm of possibility.

(2) The Basis for Calculation of Royalty Fees and the Scope of Licensed products

It is impossible to give general advice regarding what aspects of the product are considered as the basis for the calculation of royalty fees. In the case of patents belonging to sub-category (I), it seems natural to calculate the royalty fee on the basis of the price of the recording medium and the software recorded on it. On the other hand, in cases where the contractor belongs to sub-category (IV), it is reasonable to calculate the royalty fee based on the price of the whole system including the computer, whereas in cases where the contractor belongs to sub-category (II), it is conceivable that the royalty fee might be calculated based on the price of the whole system. However, this contract's contractor is entirely different from others, and thus, further analysis will be necessary in this regard.

The next issue is determination of royalty rate. As far as the old-fashioned patents in Japan are concerned, so-called the industrial standards were widely applied, but a major aspect of software patents is that the industrial standards are not established yet. To date, software has been bought and sold under copyright license, but tariffs thereof have probably been of little use, as copyrights and patent rights are completely different. With the licensed contract, however, it may be significant to refer to the total royalty fees for the contract for using the source program, the right to modify the work and sub-licensing rights under the protection by the Copyright Law, whereas in case where the contractor belongs to sub-category (I) and (IV) and industrial standards are tried to be established.

As mentioned above in the section "1. Specific aspects of software patents and licenses," a vast amount of money must be spent for completion of the development of software, whereas little expenditures are required for selling the products. This becomes an important fact for consideration when the running royalty fee is determined.

(3) Terms of Contracts

Special attention must be paid to the fact that software products as the object of software patents are characterized by being easily reproduced by end users, in contrast to products relating to the old-fashioned patents.

For example, when the contractor falls under sub-category (II), clauses should be inserted into the license contract which place limitations on the system and location in which it is used and on the number of copies permitted, as these may be indispensable to the proper protection of the rights of the licenser. Further, when the contractor falls under sub-categories (I) or (IV), when distributing the product to the end user, he would seem to be obliged to sign a contract with the end user stipulating conditions of use in addition to the conditions mentioned above. Such practice of providing terms and conditions of use by end-users in license agreements is popular in program copyright licenses. Nevertheless, it is a problem which shows up for the first time in the software patent, as far as the patents are concerned, and is considered to be a distinguished feature from the traditional patent practice.

(4) Miscellaneous

It would also be possible to classify software patent licenses according to licensed products.

Sub-category (a): The whole system consisting of software and general use computers in which the software is built-in;

Sub-category (b): The software themselves are written in recording media.

Sub-category (b) represents one which has not been seen in the past patents. We will have to study whether such category should be allowed to exist or not. In the meantime, we discuss here the sub-category (b) does exits. When the contractor falls under sub-categories (I), it is naturally assumed that the license falls under category (b); however, when the contractor falls under sub-categories (II) and (IV), it is conceivable that the license could fall under sub-category (a).

PACIFIC INDUSTRIAL PROPERTY ASSOCIATION
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(7) ABSTRACT : This paper discusses various factors that bear upon and must be considered in designing and implementing a licensing program for software products.

SELECTED ASPECTS OF LICENSING SOFTWARE PATENTS

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Several months ago I was asked to prepare a presentation on selected aspects of licensing software patents for this PIPA Congress. I must admit that I was somewhat bemused by this request, as I am to any reference to software patents, hardware patents, microcode patents, data base patents, interface patents, front of screen patents, or any other similar classification of patents in the computer arts. Patents protect inventive concepts as opposed to hardware or software. I suppose the term "software patent" is meant to refer to a patent where the disclosed embodiment is some form of a computer program. But such terminology and classification misses the mark and can very well lead to fuzzy thinking and erroneous results when considering licensing issues related to licensing software products. Note that I said software <u>products</u>, not software <u>patents</u>. This is an important, basic distinction which we will return to shortly.

Let me illustrate the point. IBM has a patent covering a well-known technique for encrypting and decrypting data which is in use in the United States and other countries throughout the world. For example, when you are short of cash and withdraw money from an automatic teller machine, this particular invention protects the transmission of the information between the host computer and the

automatic teller machine. The disclosed embodiment in the issued patent is a computer system including logic blocks and flow charts. This patent would probably be classified as a "hardware patent" based on the disclosed embodiment. However, the invention can be, and is in fact, implemented using any number of technologies. Some licensees implement the invention in program form for use on large-scale general data processing systems. The licensee sells a set of diskettes on which the program is recorded to the owners of general purpose computers. This is a pure software implementation of the invention. Other licensees construct a hardware product made up of hardwired elements for use in special applications. Lately these hardware products are evolving to a single semiconductor chip which performs the entire encryption/decryption function. This is a pure hardware implementation of the invention. A third set of licensees embody the invention in products using a mixture of hardware elements and software in the form of microcode. This is not an isolated example, and underlines that a number of technologies are available to a designer in the computer arts to implement inventive concepts. The technology selected will depend on the market opportunity, costs, volumes, and other market and technical factors.

The basic point I am trying to make is that it is not the type or classification of a patent that counts; what counts is the product that employs the invention and the manner in which that product is implemented and moves in commerce. Such elements must

be considered in constructing a licensing program where the invention is implemented in a software product.

Claims of patents in the computer arts are normally cast in means plus function form and/or as method claims. These claims are usually infringed by the combination or combined use of a computer program and a computer system. The direct infringer is the person who combines the hardware and the software to provide the infringing combination or uses the infringing combination. The direct infringer may be a different person or persons depending on how the hardware and software are marketed, combined, and used. This is very important to understand when considering licensing of patents in the computer arts. Let's consider a few examples to illustrate this point. In each of these examples we will assume that it is the combination of the hardware and the software that cause the direct infringement.

1. You go to your neighborhood computer store and buy a new personal computer, an IBM system I would hope, and it has microcode written and installed by the original machine manufacturer which contains functions that infringe a patent. Obviously the original machine manufacturer is a direct infringer, as he made the combination, and so is anyone else in the chain of distribution. You also are a direct infringer as a user of the machine. This is relatively straightforward and is the situation that exists in any art where a manufacturer makes an infringing product.

2. As a second example, assume you are the owner of a non-infringing general purpose personal computer, and while you are visiting your neighborhood computer store, you separately purchase a data base manager software program. You obtain a series of diskettes and instruction manuals published by a software company. When you arrive home, you load the program on your hard disc and go to work organizing your data base. In this situation you are the combiner and the direct infringer, and the software publisher is a contributory infringer and possibly an inducer. The original machine manufacturer is not an infringer at all in this instance. It is possible for exactly the same software products to be involved in the two examples we have discussed. What we are seeing are two different channels of distribution or marketing relative to software products.

3. There are many other variations from these two basic examples. The computer manufacturer sells his non-infringing general purpose machine to a distributor, and it is the distributor who makes the infringing combination based on a copyright license to copy and reproduce software developed by a software publisher. The software publisher is a contributing infringer in this instance and may also be an inducer. However, the actual making or manufacture of the <u>copies</u> of the software is accomplished by the distributor. Clearly the distributor in combining and making the infringing system in this instance is a direct infringer. Another variation is where the program comes already loaded on a hard disc

drive which the distributor had obtained from his disc drive supplier, who in turn had been licensed under copyrights to reproduce the software by the software publisher. The recent advent of computer telemarketing firms and large computer superstores represent additional variations, since they are basically assembling personal computers from standardized parts and, where appropriate, loading software to provide performance and function as specified by the customer.

As you can see from this discussion, there are many variations as to who may be involved in creating the infringing combination. Why is this important? For a number of very important reasons, all revolving around maximizing revenue and/or freedom of action from licensing activities.

Most patent licensing schemes are based on a percentage of the manufacturing cost or sales price of what is sold. Let's assume a personal computer with a given software program has an average sales price of $1,500, while the software program itself when sold through a normal retail channel sells for $150. At a royalty rate of 3% of sales price, the machine manufacturer who combines the software and the hardware may well be willing and able to pay the $45 royalty per machine. The software publisher may also be willing to pay 3% of his sales price or $4.50, but it is unlikely that he would be willing to pay $45, which represents an effective royalty rate of 30%. While profit margins are high in the software

publishing business, his only option at the higher royalty amount is to go out of business. And he also may be facing the prospect of requiring licenses from more than one source. This suggests different royalty rates for different folks. However, this may lead to most favored licensee questions and can drive various marketing schemes to minimize royalty payments, such as separately pricing and distributing the software rather than preloading it into the system.

If you decide to license the software publisher as a contributory infringer, then the software publisher will likely want an immunity or other assurance that a person, whether it is a machine manufacturer, distributor, or end user who makes the combination, will be free of infringement and will not be charged an additional royalty because of the combination of the hardware and software that is made. In such a situation the royalty recovery would likely be based on relatively small product revenue from the software product itself, rather than the much larger product revenue associated with the combination of the software product and the hardware product.

If you decide to license direct infringers who make an infringing combination, you may be able to collect on a much larger royalty base, as we have discussed. This is practical where the combining is performed by the original equipment manufacturer or someone in the distribution chain. It is not practical for at

least that portion of the combinations that are made by end users. The reason it is impractical is that there are thousands, if not millions, of end users making such combinations. Many of these end users may also be your ultimate customers, and even if it were practical, there may be a reluctance to approach them from a licensing standpoint.

The point of the above discussion is that if you decide to license only combiners of the hardware and software who are direct infringers because of their large product revenue base, then you will miss licensing revenue opportunities from that portion of the software that is combined by ultimate users. If, on the other hand, you license the software companies, the product base is much smaller. The challenge is to design a licensing program which rationalizes the various channels of distribution. This becomes even more challenging when issues such as freedom of action and who makes the inventions you might need access to are superimposed on these factors.

As an additional consideration, bear in mind if you license or immunize any direct infringer in the distribution chain, you will likely have released or immunized the software publisher or any other contributory infringer. Under United States law, for there to be a contributory infringement, there must be a direct infringer. If the direct infringer is licensed or released, then

there is no contributory infringement, and there can be no further recovery against the software publisher.

As I have indicated, most of the patent claims being granted in the computer arts are in the means plus function and method claim formats. However, the United States Patent and Trademark Office (USPTO) has granted a few patents with claims which cover programs as an article of manufacture. Such claims cover magnetic media having a program recorded thereon. See, for example, U.S. Patent Nos. 5,060,694, 5,058,780, 5,058,344, and 5,022,678. More recently, however, such claims are being rejected by the USPTO as being directed toward unstatutory subject matter under the judicially created printed matter exception to 35 USC 101. IBM does not believe this analogy is applicable, and we have a pending application under appeal in the USPTO which we are prepared to take as far as necessary to resolve the matter.

The USPTO has misapplied the printed matter exception to patentability under 35 USC 101 since: (1) the claimed invention is a machine component and not "merely" printed matter; (2) as a machine component, the primary purpose of the claimed invention is not to convey intelligence to a human, but rather to control the operation of a machine; (3) no specific copyrightable "expression" of the claimed invention is being claimed; and (4) to the extent that Applicants' claimed invention is considered to include printed matter, there is a new functional interrelationship between the

claimed computer readable program code means and the results achieved by that code means in a device using the claimed invention.

The issue under appeal in this particular application is limited to the form of the claim, since a companion case involving conventional means plus function and method claims has already been issued. If this type of claim becomes available, then the software publisher becomes a direct infringer of such a claim, and this will provide additional flexibility in designing software product licensing programs.

There are several other factors which you need to note when considering a licensing program for software products. Patent infringement in some cases will be easy to detect and in other cases almost undetectable. Let me discuss two examples that represent the extremes relative to detectability. A patent covering a function that is performed on the screen as a program is executed is very easy to detect. All you have to do is look at the screen as the program is being run. Examples are patents covering paragraph indent and similar functions in editors or word processing programs and patents covering screen or cursor management that are part of a graphical user interface. On the other hand, a routine for assigning registers buried in the depths of a compiler would be extremely difficult to detect, particularly since source code is not readily available and access to the inner

working of such programs is normally restricted by confidentiality clauses. On balance, I would suggest that infringement detection is probably easier for software products, since less analysis is normally required than that required for products in other arts.

Another factor to consider is that software vendors, defined here as those companies whose product or products are limited to software products as opposed to both software and hardware products, tend to be rather small companies, and there are many of them. For example, in 1991 in the United States, the largest 50 software vendors had revenues of about $13.8 billion dollars. The largest company had sales of $1.8 billion dollars, and half of them had gross income of less than $125 million dollars. These companies are also not very active from a patent standpoint. Assignment searches of companies making up a similar but not identical list of software vendors about a year ago revealed fewer than 150 issued patents in the United States. Discussions with software vendors indicate an increasing awareness of patent issues, and this is causing somewhat increased patent filing activity on their part, but as a group they are not proactive from a patent standpoint even though the industry in general is very innovative. Given competitive pressures and increased interest in patent licensing, it is only a matter of time before software vendors devote more attention to acquiring and strengthening their patent portfolios.

I have attempted to outline some factors to be considered in designing a licensing program for software products. Thank you for your attention, and I will be glad to answer any questions that you may have.

9/3/92

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STANDARDIZATION AND INTELLECTUAL PROPERTIES

ABSTRACT

Standards developing organizations have , or are in the process of, adopting polices concerning the impact of intellectual property rights on standards. Although such policies differ between organizations, a general consensus tends to prevail that a standard should not be selected unless intellectual property rights (that would impact implementation of standards) are available for licensing in a non-discriminatory manner and on a reasonable royalty basis. For the policy to be effective,the organization has the ongoing duty to bring the policy to the attention of its members and to others involved in the selection of standards. To help implement this policy members should disclose, as early as possible, any intellectual property rights they know of that may require licensing. However, reasonable royalty rates and cross licensing issues should be left to the usual inter party negotiation process. The licensor should be able to enforce its intellectual property rights by all means provided by law, including requesting injunctions should negotiations fail. On the other hand, if the only issue is the reasonableness of the royalty rate (excluding issues such as validity, enforceability, etc.,) then alternate dispute resolution processes, such as arbitration, would be appropriate.

INTRODUCTION

It is well known that high volume production, and its associated reduction in costs, can be achieved through adoption of industry standards for products which allows competition in the marketplace, and thereby provide ultimate benefits to the consumer.

This need for industrial standardization has resulted in the creation of a large number of standardization type organizations, each involved in developing standards for its business sector. Most of these organizations evolve from the private business sector, but there are also many government standardization developing agencies. Such standard developing organizations or agencies are primarily nationally based, but are associated with internationally based organizations to attempt to achieve global standardization. Because of the large number of standard developing organizations in the United States, the American National Standards Institute (ANSI) has been created as a federation to serve as a focal point for other United States organizations for achieving international standardization. The ANSI and various other international organizations provide the leadership, on a global basis, to identify needs, to avoid duplication of efforts, and to aid in establishing voluntarily global consensus based standards.[1]

One of the issues that these national and international standard developing organization continually face is the impact upon standardization of technology covered by intellectual property rights. Government agencies face the same issue when selecting mandatory standards. As a result, many of these industry organizations have created, or are in the process of developing, intellectual property rights policies applicable to products using the adopted standards. As expected, a number of different intellectual property rights policies have been developed, varying in scope, but fortunately with a single overall theme that tends to prevail. The overall theme is to select standards which will be available to all, and if required, through licensing intellectual property rights on a reasonable royalty and non-discriminating basis. ANSI adopted a policy that it will not approve a standard, or will withdraw a standard, which requires the use of a patented product or process unless the patent holder agrees to license the patent in a non-discriminatory manner, either without compensation or reasonable compensation.[2] ANSI also urges the early member disclosure of intellectual property rights that might apply to the standard.[3] To a large extent, patents have been the focus of most of the past attention. But now with the ability to copyright software, it is expected the copyrights will play an ever increasing role. The policy is simple enough, but difficulties arise when attempting to reach a consensus between organizations as to the extent to which such organizations should police such policy, and also as to the extent of its role in determining the reasonableness of royalty rates.

As one can see, there are two competing philosophies. On one hand, we have intellectual property rights, the purpose of which is to provide exclusive rights to inventors and authors to encourage creativity and innovation. On the other hand, we have the need for standardization for competition purposes. There is a need to manage these philosophies in a way so that standard developing organizations can have the ability to select the best standards, while assuring the availability of nondiscriminatory intellectual property rights licenses to the entire industries operating under such standards.

The most practical situation (but not without problems as will be discussed later), is to require (as ANSI urges) that the members of the organization agree to disclose their applicable intellectual property rights at the time the standard is being considered, and to agree to license the same on a reasonable and non-discriminating basis. The same would apply to non-members if they are involved in the recommendation of a standard. For such an intellectual property rights policy to be effective, such organizations need not only the cooperation of its members, but also non-members. A factor to remember is that these private sector standard setting organizations do not have the power to require that intellectual property rights be licensed, but must rely on the cooperative effort of its membership.

However, a question arises as to what extent, if any, should a standard

developing organizations (as distinguished the manufacturers that operate under the standard) have the duty of independently searching existing intellectual property rights to identify that which applies to the standard and to make legal judgment as to the need for licensing. We all know this is a formidable task. We also know that a consensus on intellectual property rights issues involving the opinions of many parties is seldom reached. It a major project in itself of the organization to attempt to select the technically best standard. An extensive complicated and time consuming independent undertaking by the organization of making judgements as to what intellectual property rights needs to be licensed would be counter productive to the time needed to be applied toward accomplishing the main objectives of the organization.

It should be understood that many of these standard developing organizations are composed of a large number of diverse members, each having separate and different needs, and therefore, different philosophies concerning intellectual property rights. For example organizations include members that have many patents and those who have few patents, and also diverse members, such as, manufacturers, users, operators and service organizations, each of which have their own but different needs. In addition, there will always be those that espouse the proposition that if a standard is selected, and if a member having applicable intellectual property rights is involved in the recommendation of such standard, then such intellectual property rights should

be licensed royalty free. Further, there are philosophical differences in the intellectual property rights policies between various international organizations, and therefore there is the question as to which policy should control.

One approach evolving from the European Telecommunication Standard Institute (ETSI) would be to require disclosures of intellectual property rights that is "essential" to the standard.[4] When and to what extent does intellectual property rights need to be disclosed? The questions that follows are how specific is the standard, and whether it extends to specific ways to implement the standard. What is the definition of "essential". Further, it should be noted that some of the claims in a patent could be considered as "essential", while others are not. Such disclosure requirement may be an insignificant burden to those members that have a few patents, but in contrast will be a large burden to members that have a large portfolio of patents. It may be very difficult for a member to make a determination as to which of its patents are "essential", and thus available for licensing, that will be satisfactory to all others. Would it be necessary to determine which intellectual property rights are "essential" in advance? Some members may consider that even though certain patents that may not cover the standard, they may still cover the best method of commercially implementing a standard, and therefore, should be considered "essential" patents available for licensing. On the other hand, patent holders may consider that members may be using the standard developing organization to

deliberately expropriate licenses under patents that are not otherwise available, while other members may consider that patent owners may be using the organization to help exploit their patents.

Then there is the question whether the obligation to license (on a reasonable non-discriminatory basis) will extend to non-members of the standard developing organization. Keep in mind that such intellectual property rights owner, since it is not a member of the organization, is not required to disclose its intellectual property rights or to license the same. Although this issue raises some questions, the better approach is, that in order for a standard to be universal, licenses should be available to all (i.e. members and non-members of the organization).

In addition, what is considered to be a reasonable royalty? This obviously depends to a large degree, whether a party is a licensor or licensee. Some organizations have considered the requirement of the disclosure of a "maximum" royalty rate for a license, in pure monetary terms.[5] If so, how can an such organization enforce its judgement that may be contrary to that selected by the intellectual property rights owner-member, other than by not selecting the preferred standard, or terminating the intellectual property rights owner's membership. The policy of ANSI is not to get involved in the determination of the reasonableness of the royalty rate.[6] The licensor should be able (to the same degree presently available in

normal license negotiating circumstances) to reduce the "maximum" royalty rate in circumstances in which the licensee can provide valuable cross licensing or grant back rights. Would the ability to acquire cross licensing or grant back rights be limited to intellectual property rights that apply to product embodying the standard, or can they extend to other product fields. Such cross licensing rights and corresponding reductions in royalty rates are normal licensing practices and should not be considered as being discriminatory. However, cross licensing opportunities (to the extent they exist) should be made available to all other potential licensees. In fact, the right to cross license is critical to the licensor. These cross licensing capabilities are needed by the licensor to keep from being disadvantaged in being forced to license its patents at a reasonable royalty rate while at the same time being restricted from acquiring cross license rights in the intellectual property rights of others.

The issue of reasonable royalty remains, as always, the main issue. Principals for determining that a reasonable royalty would include a rate that would, on one hand, not unreasonably hinder others in the manufacturing, use and sale of products complying with the standards, but on the other hand, that would fairly compensate the licensor for its innovation including its investment in research and development. Such a balance should normally be obtained through the usual negotiation process, so long as the same standard negotiated rate is available to all prospective entrants. Of course, under cross-licensing scenarios, those that do not have patents or other

cross licensing rights, will be more detrimentally financially impacted than those that do. This is particularly true if a number of licenses are needed from many patent owners, in which the cumulative effect of a large number of reasonable royalties could become prohibitively expensive. This requirement of a number of licenses in a given technology is not an unusual occurrence facing many manufacturers, but the situation may be exacerbated by the need to comply with standards. It has been proposed that, in addition to disclosure of the "maximum" royalty rate, a "cumulative maximum" royalty rate or ceiling needs to be considered.[7] If so, such arrangement then creates a problem (that may not be readily resolved) of how the cumulative royalties, once the "cumulative maximum" is exceeded, is to be distributed between the various licensors.

Assuming an intellectual property rights owner has agreed to license its intellectual property rights on a reasonable and non-discriminatory basis. Assuming further that no discriminatory action takes place. Then as can be expected, and as previously mentioned, the major dispute is, and will continue to be, the reasonableness of the royalty rate. This is the usual issue that polarizes most licensors and licensees. Both sides have opposing objectives. Licensors would like to maximize their royalty income, while Licensees would like to minimize their royalty payments. Licenses will take the position, that since a standard has been selected that is covered by the intellectual property rights of the Licensor, the Licensor has

unfairly taken an advantage of the standard by raising the royalty significantly higher than would be available without the standard. It should be understood that, it is not unusual that such parties disagree, even to the extent that no resolution can be achieved. The question is now raised to what extent can the intellectual property rights owner, once he has agreed to license its intellectual property rights, resort to the usual means of enforcing intellectual property rights. Can the licensor sue in court for an injunction in addition to damages? Should the licensor be able to litigate in the United States International Trade Commission to prohibit those parties, that it was unable to license, from exporting products into the United States? If not, then would not a non-licensed manufacturer have an advantage over the licensor in that it would have the opportunity to litigate the validity the intellectual property rights without the fear of injunction, and with a worst case result of payment of court awarded reasonable royalty damages. Perhaps, if the reasonable royalty rate is the only issue (excluding issues of validity, enforceability, etc.,) arbitration or some other form of alternate dispute resolution could be an acceptable manner to resolve this issue.

In general, it is the speakers' position that it is better to select a standard involving the issues of intellectual property rights than failing to select any standard at all. In addition, once a defacto industry standard is created (such as being set by a dominant company in an industry), it is better to have the organization to acknowledge such defacto industry standard as the official standard (whether or not

intellectual property rights is involved) rather than ignoring the defacto standard. Finally, once a standard is set, be it voluntary (industry organization standard) or be it mandatory (government standard), if intellectual property licenses are available to all industry participants on mutually acceptable (i.e., reasonable) royalty rates, all will profit and benefit.

The following are several United States case histories involving standards that have impacted intellectual property rights of others. One case is a United States government mandatory standard (FM Stereo), the second case is one in which no United States government standard was selected (AM Stereo), and third case is a case of current interest (SIMM) in which an organization selected a standard to which intellectual property rights of a non-member applied.

FM STEREO CASE HISTORY

In the late 50's the United States Federal Communications Commission (FCC) issued a Ruling Making Notice calling for the consumer electronics industry to propose an FM Stereo System for adoption as the United States standard.

Key criteria for such system was to be:

i) Compatibility with existing monaural receivers, so that they could receive a stereo signal and play it back monaurally with no degradation in performance.

ii) Ability to easily convert existing monaural receivers in the field to receive a stereo signal and play it back in stereo through utilization of a low cost adaptor.

iii) The transmitted stereo signal would not interfere with the Store Casting Service (S.C.A.) then being offered by FM Stations to stores, public buildings, restaurants, etc.

iv) Not require expensive changes to existing transmitters.

The industry responded to this very aggressively by instituting their own programs to design such a system.

Amongst the 8 - 10 serious development programs which were undertaken were those of receiver manufacturers, such as, General Electric, Zenith, Philco-Ford,

etc. and transmitter manufacturers, such as, Gates Radio. After extensive design work and testing by the companies and field testing of all systems by the FCC, the field was narrowed down to G.E. and Zenith Systems, with GE's pilot tone system being finally selected as best fulfilling the FCC's requirements.

After the standard was adopted in 1961, the industry launched into full scale production of receivers, adapters and transmitters which conformed to such standard.

As the industry would do with any product developments designed to meet a market need, whether or not dictated by a government or an industry established standard, they launch their own patent procurement programs in accordance with their normal practice. Over the course of a number of years, patents of various scopes started issuing to the proponents, as well as other parties, in the United States and in many foreign countries.

In recognition of such expected patent activity, each manufacturer of receivers, transmitters and adapters, whether or not it had made a proposal to the F.C.C., conducted whatever patent infringement study it thought to be appropriate for its particular design, in accordance with its normal procedures, when placing a new product on the market.

The FCC dealt with the patent aspects of the Rule Making as follows:

"34. The proponents of Systems 1, 4 and 4A have, as requested in the Notice of Proposed Rule Making, submitted statements which indicate in substance the each is prepared to grant non-exclusive licenses under any one or more of its patent applications and the reasonable royalties for the manufacture, use and sale of the apparatus covered thereby. We find these representations consistent with the patent policies of the Commission which are designed to obviate any restraint of trade or monopolistic practices in matters coming within its cognizance."

GE's adopted pilot tone systems was ultimately covered, by a United States Patent 3,122,610 which issued February 25, 1964 in the name of Antal Csicsatka (a copy of the front page of the patent is included in the Appendix). Antal Csicsatka was an immigrant to the United States after his escape with his family from Hungary during their revolution against the U.S.S.R. Csicsatka came to the United States with other Hungarians and was housed at the United States Army Base at Fort Dix, New Jersey as a relocation center. In order to help such immigrants gain meaningful employment, the United States Government held a job fair which any interested company could visit and interview such people for prospective employment. G.E. and Zenith made job offers to Csicsatka. Fortunately for G.E., he accepted G.E.'s offer and

joined the Radio Receiver Department at Utica, N.Y. A short time later he was assigned to the FM Stereo Receiver development program. The rest is history.

Once his United States patent issued, G.E. made license offers to manufacturers selling receivers, adapters and transmitters into the United States market. A nonexclusive license program was established in the same fashion as any other consumer electronics licensing program would be established. i.e., the royalty rate was established consistent with conventional criteria such as breadth of the invention, ease to design around, benefits conferred in utilizing the invention, etc.

In accordance with such criteria, non-exclusive licenses under the United States Patent were offered to all domestic and foreign manufacturers at 36¢ per receiver for all receivers sold, or otherwise disposed of, for marketing in the United States.

After extensive and hard fought negotiations, in which all prospective licensees raised the usual defenses of non-infringement and invalidity, as well as questioning the reasonableness of the proposed royalty rate, ultimately, G.E. reached agreement with a number of parties at a negotiated rate of 32¢/unit, with royalties for past infringement at 16¢/unit. Later in order to license another infringer on a mutually agreeable basis, the royalty rate was reduced further to 28¢/unit, with past infringement being set at 14¢/unit. This reduced rate was then made available to all

previous licensees and, thus, became the newly established standard rate which survived for the life of the licensing program.

The end result was exactly the same as any other licensing program involving a patent of comparable breadth covering a consumer electronic product demanded by the marketplace without the intervention of an established standard.

Hence, the patent policy followed by the FCC was in the United States public's best interest in that it attracted a major response from the United States consumer electronics manufacturers with the best system being adopted to meet the market's needs. Manufacturers both domestic and foreign who later supplied the market's needs also benefited from the prompt establishment of a standard which could be satisfied easily with the necessary hardware at competitive prices subject only to the payment of a mutually agreed upon standard non discriminatory royalty rate, which was established during the negotiation process as being reasonable.

AM STEREO CASE HISTORY

Throughout the 1960's several petitions were filed urging the FCC to institute rule making directed to AM broadcast systems. These were all denied as not in the public interest. However, in 1977 in response of being advised that AM stereo

broadcast had been fully developed and tested, the FCC decided to go forward with the Notice of Inquiry. The Notice of Inquiry was issued to determine if there was an interest and need for a service of stereophonic broadcasting by AM stations, and if so, to develop a record that would assist the FCC in issuing a Notice of Proposed Rule Making proposing standards for such a service.

As a result, five AM stereo systems were presented to the FCC, i.e., Belar Laboratories, Harris Corporation, Kahn Communications, Magnavox and Motorola. Each system had its own unique method of generating stereo signals. At that time there was great hope that AM Stereo would soon be on the air.

As a result of the positive response to the Notice of Inquiry, the FCC issued a Notice of Proposed Rule Making. The FCC wanted to be satisfied on various aspects of each of the proposed systems so that they would make its final decision. Each of the proposed systems had advantages and disadvantages. Although both the manufacturers of broadcast equipment and manufacturers of receivers were attempting to advise the FCC of the benefits of their broadcasting and receiving systems, the underlying the major financial impact in the market place would result from the creation of a large demand for AM stereo receivers. The various systems proposed were not mutually compatible, so that if a single standard was not selected, it was conceivable that three types of receiving systems would be needed to pick up

all stations in a single market.

Again, as in the FM stereo case, the industry launched their own patent procurement program in accordance with normal practice for product developments designed to meet a market need, whether or not dictated by an industry or government standard. Hence, most of the systems proposed were covered by issued patents or pending applications (copies of the first page of a sample of some of the AM stereo patents are included in the Appendix). As in the case of FM Stereo, the Commissioner's Report and Order adapting standards concerning patents (mentioned in the FM stereo case history) also applied to AM stereo standard.

The FCC had initially selected the Magnavox system by first issuing a non-final tentative determination. In objecting to the selected Magnavox standard, certain parties submitting proposals that presented arguments to the FCC that the selection was wrong, and that the FCC shall obtain additional public comments before the decision was finalized. The tentative determination was withdrawn and further public hearings were conducted. After a long delay, the FCC never did make a final ruling. Instead, the FCC stated that the market place is to make its own determination. In contrast to the FM stereo situation, no AM stereo standards were ever issued by the FCC.

The result of a lack of a standard was that receiver manufacturers were hesitant to produce AM stereo receivers without a broadcast standard, and the transmitter manufactures were hesitant to produce AM stereo transmitters for which no receivers were available. For a lack of a standard, the AM stereo system has yet to become a major factor in the radio broadcast market to the same degree experienced as a result of the FM stereo standard. As a result of the lack of a standard, all parties, transmitter manufacturers, receiver manufacturers and radio station owners, all missed a golden opportunity to profit from the creation of a new market that only needed to be awaken by the issuance of standard.

The Motorola system appears to be evolving as the industry AM stereo standard. Japan has selected the Motorola system as standard and AM stereo broadcasting began in Japan in the spring of 1992. This is almost 15 years after the first Notice of Inquiry was issued.

Hence, as can be seen, the FM stereo receivers, meeting the standard, became an instant success in the marketplace, despite the need for royalty bearing licenses under GE patents of General Electric. All parties, including the consumers profited by the standard. On the other hand, in the case of AM stereo, the lack of a standard in such market was proven to be significantly more detrimental than the issue of licenses with royalty payments.

Even if the marketplace selects its own standard, such as in Japan, it still would be faced with the need for acquiring licenses and making royalty payments. In Japan, the manufacturers have to buy the necessary semiconductors from Motorola and also pay a fifty cent (50¢) royalty for each unit produced. There is some fear in the industry in Japan, that Motorola (Nippon Motorola) could decide to increase the royalty rate now that its system became the standard, since its application to the Ministry of Posts and Telecommunications did not rule out increases.[8] This situation may lead to confrontations similar to that between Mitsubishi and Wang, which is discussed below in the following section.

SIMM STANDARD

The Joint Electronic Device Engineering Counsels (JEDEC) of the United States issued its Standard 21-A-1 for "single-in-line memory modules" (SIMM), (a copy of which is in the Appendix) which is the topic of discussion of this portion of this paper.

JEDEC Organization

The Solid State Products Division (SSPD) of the Electronics Industries Association (EIA) is the Sponsoring Association for the Joint Electron Device

Engineering Councils (JEDEC). JEDEC's function is to promote the development and standardization of product characterization, test methods, manufacturing support functions and mechanical standards for solid state products. Companies that manufacture solid state products and provide related services or equipment for the United States market may hold membership in JEDEC.

JEDEC Committees have the authority to develop proposed standards and with the approval of JEDEC's governing body, the Solid State Products Engineering Counsel, and EIA's General Counsel, may set standards. The JEDEC standards are designed to serve the public interest by eliminating misunderstandings between manufacturers and purchasers and for facilitating interchangeability of products. JEDEC Standards as well as EIA standards are entirely voluntary and their use within the discretion of individual manufacturers.

JEDEC Standard may be considered for elevation to EIA Standards after it has demonstrated that it is both useful and necessary and that it has a reasonable probability of attaining the industry wide acceptance associated with EIA standards. No standard shall be recommended for adoption by either EIA or JEDEC unless it conforms with the acceptance of the organization Patent Policy

Patent Policy

A JEDEC disclaims on every standard it promotes that its standards are adopted without regard to whether or not their adoption may involve patents. (See JEDEC Manual No. 21, page 17, a copy of which is in the Appendix). JEDEC's parent organization, EIA, however, proposes that requirements in EIA Standards which call for the use of patented items should be avoided (a copy of which is in the Appendix). To the extent it can't, EIA Requires that "no program of standardization shall refer to a product on which there is a known patent unless all the technical information covered by the patent is known by the committee and the committee chairman has received a written expression from the patent holder that it is willing to license applications under reasonable terms and conditions that are demonstrably free of any unfair discrimination."

This is consistent with the American National Standards Institute (ANSI) patent policy (a copy of which is included in the Appendix), which encourages the early disclosure of any potential or actual patent rights to the standards developer in order to provide the opportunity of evaluating the propriety of standardizing the patented technology. ANSI proposes that the early disclosure of a patent position, to allow patent holders and the prospective licensees ample time to negotiate the terms and conditions of licenses outside the standards development process itself. ANSI purports that by requiring early disclosure, a patent holder may then have a strong incentive to provide an early assurance that the terms and conditions of the license

will be reasonable and demonstrably free of unfair discrimination in order to avoid any objection to the standardization of its proprietary technology. ANSI, nonetheless, cautions standards developers not to be involved or participate in the evaluation of whether such license terms and conditions are reasonable or nondiscriminatory.

SIMM Patent

In 1980, Jim Clayton of Wang Laboratories invented an implementation single in-line memory module (SIMM). Two patent applications which were both filed originally in the U.S. in 1983 covers a memory module having 8 memory for data and a ninth memory chip for error detection, all mounted in a single row on a 30 pin epoxy glass printed circuit board substrate and eight decoupling capacitors for suppressing transient voltage spikes.

JEDEC Approval of SIMM Standard

About the same time period as the filing of the patent applications, Mr. Clayton in representing Wang was addressing the JEDEC subcommittee responsible for memory standards. Mr. Clayton proposed to JEDEC that Wang's implementation for SIMM be adopted as an industry wide standard. IBM as well as other members were

in support of this proposal, which some contend was already in use and perhaps an already potential defacto industry standard. After review and analysis, the JEDEC subcommittee on memory devices approved the electrical aspects of the SIMM technology in 1985. Because the mechanical features such as package configuration and size required a different committee for review, the full JEDEC approval was not complete until August of 1986, eight months prior to the issuance of the first of Wang's two patents.

Patent Litigation by Wang

Wang began enforcing its patent rights in 1989 and notified all manufacturers using the 30 pin, 9 memory chip SIMM design of patent infringement. More than thirty manufacturers and resellers have taken licenses in the module technology including Texas Instruments, Motorola, Samsung, Goldstar, Hitachi and Memory Technology.

In October of 1990, Wang filed a patent infringement lawsuit in the Eastern District of Virginia against Toshiba Corporation and NEC Corporation, two of the larger competing SIMM manufacturers. After trial in the summer of 1991, a jury found both Toshiba and NEC infringed Wang's patents and the court issued an injunction. Both Toshiba and NEC are appealing this decision.

Wang subsequently filed an International Trade Commission (ITC) action on January 17, 1992 against a number of companies seeking relief from alleged violations of Section 337 of the Tariff Act based upon infringement of its two patents. Prior to the ITC trial, all the defendants except Mitsubishi and NMB Technologies settled with Wang.

Just prior to the ITC trial against the remaining defendants, Wang brought an infringement suit on June 4, 1992 against Mitsubishi and NMB in the United States District Court for the Eastern District of Virginia. Several days later, Wang moved to have the ITC investigation terminated and on June 18, 1992 the ITC action was terminated.

Mitsubishi filed a counter suit on July 17, 1992, against Wang in the United States District Court for the Central District of California requesting a declaratory judgment of noninfringement and/or invalidity and charging antitrust violations in connection with Wang's acquisition and enforcement of its SIMM patent rights. Mitsubishi contends that Wang's encouragement to the industry, back in 1983, to begin production of a 9-chip, 30 pin SIMM design without disclosing to the industry that it was trying to obtain a patent position, along with its concerted efforts to promote the adoption of that design as the JEDEC standard for SIMM, caused industry members to unknowingly promote the patented design. Mitsubishi further

asserts that the royalties demanded by Wang are much greater than Wang would have been able to demand or obtain if JEDEC had not adopted the Wang design as the industry standard.

Many companies in addition to Mitsubishi, believe that Wang did not disclose to JEDEC or to any industry representatives attending JEDEC meetings, that it had filed United States patent applications relating to the SIMM it was promoting. Some industry members argue that this not only violated the EIA/JEDEC patent policy requirements, but it also was a subversion of the process by which JEDEC formulates and adopts industry wide standards.

Other industry members, including Wang, contend that the SIMM configuration promoted by Wang and others was in fact already a defacto standard and JEDEC was merely recognizing this fact by approving it for publication. Additionally Wang points out that the JEDEC standard is not a mandatory one and some companies such as Apple did not follow the standard.

Chilling Effect on JEDEC

Because the JEDEC standard on SIMM has been central to the litigation involving Wang, JEDEC has taken a hard look at its procedures in approving

standards. The initial concern over selecting standards which may be patented had such a chilling effect that there was some discussion within committees suggesting that standards should no longer be made. After much discussion it was finally concluded that standardization was essential to ensure compatibility and enhance competition.

The result was the decision for committees to be made cognizant of the intellectual property issues. In particular, some committees now begin each meeting by reading the EIA patent policy providing for the disclosure of the intentions of any patent holders having an impact on proposed standards. Although the EIA policy had always been applicable, the recent procedure assures that the committee members will be continually informed of the policy and its implications as they consider what standards to approve. Also some committees are now tracking relevant patents in the technical areas at issue in order to monitor what may be patented and by whom. It is hoped by this effort, that the committee members are better informed whether to approve a proposed standard based on the potential patent position and any commitment of the patent owner to license on a non-discriminatory basis at a reasonable royalty rate. On the other hand, it is hoped that the activity will not be so burdensome and overwhelming so as to detrimentally impact the committee's ability to concentrate on its main objective of selecting the best standards.

Conclusion

The SIMM standard has been an economic success for Wang and those companies manufacturing the 9-chip, 30 pin memory module SIMM. Total United States sales of SIMM in 1991 alone are estimated to have exceeded $1 billion. However, typical of this type of product, the 30 pin SIMM standard is reaching its maturity and next generation chips are already being introduced, such as the IBM's 72 pin and possibly a 156 pin memory module.

Notwithstanding the SIMM success in the market place, Wang's enforcement of the SIMM patents after it became an industry standard has caused much concern among industry representatives. Some agree that developers of new technology deserve to be amply rewarded through royalties, while others contend that royalties should be set low so the benefits of new technologies can reach the widest audience. While both sides agree that licensing fees should be kept to reasonable limits, they differ over the definition of what is reasonable. Hence, resorting to the courts for a judicial decision, or alternatively to an determination by an arbitrary body, of reasonable royalties, will be with us for some time in the future as patented standards continue to occur. In the meantime, standard developing organizations will continue to endeavor to be cognizant of intellectual property rights issues when considering their selection of standards.

Final Comment

The speaker remains impartial with regard to any of the controversy discussed above and neither endorses nor rejects the various viewpoints industry representatives which are reflected in this paper.

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2. Rockwell, *supra*, page 2.1.3

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5. Tolfree, *supra*, page 2.3.3

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Appendix Index

FM Stereo Patent

US Patent 3,122,610 - (General Electric)

Sample AM Stereo Patents

US Patent 4,232,189 - (Harris)

US Patent 4,159,398 - (Motorola)

US Patent 4,172,966 - (Motorola)

US Patent 4,218,586 - (Motorola)

US Patent 4,018,994 - (Kahn)

Wang SIMM Patents

US Patent 4,656,605

US Patent 4,727,513

JEDEC Standards

JEDEC Standard 21-A-1

JEDEC Standard 21-C (Release 2)

9/3/92

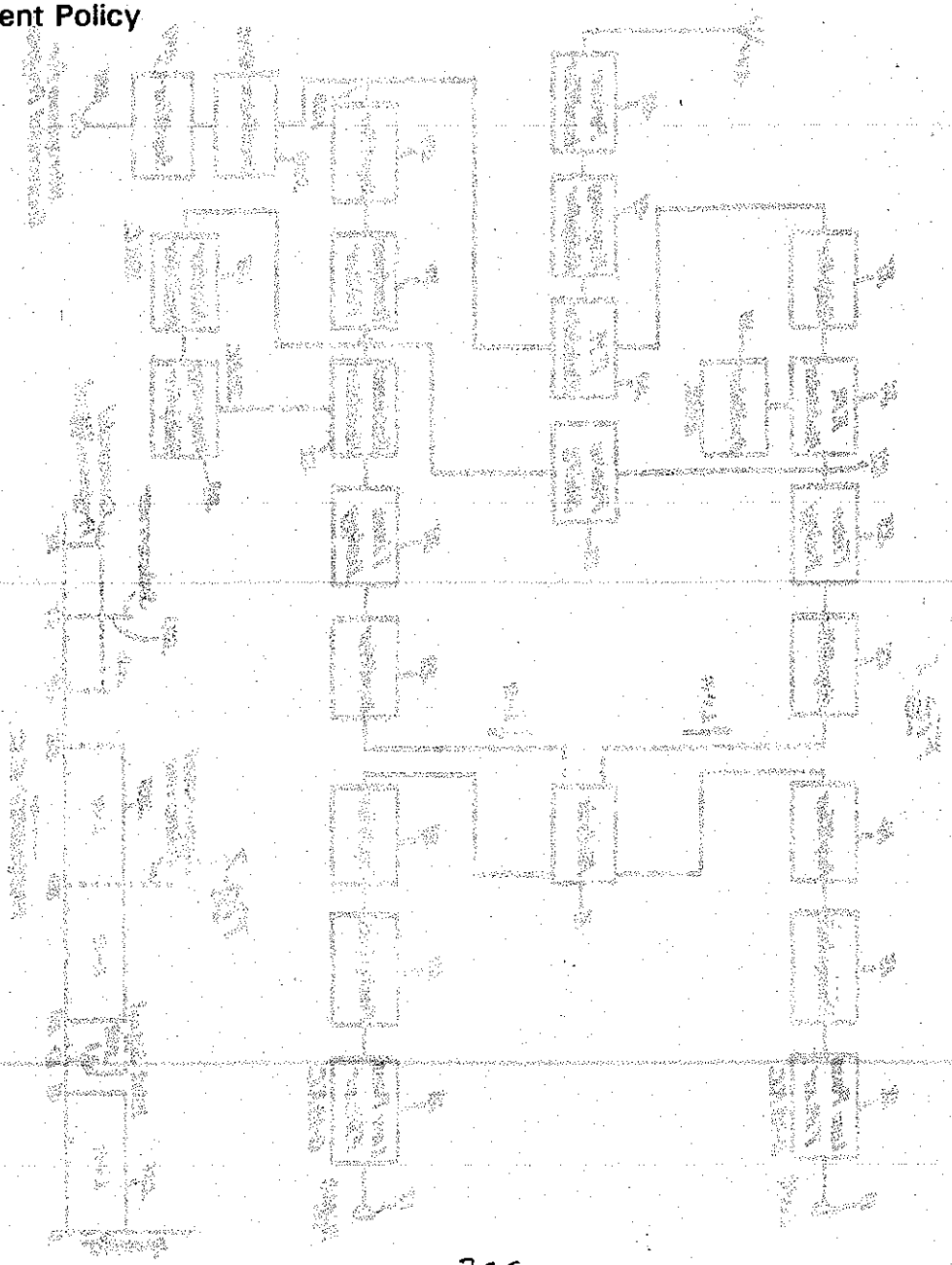
Patent Policies

JEDEC Manual of Organization & Procedure

(Appendix D - Patent Policy)

EIA Patent Policy

ANSI Patent Policy



OR 3,122,610

FM STEREO

Feb. 25, 1964 A. CSICSATKA 3,122,610

CIRCUITRY FOR MULTIPLEX TRANSMISSION OF FM STEREO SIGNALS WITH PILOT SIGNAL

Filed July 22, 1960 6 Sheets-Sheet 1

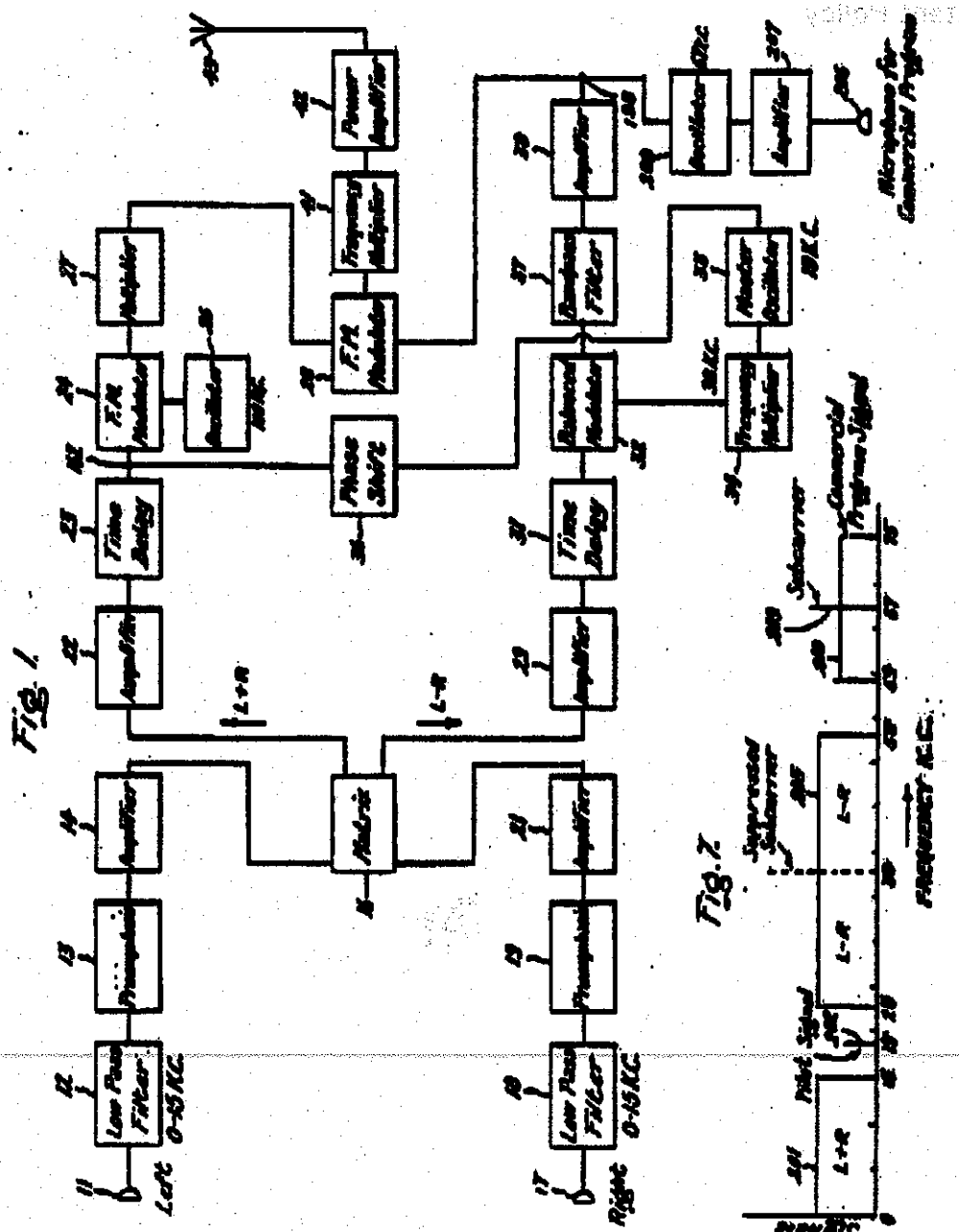


Fig. 1

Fig. 2

Inventor:
Antal Csicsatka,
by Norman C. Fulmer
His Attorney.

AM STEREO

United States Patent [19] [11] **4,232,189**

Leitch [45] **Nov. 4, 1980**

[54] **AM STEREO RECEIVERS**

[75] Inventor: **Clifford D. Leitch**, Quincy, Ill.

[73] Assignee: **Harris Corporation**, Cleveland, Ohio

[21] Appl. No.: **829,518**

[22] Filed: **Aug. 31, 1977**

[51] Int. Cl.³ **H04R 5/04**

[52] U.S. Cl. ..... **179/1 G; 455/265**

[58] Field of Search ..... 325/418, 419, 420, 421, 325/423, 442, 444, 36; 179/15 BT, 1 G, 1 GQ, 1 GB, 1 GJ, 1 GS

[56] **References Cited**

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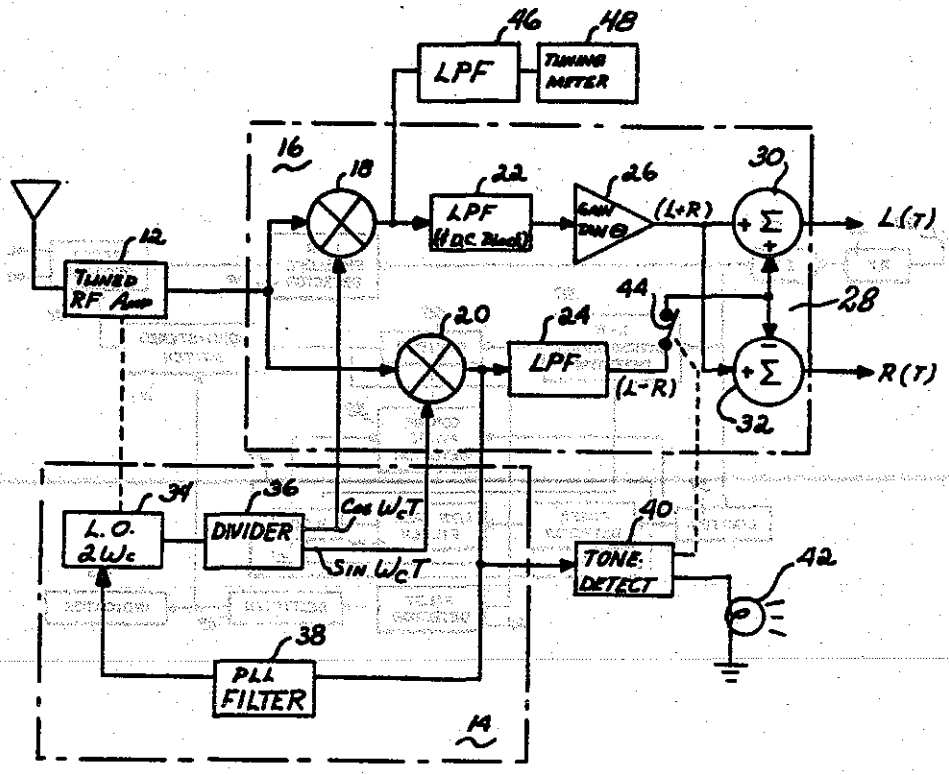
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3,944,749	3/1976	Kahn	179/1 GS
4,018,994	4/1977	Kahn	179/1 GS
4,037,165	7/1977	Ogita	179/15 BT

Primary Examiner—Benedict V. Safourek
Assistant Examiner—Tommy P. Chin

[57] **ABSTRACT**

Radio receiver systems for recovering stereo program signals from a composite stereo signal which has been modulated with either quandrature modulation or modified quadrature modulation techniques. In one embodiment, a receiver is provided which directly recovers the program signals from the composite signal by means of product detectors, without first converting the composite signal into an IF signal. In another embodiment an IF stage is provided, but is designed to have broad bandpass characteristics. This embodiment additionally includes a phase locked loop for forcing the IF frequency into the center of the IF passband. In either case, the stereo demodulation is accomplished by product detectors which multiply the composite signal by phase reference signals. Several methods of synthesizing stable phase reference signals are shown.

9 Claims, 6 Drawing Figures



AM STEREO

United States Patent [19]

Hilbert et al.

[11] **4,159,398**

[45] **Jun. 26, 1979**

[54] **STEREO PRESENCE SIGNAL FOR AN AM STEREO SYSTEM**

[75] Inventors: **Francis H. Hilbert**, Addison; **Norman W. Parker**, Wheaton, both of Ill.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **837,256**

[22] Filed: **Sep. 27, 1977**

[51] **Int. Cl.**[2] **H04H 5/00**

[52] **U.S. Cl.** ..... **179/1 GS**

[58] **Field of Search** ..... 179/15 BT, 1 GS; 325/36, 60, 456

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3,908,090	9/1975	Kahn	179/15 BT
4,018,994	4/1977	Kahn	179/15 BT
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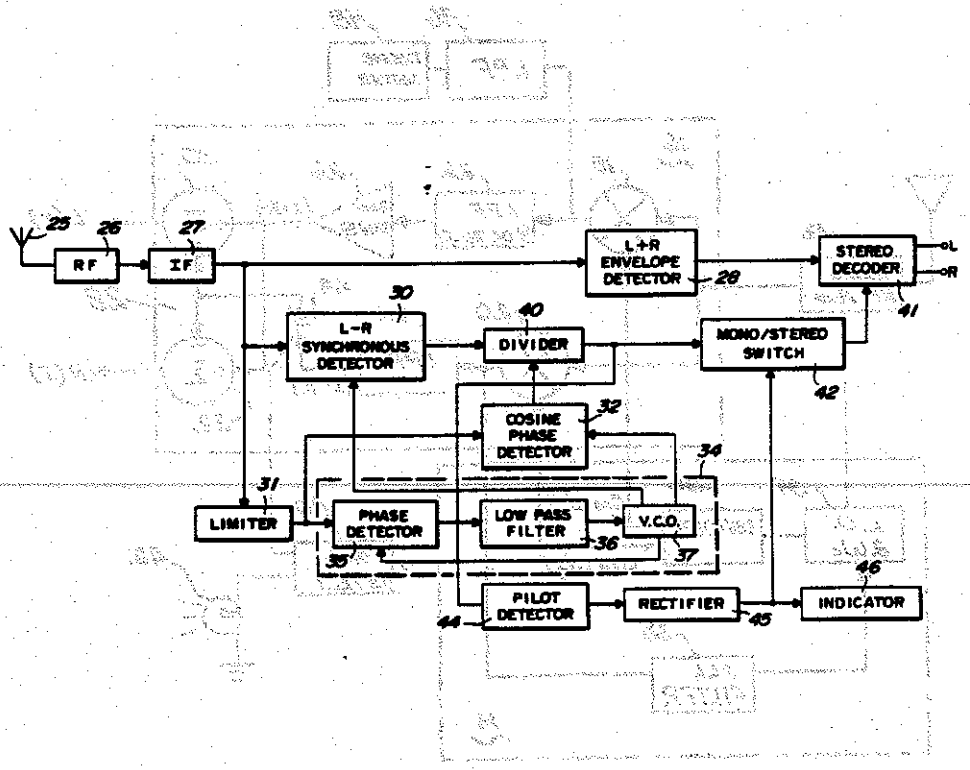
Primary Examiner—Douglas W. Olms

Attorney, Agent, or Firm—Margaret Marsh Parker; James W. Gillman

[57] **ABSTRACT**

In an AM broadcast transmitter, an infrasonic tone is added to the difference channel of a compatible AM stereo system to provide a stereo presence signal. In a stereophonic receiver, the corrected output of a synchronous detector in the difference signal channel is coupled to an infrasonic detector for control of a mono/stereo mode switch and a stereo presence indicator. When the received signal is weak, the infrasonic tone is effectively stronger, because the phase angle is increased. Since the s/n ratio is proportional to the phase angle, the stereo presence signal is self-adjusting. The mode switch and indicator are enabled for all values of L and R. The infrasonic tone could also be removed from the transmitted signal whenever the difference signal goes above a predetermined level during stereo broadcasting, in which case a comparator at the receiver would enable the mode switch and indicator upon detection of either a difference signal or the infrasonic tone.

10 Claims, 5 Drawing Figures



AM STEREO

United States Patent [19]

Parker et al.

[11] **4,172,966**

[45] **Oct. 30, 1979**

[54] **AM STEREOPHONIC RECEIVER**

[75] Inventors: **Norman W. Parker, Wheaton; Francis H. Hilbert, Addison, both of Ill.**

[73] Assignee: **Motorola, Inc., Schaumburg, Ill.**

[21] Appl. No.: **880,686**

[22] Filed: **Feb. 23, 1978**

[51] Int. Cl.² **H04H 5/00**

[52] U.S. Cl. ..... **179/1 GS; 329/135**

[58] Field of Search ..... **179/1 GS, 15 BT; 325/36; 329/122, 124, 129, 132, 135**

[56] **References Cited**

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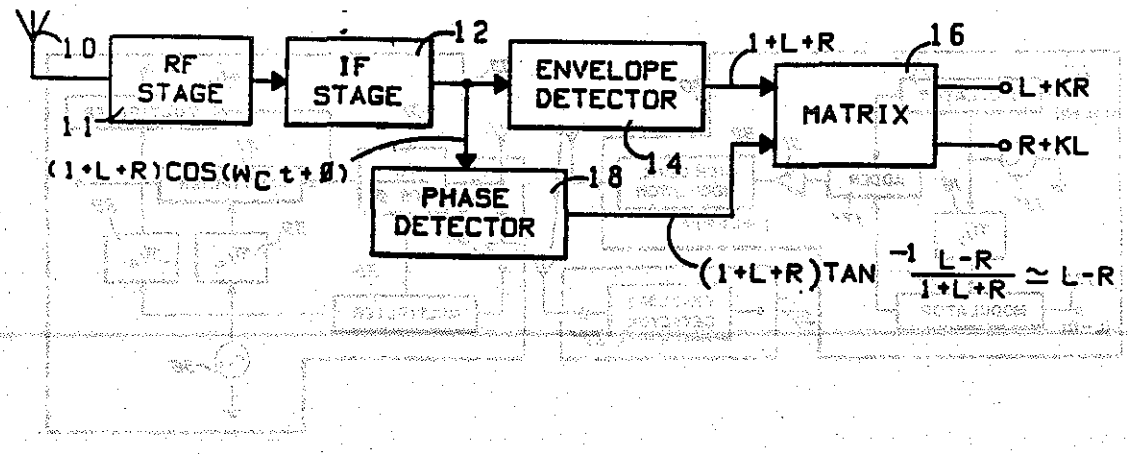
Primary Examiner—Douglas W. Olms

Attorney, Agent, or Firm—Margaret Marsh Parker; James W. Gillman

[57] **ABSTRACT**

An AM receiver for utilizing a broadcast signal of the form $(1+L+R)\cos(\omega_c t+\phi)$ separates the L and R signals by utilizing phase detection and matrixing. Distortion is either eliminated with non-linear amplification or reduced with partial matrixing.

13 Claims, 6 Drawing Figures



AM STEREO

United States Patent [19]

Parker et al.

[11] **4,218,586**

[45] **Aug. 19, 1980**

[54] **COMPATIBLE AM STEREO BROADCAST SYSTEM**

[75] Inventors: **Norman W. Parker**, Wheaton; **Francis H. Hilbert**, Addison, both of Ill.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **7,733**

[22] Filed: **Jan. 30, 1979**

Related U.S. Application Data

[63] Continuation of Ser. No. 674,703, Apr. 7, 1976, abandoned.

[51] Int. Cl.[2] **H04H 5/00**

[52] U.S. Cl. ..... **179/1 GS**; 455/61; 455/91

[58] Field of Search ..... 325/36, 60, 61, 139; 179/15 BT, 15 BM, 16 B, 1 GS

[56] **References Cited**

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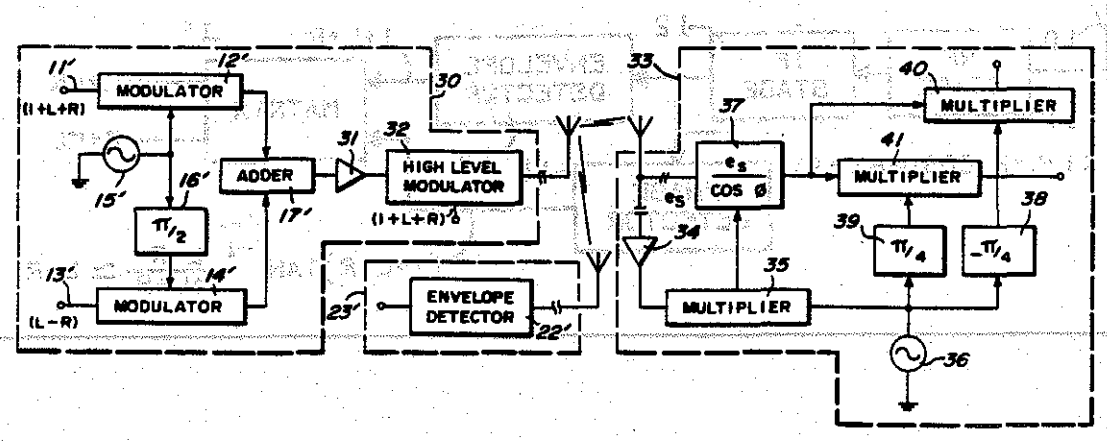
Primary Examiner—Marc E. Bookbinder

Attorney, Agent, or Firm—Margaret Marsh Parker; James W. Gillman

[57] **ABSTRACT**

A compatible AM stereo broadcasting system is disclosed in which the signal is a carrier having an amplitude directly variable with monoaural or sum (L+R) information, and having an instantaneous phase ϕ varying as a function of the resultant amplitude of the sum information (L+R) and difference information (L−R) which are established in a preselected phase relationship (quadrature). In a stereo receiver, L and R or the sum and difference signals may be restored by dividing the signal by the cosine of the angle ϕ, and in a monaural receiver, the sum signal alone is detected.

38 Claims, 14 Drawing Figures



AM STEREO

United States Patent [19]

Kahn

[11] **4,018,994**

[45] **Apr. 19, 1977**

[54] **COMPATIBLE AM STEREOPHONIC RECEIVERS**

[76] Inventor: **Leonard R. Kahn**, 70 N. Grove St., Freeport, N.Y. 11520

[22] Filed: **May 2, 1975**

[21] Appl. No.: **573,905**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 487,155, July 10, 1974, Pat. No. 3,908,090, and a continuation-in-part of Ser. No. 487,154, July 10, 1974, Pat. No. 3,944,749, each is a continuation-in-part of Ser. No. 251,947, May 10, 1972, abandoned.

[52] U.S. Cl. ..... 179/15 BT; 325/36; 329/132; 329/135

[51] Int. Cl.² H04H 5/00

[58] Field of Search ..... 179/15 BT; 325/36, 47, 325/345; 329/124, 130, 132, 135

[56] **References Cited**

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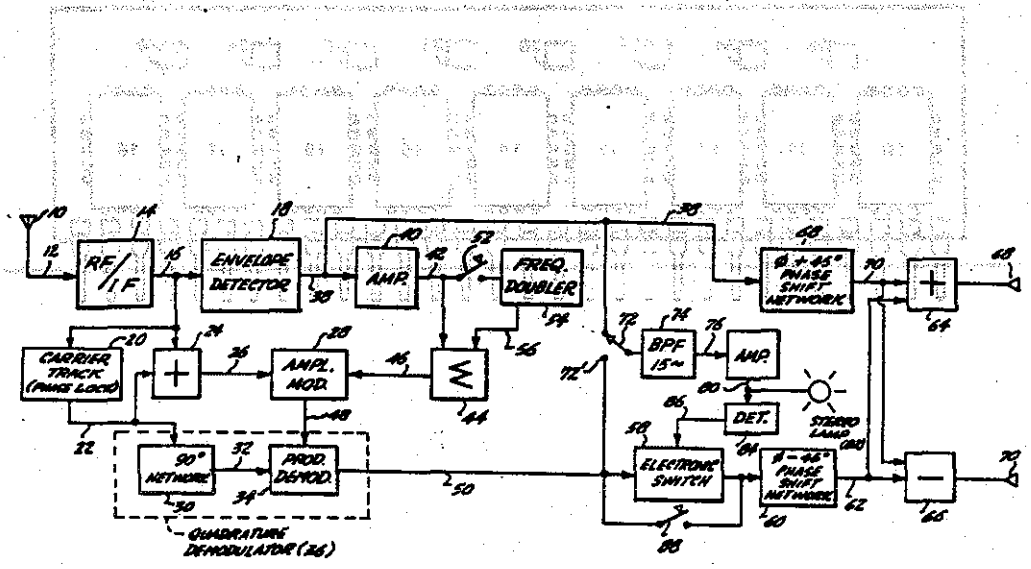
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Primary Examiner—Douglas W. Olms
Attorney, Agent, or Firm—Graybeal, Barnard & Uhlir

[57] **ABSTRACT**

Compatible AM stereophonic receivers for reception of a radiant energy carrier wave modulated with two stereo related signals (L and R), each appearing as a respective first order single-sideband. Receivers embodying the invention in general improve an optimize output stereo signal quality by quadrature demodulation of the carrier to derive the stereo difference (L-R) signal, together with in-phase detection of the stereo summation (L+R) signal, the L+R and L—R signals thus derived being placed in phase and combined through sum and difference circuits to obtain the stereo related (L and R) outputs. Demodulation distortion may be minimized by inverse amplitude modulation of the carrier wave with a portion of at least the envelope fundamental (and preferably also one or more harmonics thereof). The carrier wave is preferably enhanced prior to quadrature demodulation and preferably is also modulated with an infrasonic frequency (e.g. 15 Hz) signal indicating stereo signal presence, with such infrasonic modulation either amplitude modulating or phase modulating the carrier wave. Such infrasonic modulation is utilized to automatically switch receiver output mode and to visually indicate stereo signal presence.

54 Claims, 8 Drawing Figures



SIMMs

United States Patent [19]

Clayton

[11] **Patent Number: 4,656,605**

[45] **Date of Patent: Apr. 7, 1987**

[54] **SINGLE IN-LINE MEMORY MODULE**

[75] **Inventor:** James E. Clayton, Londonderry, N.H.

[73] **Assignee:** Wang Laboratories, Inc., Lowell, Mass.

[21] **Appl. No.:** 873,879

[22] **Filed:** Jun. 12, 1986

Related U.S. Application Data

[63] Continuation of Ser. No. 528,817, Sep. 2, 1983, abandoned.

[51] **Int. Cl.**[4] G11C 13/00

[52] **U.S. Cl.** 365/52; 365/189; 357/72

[58] **Field of Search** 365/52, 189, 200, 202; 357/72, 75

[56] **References Cited**

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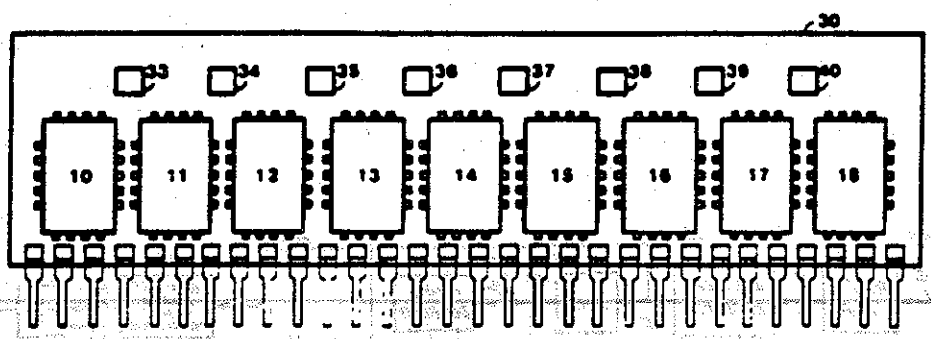
Primary Examiner—Terrell W. Fears

Attorney, Agent, or Firm—Michael H. Shanahan; Kenneth L. Milik

[57] **ABSTRACT**

What is disclosed is a memory module to and from which multibit binary words are stored and read out. Each multibit binary word comprises a standard word size and another memory bit that may be used for purposes such as parity checking. The modules may be mounted on a printed circuit mother board from which power, control signals and binary words are applied to and taken from the module.

1 Claim, 2 Drawing Figures



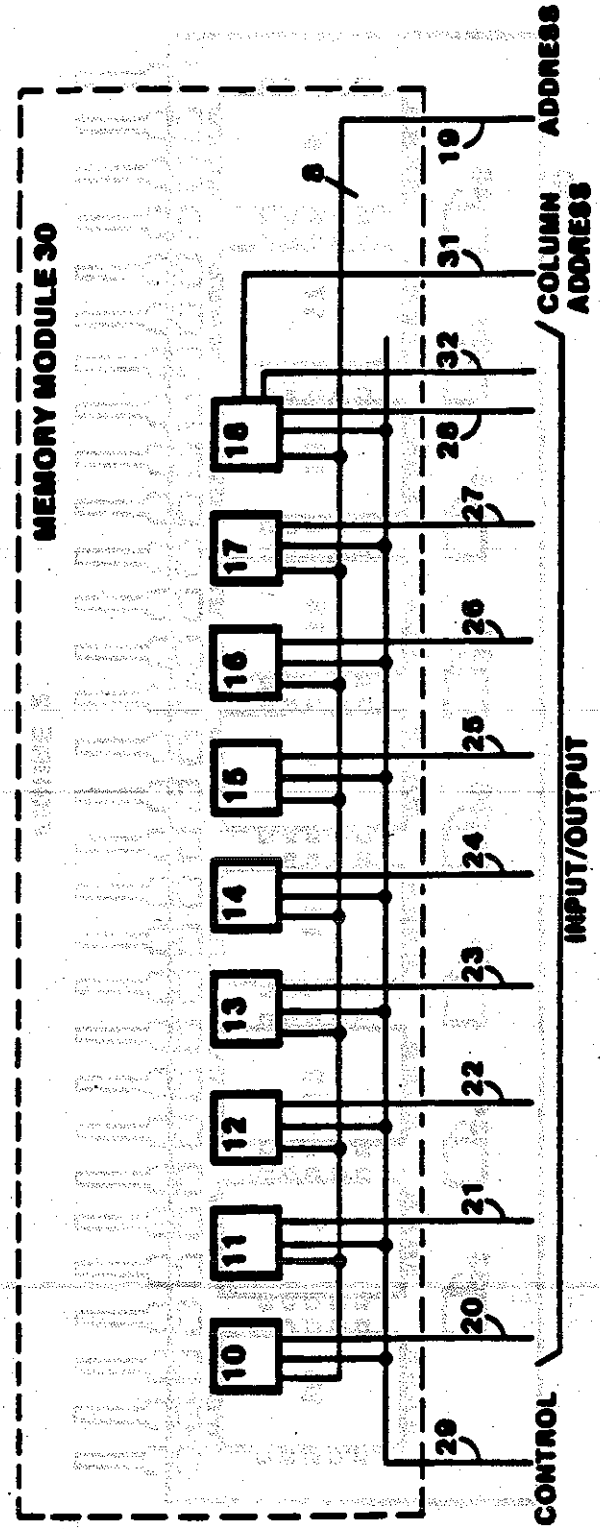

MEMORY MODULE 30
ADDRESS
COLUMN ADDRESS
INPUT/OUTPUT
CONTROL
9
19
31
32
18
20
17
27
16
26
15
25
14
24
13
23
12
22
11
21
10
20
29

FIGURE 1

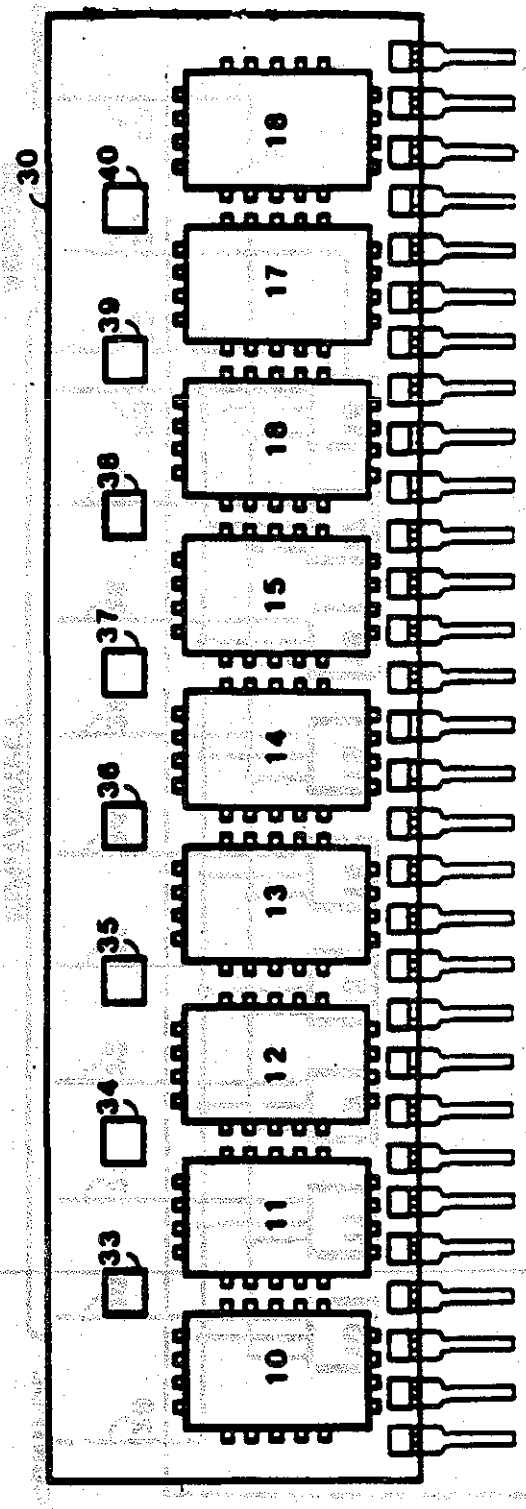


FIGURE 2

SINGLE IN-LINE MEMORY MODULE

The present application is a continuation of U.S. patent application Ser. No. 528,817 filed Sept. 2, 1983 by James E. Clayton for a SINGLE IN-LINE MEMORY MODULE, subsequently abandoned.

BACKGROUND OF THE INVENTION

This invention relates to memories and more particularly to modular memories providing storage and retrieval of binary words.

What is disclosed is a memory module to and from which multibit binary words are stored and read out. Each multibit binary word comprises a standard byte size and one or more other memory bits that may be used for purposes such as parity checking. The modules may be mounted on a printed circuit mother board from which power, control signals and binary words are applied to and taken from the module.

SUMMARY OF THE INVENTION

The present invention is a memory module on which a plurality of memory components each storing or reading one binary bit at a time have their power, control, input/output and other access leads interconnected so there is only one set of these leads available at terminals of the module. A first plurality of these memories provide for one binary word being input or output to the memory module at a time. In addition, I add another individual memory intended for purposes such as parity checking and error correction. This additional memory has its power and control leads interconnected with the other memories within the module, but has separate input/output lead(s) and column address select leads to enable independent accessing or addressing of the parity memory.

DESCRIPTION OF THE DRAWING

My invention will be understood on reading the following detailed description in conjunction with the drawing in which:

FIG. 1 is an electrical block diagram of my novel memory module; and

FIG. 2 is a mechanical layout drawing of the memory module.

DETAILED DESCRIPTION

In FIG. 1 is seen the electrical block diagram of my invention. In one embodiment of my invention, the embodiment shown in FIG. 1, eight individual memory chips 10–17, each capable of storing a zero or a one binary bit at each memory location, are accessed by a multi-bit address applied to address leads 19 which comprises eight leads. With this embodiment of my invention, single input/output leads 20–27 are provided respectively to each of memory chips 10–17 to provide a total of eight input/output leads making up an eight bit binary word. Control lead 29 connected to one input of each of memory chips 10–17 on the module 30 indicates whether a read or write operation is being performed at the location identified by the address present on the eight address leads 19 which are interconnected to the addressing inputs of each of chips 10–17.

In a manner well known in the art the concurrent addressing and control of chips 10–17 which are connected in parallel permits an eight bit byte or binary word to be store in or read out of memory chips 10–17 for each read or write operation.

In accordance with the preferred embodiment of my invention I provide an extra memory chip 18 similarly connected in parallel with memory chips 10–17, the read/write control leads of which are interconnected with the control leads 29 connected to memory chips 10–17 with the exception of the column address select lead 31. Memory chip 18 has a data input lead 28 and a separate data output lead 32 as distinguished from memory chips 10–17 which respectively use common input-/output data leads 20–27 for both data input and output. A total of ten input/output data leads 20–28 and 32 are therefore provided on the edge of the memory module 30 as shown and eight bit binary words plus and extra ninth bit for functions such as parity checking are stored in or read out of the memory module 30. A separate column address select lead 31 is provided for memory chip 18 to enable independent operation for the parity function.

When it is desired to store a binary word made up of an eight bit byte/word with a ninth parity bit in a specific address location in memory chips 10–17 and 18, the binary bits are applied to terminals on the edge of memory module 30 which are connected to common input-/output leads 20–27 and to input lead 28. Each of the nine binary bits is thereby applied to the input respectively of memory chips 10–18. A signal is then applied to control lead 29 at a terminal on the edge of memory module 30, which control lead 29 is connected to the read/write control input of chips 10–18. Finally, a multibit binary address is applied to the multiple address leads 19 also on the edge of memory module 30, which addressing leads are connected to the addressing inputs of each of memory chips 10–18. In response to all the above signals applied to the appropriate terminals of memory module 30, the binary word on input/output leads 20–27 and the extra binary bit on input lead 28 are stored respectively in memory chips 10–17 and 18 at the address indicated by the binary number on address leads 19.

Similarly, when it is desired to read a binary word out of memory module 30, a read signal is applied to read/-write control lead 29 and a binary address is applied to address leads 19. In response thereto, the binary word stored in memory module 30 at the indicated address is read out of memory chips 10–17 and 18 respectively onto input/output leads 20–27 and output lead 32.

Referring to FIG. 2, there is shown a physical layout of my memory module 30. The nine memory chips 10–18 are mounted on a substrate 31 that may be a printed circuit board (glass-epoxy) or ceramic. The memory chips 10–18 may be dynamic RAMs (D-RAM) advantageously packaged in small plastic leaded chip carriers available from Texas Instruments and soon from other companies such as National Semiconductor, Motorola, and AMD. Also mounted on the substrate of module 30 are small ceramic decoupling capacitors 33–40, having a value between 0.1 and 0.22 ufd, and connected between each of memory chips 10–18 to suppress transient voltage spikes. By using the small D-RAMs and small capacitors, module 30 may have physical dimensions in the order of three-quarter inch by three inches while providing large memory capacity. Sixty-four thousand words on the module are presently possible and two hundred fifty-six thousand bytes are feasible with the physical dimensions of module 30 only being slightly larger.

With my invention the input, output and control of the memory elements 10–18 on module 30 may be accomplished via only thirty terminals on the edge of the module. Use of module 30 in lieu of memory chips in conventional dual in line terminal packages normally mounted in rows and columns on a printed circuit board enables an eight-fold density increase over previous circuit assembly technology.

In addition, by having an extra memory chip parity may be checked. By having separate control of the extra memory chip a system designer has more flexibility in designing parity operation.

While what has been described hereinabove is the preferred embodiment of my invention, it will be obvious to those skilled in the art that numerous changes may be made without departing from the spirit or scope of the invention. More than one bit may be used for parity checking or other purposes. In addition, rather than using discrete memory chips, the unpackaged dies may be mounted on a substrate to implement my invention in a hybrid integrated circuit package or in a large scale integrated circuit package.

I claim:

1. A memory module for installation on a printed circuit motherboard comprising:

eight data memory chips for storing digital data, each having a data input and output, a control input, and an address input, and each being packaged in a plastic leaded chip carrier;

a ninth memory chip for storing error detection and correction information associated with the eight data memory chips, said ninth memory chip having

a data input and output, a control input and an address input interconnected with those of the eight memory chips, and a control input to provide writing in or reading out of the ninth memory chip at times other than when said bytes of digital information are written into or read out of the eight data memory chips to thereby facilitate said error detection and correction operation;

an epoxy-glass printed circuit board substrate having a length and width adequate for mounting thereon only in a single row said nine memory chips and for interconnecting the control inputs and the address inputs of the memory chips so that bytes of digital information may be input to or output from the memory chips one at a time;

the substrate including thirty terminals for providing access to the data inputs and outputs, control inputs, and address inputs of the nine memory chips to enable reading and writing of bytes of digital information into and out of the eight memory chips and to enable reading and writing of error detection and correction information into and out of the eight memory chips;

support means for supporting the memory module at an angle with respect to the printed circuit motherboard when the memory module is installed thereon; and

eight decoupling capacitors, mounted on said substrate and connected between the nine memory chips, for supressing transient voltage spikes between said memory chips.

* * * * *

SIMMs

United States Patent [19]

Clayton

[11] **Patent Number: 4,727,513**

[45] **Date of Patent: * Feb. 23, 1988**

[54] **SIGNAL IN-LINE MEMORY MODULE**

[75] Inventor: **James E. Clayton, Londonderry, N.H.**

[73] Assignee: **Wang Laboratories, Inc., Lowell, Mass.**

[*] Notice: **The portion of the term of this patent subsequent to Apr. 7, 2004 has been disclaimed.**

[21] Appl. No.: **16,704**

[22] Filed: **Feb. 20, 1987**

Related U.S. Application Data

[63] Continuation of Ser. No. 873,879, Jun. 12, 1986, Pat. No. 4,656,605, which is a continuation of Ser. No. 528,817, Sep. 2, 1983, abandoned.

[51] Int. Cl.[4] G11C 13/00

[52] U.S. Cl. 365/52; 365/189; 357/72

[58] Field of Search 365/52, 189, 200, 202; 357/72, 75

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,599,146	8/1971	Weisbecker	365/200
3,972,033	7/1976	Cislaghi	365/200
4,656,605	4/1987	Clayton	365/52

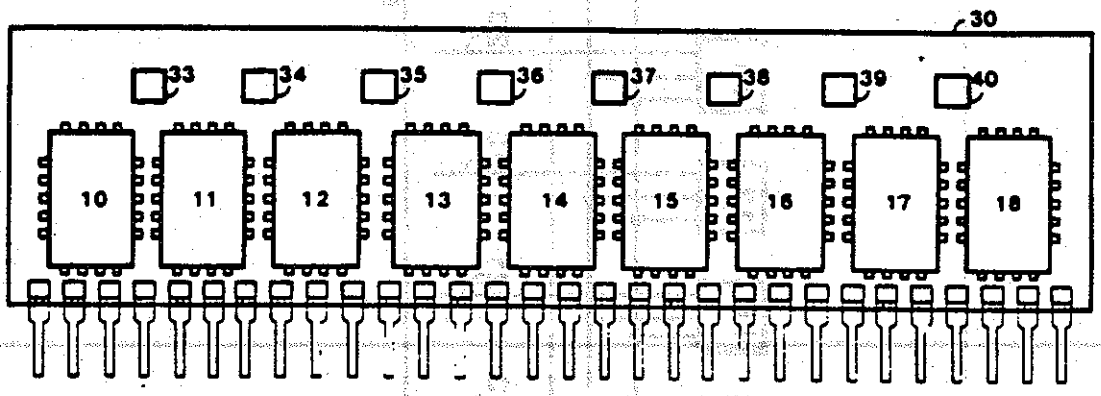
Primary Examiner—Terrell W. Fears

Attorney, Agent, or Firm—Michael H. Shanahan; Kenneth L. Milik

[57] **ABSTRACT**

What is disclosed is a memory module to and from which multibit binary words are stored and read out. Each multibit binary word comprises a standard byte size and one or more other memory bits that may be used for purposes such as parity checking. The modules may be mounted on a printed circuit mother board from which power, control signals and binary words are applied to and taken from the module.

2 Claims, 2 Drawing Figures



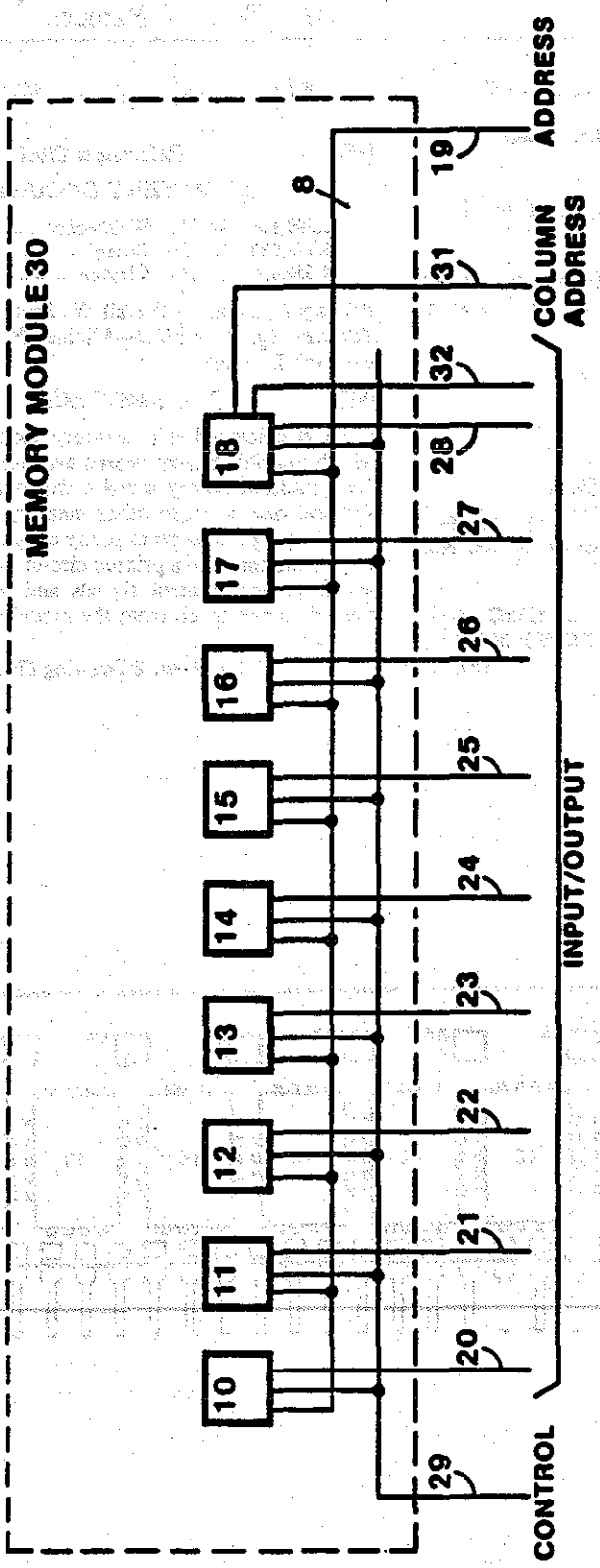

MEMORY MODULE 30
8
19
ADDRESS
31
COLUMN ADDRESS
32
28
27
26
25
24
23
22
21
20
INPUT/OUTPUT
29
CONTROL
18
17
16
15
14
13
12
11
10

FIGURE 1

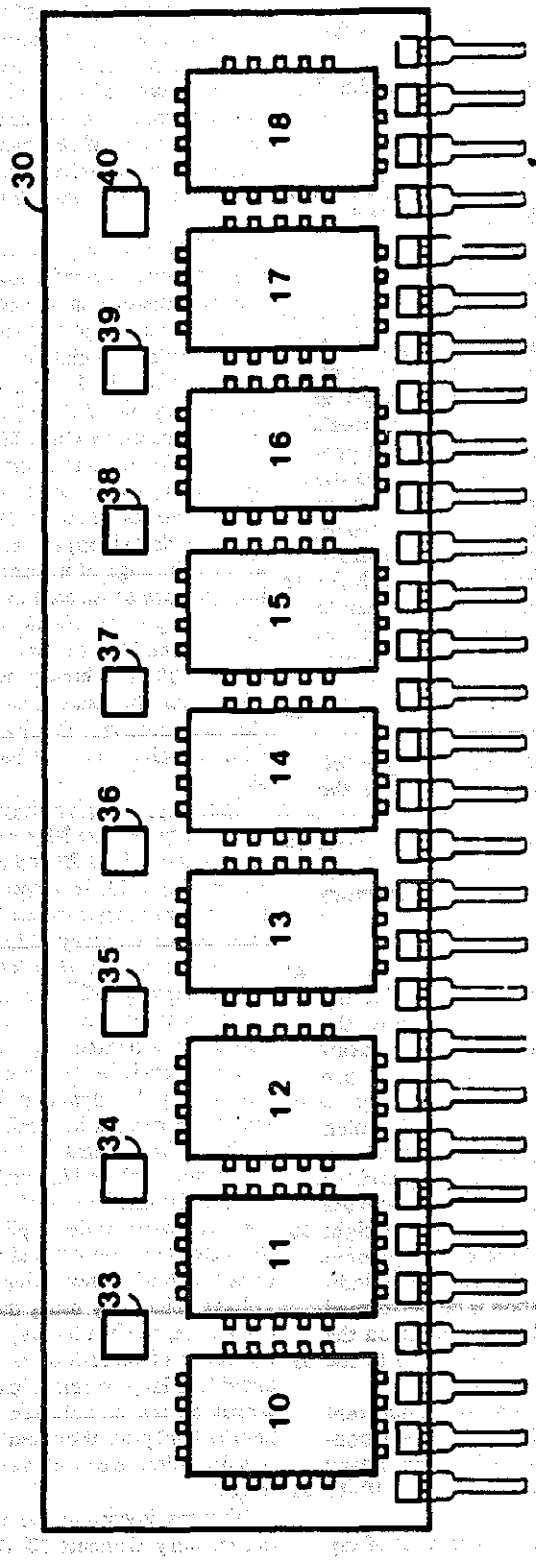


FIGURE 2

SIGNAL IN-LINE MEMORY MODULE

This is a continuation of copending application Ser. No. 873,879, filed on June 12, 1986, now U.S. Pat. No. 4,656,605, which is a continuation of Ser. No. 528,817, filed On Sept. 2, 1983, now abandoned.

BACKGROUND OF THE INVENTION

This invention relates to memories and more particularly to modular memories providing storage and retrieval of binary words.

SUMARY OF THE INVENTION

The present invention is a memory modular on which a plurality of memory components each storing or reading one binary bit at a time have their power, control, input/output and other access leads interconnected so there is only one set of these leads available at terminals of the module. A first plurality of these memories provide for one binary word being input or output to the memory module at a time. In addition, I add another individual memory intended for purposes such as parity checking and error correction. This additional memory has its power and control leads interconnected with the other memories within the module, but has separate input/output lead(s) and column address select leads to enable independent accessing or addressing of the parity memory.

DESCRIPTION OF THE DRAWING

My invention will be understood on reading the following detailed description in conjunction with the drawing in which:

FIG. 1 is an electrical block diagram of my novel memory module; and

FIG. 2 is a mechanical layout drawing of the memory module.

DETAILED DESCRIPTION

In FIG. 1 is seen the electrical block diagram of my invention. In one embodiment of my invention, the embodiment shown in FIG. 1, eight individual memory chips 10–17, each capable of storing a zero or a one binary bit at each memory location, are accessed by a multi-bit address applied to address leads 19 which comprises eight leads. With this embodiment of my invention, single input/output leads 20–27 are provided respectively to each of memory chips 10–17 to provide a total of eight input/output leads making up an eight bit binary word. Control lead 29 connected to one input of each of memory chips 10–17 on the module 30 indicates whether a read or write operation is be performed at the location identified by the address present on the eight address leads 19 which are interconnected to the addressing inputs on each of chips 10–17.

In a manner well known in the art the concurrent addressing and control of chips 10–17 which are connected in parallel permits an eight bit byte or binary word to be store in or read out of memory chips 10–17 for each read or write operation.

In accordance with the preferred embodiment of my invention I provide an extra memory chip 18 similarly connected in parallel with memory chips 10–17, the read/write control leads of which are interconnected with the control leads 29 connected to memory chips 10–17 with the exception of the column address select lead 31. Memory chips 18 has a data input lead 28 and a separate data output lead 32 as distinguished from memory chips 10–17 which respectively use common input-/output data leads 20–27 for both data input and output. A total of ten input/output data leads 20–28 and 32 are therefore provided on the edge of the memory module 30 as shown and eight bit binary words plus and extra ninth bit for functions such as parity checking are stored in or read out of the memory module 30. A separate column address select lead 31 is provided for memory chip 18 to enable independent operation for the parity function.

When it is desired to store a binary word made up of a eight bit byte/word with a ninth parity bit in a specific address location in memory chips 10–17 and 18, the binary bits are applied to terminals on the edge of memory module 30 which are connected to common input-/output leads 20–27 and to input lead 28. Each of the nine binary bits is thereby applied to the input respectively of memory chips 10–18. A signal is then applied to control lead 29 at a terminal on the edge of memory module 30, which control lead 29 is connected to the read/write control input chips 10–18. Finally, a multibit binary address is applied to the multiple address leads 19 also on the edge of memory module 30, which addressing leads are connected to the addressing inputs of each of memory chips 10–18. In response to all the above signals applied to the appropriate terminals of memory mudule 30, the binary word on input/output leads 20–27 and the extra binary bit on input lead 28 are stored respectively in memory chips 10–17 and 18 at the address indicated by the binary number on address leads 19.

Similarly, when it is desired to read a binary word out of memory module 30, a read signal is applied to read/-write control lead 29 and a binary address is applied to address leads 19. In response thereto, the binary word stored in memory module 30 at the indicated address is read out of memory chips 10–17 and 18 respectively onto input/output leads 20–27 and output lead 32.

Referring to FIG. 2, there is shown a physical layout of my memory module 30. The nine memory chips 10–18 are mounted on a substrate 31 that may be a printed circuit board or ceramic. The memory chips 10–18 may be dynamic RAMs (D-RAM) advantageously packaged in small plastic leaded chip carriers available from Texas Instruments and soon from other companies such as National Semiconductor, Motorola, and AMD. Also mounted on the substrate of module 30 are small ceramic decoupling capacitors 33–40, having the value between 0.1 and 0.22 ufd, and connected between each of memory chips 10–18 to suppress transient voltage spikes. By using the small D-RAMs and small capacitors, module 30 may have physical dimensions in the order of three-fourths inch by three inches while providing large memory capacity. Sixty-four thousand words on the module are presently possible and two hundred fifty-six thousand bytes are feasible with the physical dimensions of module 30 only being slightly larger.

With my invention the input, output and control of the memory elements 10–18 on module 30 may be accomplished via only thirty terminals on the edge of the module. Use of module 30 in lieu of memory chips in conventional dual in line terminal packages normally mounted in rows and columns on a printed circuit board enables an eight-fold density increase over previous circuit assembly technology.

In addition, by having an extra memory chip parity may be checked. By having separate control of the extra memory chip a system designer has more flexibility in designing parity operation.

While what has been described hereinabove is the preferred embodiment of my invention, it will be obvious to those skilled in the art that numerous changes may be made without departing from the spirit or scope of the invention. More than one bit may be used for parity checking or other purposes. In addition, rather than using discrete memory chips, the unpackaged dies may be mounted on a substrate to implement my invention in a hybrid integrated circuit package or in a large scale integrated circuit package.

What I claim is:

1. A memory module for installation on a printed circuit motherboard comprising

nine data memory chips for storing digital data, each having a data input and output, control input, and an address input, and each being packaged in a plastic leaded chip carrier, wherein said ninth memory chip is for storing detection and correction information associated with the eight data memory chips,

an expoxy-glass printed circuit board substrate having a length and width adequate for mounting thereon only in a single row said nine memory chips and for interconnecting the control inputs and the address inputs of the memory chips so that bytes of digital information may be input to or output from the memory chips,

the substrate including thirty terminals for providing access to the data inputs and outputs, control inputs, and address inputs of the nine memory chips and to enable reading and writing of information into and out of the nine chips,

support means for supporting the memory module at an angle with respect to a motherboard and

decoupling capacitors mounted on said substrate and coupled to the memory chips for suppressing transient voltages.

2. The module of claim 1 wherein all nine memory chips are interconnected such that data is input to or output from the ninth memory chips when data is input to or output from the other eight memory chips.

* * * * *

AUGUST [redacted]

JEDEC STANDARD 21-A-1

(Addendum No. 1 to JEDEC Standard No. 21-A)

CONFIGURATIONS

FOR

SOLID STATE MEMORIES

EXHIBIT
JEDEC '31
9/10/96 MDD

JEDEC

Solid State Products Engineering Council

JC 00576

6 OBSOLETE STANDARDS

The following standards were approved and published, but are no longer considered applicable to the needs of the Industry. At the present time, no company manufactures or has any interest in the parts. They are retained in this document only for purposes of maintaining a historical record of the field.

6.4 A PIN-OUT STANDARDS FOR PLD IN CC

This standard defined the pin-out conventions for converting a PLD in DIP to a CC. The conversion for the 24 PIN DIP to 28 PAD CC has been rescended by JEDEC:

24 PIN DIP TO 28 PAD (PIN) SCC, 0.450" BY 0.450", FIG 87-A

Standard 21-A contained a conversion pin-out for 24 PIN DIP to 28 PAD scc. This conversion has been rescended.

7 A MULTI-CHIP MODULES

The following standards establish pin assignments and package configurations and nominal dimensions for a series of multi-chip modules. The modules will normally be made using surface mount devices described in sections 3 and 4 of this standard. The initial standards are for SIP modules, but the standardization effort is not restricted to modules with this configuration. In addition tc the device standards, there are standards which address special nomenclature related to the modules.

7.1 A DRAM SIP MODULES

7.1.1 A 22 PIN DRAM MODULE

CAPACITY--64K, 256K WORDS OF 4 8ITS
CONFIGURATION--SINGLE SIDED MODULE USING 64K OR 256K DEVICES
PACKAGE--22 PIN SIP MODULE,
See Fig. 84-A FOR MECHANICAL CONFIGURATIONS,
See TABLE 1 FOR NOMINAL DIMENSIONS
PIN ASSIGNMENTS--Fig. 81-A

7.1.2 A 24 PIN DRAM MODULE

CAPACITY--128K, 512K WORDS OF 4 8ITS
CONFIGURATION--DOUBLE SIDED MODULE USING 64K OR 256K DEVICES
PACKAGE--24 PIN SIP MODULE
SEE Fig. 84-A FOR MECHANICAL CONFIGURATIONS,
SEE TABLE 1 FOR NOMINAL DIMENSIONS
PIN ASSIGNMENTS--Fig. 81-A

7 A MULTI-CHIP MODULES (continued)

7.1.3 A 30 PIN DRAM MODULE
CAPACITY--64K, 256K, 1M, 4M WORDS OF 8 OR 9 BITS
CONFIGURATION--SINGLE SIDED MODULE USING 64K, 256K, 1M, OR 4M DEVICES
PACKAGE--30 PIN SIP MODULE
SEE Fig. 84-A FOR MECHANICAL CONFIGURATIONS,
SEE TABLE 1 FOR NOMINAL DIMENSIONS
PIN ASSIGNMENTS--Fig. 81-A

7.1 4 A 30 PIN DRAM MODULE FAMILY
CAPACITY--64K TO 8M WORDS OF 4 OR 5 BITS
128K TO 16M WORDS OF 2 BITS
256K TO 32M WORDS OF 1 BIT
CONFIGURATION--SINGLE OR DOUBLE SIDED, USING 64K, 256K, 1M, OR 4M DEVICES
PACKAGE--30 PIN SIP MODULE
SEE Fig. 84-A FOR MECHANICAL CONFIGURATIONS,
SEE TABLE 2 FOR NOMINAL DIMENSIONS
PIN ASSIGNMENTS--Fig. 82-A

7.1.5 A 40 PIN DRAM MODULE FAMILY
CAPACITY--64K TO 4M WORDS OF 16 OR 18 BITS
64K TO 8M WORDS OF 8 OR 9 BITS
128K TO 16M WORDS OF 4 BITS
256K TO 32M WORDS OF 2 BITS
512K TO 64M WORDS OF 1 BIT
CONFIGURATION--SINGLE OR DOUBLE SIDED, USING 64K, 256K, 1M, OR 4M DEVICES
PACKAGE--40 PIN SIP MODULE
SEE Fig. 84-A FOR MECHANICAL CONFIGURATIONS,
SEE TABLE 2 FOR NOMINAL DIMENSIONS
PIN ASSIGNMENTS--Fig. 83-A

PHYSICAL CONFIGURATION	4 DEVICES LONG		8 OR 9 DEVICES LONG SINGLE SIDED
	SINGLE SIDED	DOUBLE SIDED	
VERSION	N X 4	2N X 4	N X 8(9)
1	A8	NC	VDD
2	VDD	A8	$\overline{CE}$
3	D0	VDD	DQ0
4	Q0	D0	A0
5	$\overline{CE}$	Q0	A1
6	A7	$\overline{CE}$	DQ1
7	A5	A7	A2
8	A4	A5	A3
9	D1	A4	VSS
10	Q1	D1	DQ2
11	$\overline{W}$	Q1	A4
12	A1	$\overline{W}$	A5
13	A3	A1	DQ3
14	A6	A3	A6
15	Q2	A6	A7
16	D3	Q2	DQ4
17	A2	D2	A8
18	A0	A2	* A9
19	$\overline{RE}$	A0	* A10
20	D3	$\overline{RE1}$	DQ5
21	Q0	D3	$\overline{W}$
22	VSS	Q3	VSS
23		VSS	DQ6
24		$\overline{RE2}$	# NC
25			DQ7
26			Q8
27			$\overline{RE}$
28			$\overline{CE8}$
29			D8
30			VDD

22, 24, OR 30 PIN SIP MODULE TOP VIEW

* ON THE 30 PIN MODULE, 1M x 4M DEVICES MAY BE USED. PINS 18 & 19 ARE USED TO PROVIDE ADDRESS EXPANSION. THE OTHER MODULES WILL ACCOMIDATE 64K & 256K DEVICES ONLY.

OPTIONAL REFRESH (F) FUNCTION

CONFIGURATION DEFINES THE PHYSICAL ARRANGEMENTS OF THE MEMORY DEFICES ON THE MODULE, GIVING LENGTH AND NUMBER OF SIDES POPULATED

VERSION IS THE LOGIC ORGANIZATION OF THE MODULE WHERE "N" IS THE CAPACITY OF THE MEMORY DEVICE USED

FIGURE 21-A

22, 24, AND 30 PIN DRAM SIP MODULES

JEDEC 00583

JEDEC PUBLICATION

JEDEC Manual of Organization and Procedure

JEP21-H

JEP21-H

(Revision of JEP21-G)

JULY 1988

ELECTRONIC INDUSTRIES ASSOCIATION

ENGINEERING DEPARTMENT

APPENDIX D
NOTICE TO BE INCORPORATED INTO JEDEC STANDARDS

The following text shall be included in each JEDEC Standard:

NOTICE

This JEDEC Standard contains material that has been prepared and progressively reviewed and approved through the JEDEC Council level and subsequently reviewed and approved by the EIA General Counsel.

JEDEC Standards are designed to serve the public interest through eliminating misunderstandings between manufacturers and purchasers, facilitating interchangeability and improvement of products, and assisting the purchaser in selecting and obtaining with minimum delay the proper product for his particular need. Existence of such Standards shall not in any respect preclude any member or nonmember of JEDEC from manufacturing or selling products not conforming to such Standards, nor shall the existence of such Standards preclude their voluntary use by those other than EIA members whether the Standard is to be used either domestically or internationally.

JEDEC Standards are adopted without regard to whether or not their adoption may involve patents or articles, materials, or processes. By such action JEDEC does not assume any liability to any patent owner, nor does it assume any obligation whatever to parties adopting the Standards.

The information included in JEDEC Standards represents a sound approach to product specification and application, principally from the solid state device manufacturer viewpoint. Within the JEDEC organization there are procedures whereby a JEDEC Standard may be further processed and ultimately become an EIA Standard.

Inquiries, comments, and suggestions relative to the content of this JEDEC Standard should be addressed to the JEDEC Executive Secretary at EIA Headquarters, 2001 Eye Street, N.W., Washington, D.C. 20006.

EIA Policy:

From EIA Engineering Publication EP-7-A August 1990 Style Manual, Pg 2:

"3.4 Patented Items or Processes

Avoid requirements in EIA Standards that call for use of a patented item or process. No program standardization shall refer to a patented item or process unless all of the technical information covered by the patent is known to the formulating committee or working group, and the committee chairman has received written expression from the patent holder that one of the following condition prevails:

(1) a license shall be made available without charge to applicants desiring to utilize the patent for the purpose of implementing the standards, or

(2) a license shall be made available to applicants under reasonable terms and conditions that are demonstrably free of any unfair discriminations

In either event, submit the terms and conditions of the license to the EIA general counsel for review.

An appropriate footnote shall be included in th standard identifying the patented item and describing the conditions under which the patent holder will grant a patent (see 6.5.2)."

"3.5 Copyrighted Material

If, in!developing a standard, a committee proposes to incorporate verbatim material from a bpublication copyrighted by another organization, it shall obtain written permission from the owner of the copyright for EIA to reprint the material. Forward the letter granting permission directly to the EIA's Puiblications Office, and include a reference to such permission in the standard as a footnote (see 6.5.2)."

From EIA Engineering Publication EP-3-F, Manual for Committee, Subcommittee, and Working Group Chairmen and Secretaries, October 1981:

"8.3 Reference to Patented Products in EIA Standards

Requirements in EIA Standards which call for the use of patented items should be avoided. No program of standardization shall refer to a product on which there is a known patent (Underline mine) unless all the technical information covered by the patent is known to the Formulating committee. subcommittee, or working group. The Committee Chairman must also have received a written expression!from the patent holder that he is willing t olicense applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination. Additionally, when a known patented item is referred to in an EIA Standard, a Caution Note, as outlined in!the Style Manual EP-7, shall appear in!the EIA Standard.

JEDEC STANDARD

CONFIGURATIONS FOR SOLID STATE MEMORIES

JESD21-C

JEDEC Standard No. 21-C Release 2

(Revision of JESD 21-B

(Release 2 includes all of Release 1)

October, 1991

ELECTRONIC INDUSTRIES ASSOCIATION

ENGINEERING DEPARTMENT

4 MULTI-CHIP MEMORY MODULES

The following standards establish pin assignments for a series of multi-chip modules. The package configurations and dimensions are as defined in JEDEC Publication 95. The modules will normally be made using surface mount devices described in section 3 of this standard. The initial standards were for DRAM modules, but the since the publication of Std. 21-B, a standard for a family of SRAM modules has been approved. In addition to the device standards, there is a standard that addresses special nomenclature related to the modules.

4.1 Memory Module Nomenclature

4.1.1 Purpose

The purpose of this standard is to establish a format for a number system which defines the format of a number which is an architectural description of multi-chip memory modules. It is intended to be used with but not restricted to modules made with DRAM devices.

4.1.2 Number Format

The description number designation shall consist of 8 fields with the form nnSccbbDttlpp where :

nn = the number of longitudinal positions on the module: 4, 5, 8, 9.
S = the number of sides on the module stated as "single or double" : S, D
cc = the capacity of the memory chip stated in terms of the log(2) of the capacity (i.e.-the number of address bits needed for the chip): 16, 18, 20, 22
bb = the number of data bits in the interface: 1, 2, 4, 5, 8, 9, 10, 17
D = the data interface configuration, common, separate, or mixed: C, S, M
tt = total number of words stated as log(2) of the capacity: 16–26
l = mechanical interface: P = pins, E = edge card connector
pp = number of pins or pads

4.1.3 Number Example

A module with the following attributes:
9 chips long
Double sided
18 bit data interface
Separate I/O for parity bits, common I/O for other bits
1M X 1 memory chips
Pin interface
Architectural number: 9D2016M20P40

III Possible Procedures for Implementing the Policy

A Early Disclosure of Patent Rights

Experience has indicated that early disclosure of patents is likely to enhance the efficiency of the process used to finalize and approve standards. Early disclosure permits notice of the patent to the standards developer and ANSI in a timely manner, provides participants the greatest opportunity to evaluate the propriety of standardizing the patented technology, and allows patent holders and prospective licensees ample time to negotiate the terms and conditions of licenses outside the standards development process itself.

Accordingly, during the development period, standards developers may wish to adopt procedures whereby one or more requests are made to participants for the disclosure of patents that may be required for use of standards in process. Such a request could be made, for example, by including it on letter ballots used in connection with the development of a proposed standard. Alternatively, other means could be adopted so that requests are repeated throughout the course of the standards development process — e.g., by a semi-annual notice mailed to each participant in the development process or appropriate working group(s).

This is not to suggest that a standards developer should require any participant in the development process to undertake a patent search of its own portfolio or of any other. The objective is to obtain early disclosure concerning the existence of patents, where known.

A standards developer may also consider taking steps to make it clear that any participant in the process — not just patent holder — is permitted to identify or disclose patents that *may* be required for implementation of the standard. Generally, it is desirable to encourage disclosure of as much information number, and information regarding precisely how it may relate to the standard being developed. Further, to assist in international standardization, a standards developer may deem it appropriate to encourage the disclosure of relevant unexpired foreign patents.

Similarly, a standards developer may wish to encourage participants to disclose the existence of pending U.S. patent applications relating to a standard under development. Of course, in such a situation the extent of any disclosure may be more circumscribed due to the possible need for confidentiality and uncertainty as to whether an application will mature into a patent and what its claimed scope will ultimately be.

B Early Indication of a Willingness to License

The early identification of relevant patents should also increase the likelihood of an early indication from the patent holder that it is willing to license its invention, that it is prepared to do so on reasonable terms and conditions demonstrably free of unfair discrimination, or that the patent in question is not required for compliance with the proposed standard. A patent holder may have a strong incentive to provide an early assurance that the terms and conditions of the license will be reasonable and demonstrably free of unfair discrimination because of its inherent interest in avoiding any objection to the standardization of its proprietary technology. As a consequence, patent holders and prospective licensees would be provided greater opportunities to negotiate acceptable license terms.

It should be reiterated, however, that the determination of specific license terms and conditions, and the evaluation of whether such license terms and conditions are reasonable and demonstrably free of unfair discrimination, are *not* matters that are properly the subject of discussion or debate at a development meeting. Such matters should be determined only by the prospective parties to

It should also be emphasized that, notwithstanding the incentive for patent holders to indicate any early willingness to license, it may not be possible for potential patent holders to give such an assurance until the standards development process has reached a relatively mature stage. It might be that only at that time will the patent holder be aware that its patent may be required for use of the proposed standard. This should not, however, preclude a patent holder from giving an assurance that *if* its patent is required for use of the standard it will license on reasonable terms and conditions demonstrably free of unfair discrimination.

Thus, standards developers may wish to adopt procedures that would permit and encourage the early indication by patent holders of their willingness to comply with the Patent Policy by providing one of the assurances specified therein. Such encouragement might take the form of simply advising participants in the development effort that assurances may be made at an early stage, explaining the advantages of early negotiations, or through other means. While participants in the standards development effort might consider a refusal to provide assurances (or a refusal to commit to offer acceptable licensing terms and conditions) as a ground for favoring an alternative technology, the patent holder is only required to provide assurances called for by the Patent Policy prior to the final approval of the proposed standard as an American National Standard.

C Subsequently Discovered Patents

By its terms, the Patent Policy applies with equal force to situations involving (1) the discovery of patents that may be required for use of a standard subsequent to its adoption and (2) the initial issuance of a patent after adoption. Once disclosure is made, the holder is obligated to provide the same assurances to ANSI as are required in situations where patents exist or are known prior to approval of a proposed standard as an American National Standard.

Thus, if notice is given of a patent that may be required for use of an already approved American National Standard, a standard developer may wish to make it clear to its participants that the ANSI Procedures require the patent holder to provide the assurances contained in the Patent Policy or suffer the withdrawal of ANSI's approval of the standard as an American National Standard.

IV Conclusion

Good standards development is often time consuming and demands considerable effort by those participating in the process. In fields that may involve the use of patented technology in a standard, therefore, it is particularly important that a patent holder's willingness and intention to comply with ANSI's Patent Policy be ascertained as soon as possible. Doing so, however, does not require participants in standards development meetings to become involved in negotiating the terms and conditions of a possible license with the patent holder. To the contrary, what is required is the use of effective procedures designed to assure an understanding of the Patent Policy and to foster prompt compliance with it.

(1) Title:

Licensing of Intellectual Property Right in the Course of Technical Standardization

(2) Date: October, 1992 (The 23rd, Okayama)

(3) Source: 1) Source; PIPA
2) Group; Japan
3) Committee; No. 2

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(5) Keywords: Standardization, Technical Standard, Standardization Organization, Intellectual Property Right, Patent, Copyright, License

(6) Abstract:

In the past, technical standardization has been proceeded within such scope as would not be in conflict with specific intellectual property right. As the technology to be standardized becomes more highly sophisticated, and the number of cases that require license of specific intellectual property right has increased.

This paper will report on guidelines provided by a number of standardization organizations, both domestic and international, in respect of treatment of intellectual property right in the course of technical standardization. Based on results obtained from questionnaires completed by member companies of PIPA Japanese group, the paper will also report why providers of the intellectual property right decided to make it so available in the course of standardization and what they would propose for future reference.

INTRODUCTION

Many efforts have been made in many technical fields for adopting technical standards (defined to mean the standard made open as such for free use in respect of specific technical items) for the purpose of securing mutual communication, compatibility of means of record reproduction, and interchangeability of parts and so on. The technical standardization is promoted in many cases by an expert committee organized by the international standardization committee or an industrial association concerned. As the technology to be standardized becomes highly sophisticated, the cases that could not avoid conflicts with some patents and other intellectual property rights (IPR) and the necessity for appropriate arrangements, such as licensing of the IPR, is on the increase.

This paper will deal with how standardization organizations treat the IPR in the course of searching for and deciding on the technical standard to be adopted and how providers of the IPR respond to the request for it.

Chapter 1 will deal with guidelines of several standardization organizations for treatment of IPR, as they are, and their future trend.

Chapter 2 will report, based on information obtained from questionnaires completed by license division of member companies of PIPA Japanese group, how these companies have made their IPR available according to the request of standardization organizations, and how above companies, whether they had experience of making their IPR available or not, would respond to future requests from standardization organization for making their IPR available.

(Part excluded from of this paper)

As a means of acquiring the market leadership in respect of a certain technical system, a group of companies is organized through licensing. As a result, the technology adopted by the majority becomes the standard as a matter of fact, (this type of standard is called "de facto standard"), serving as a another

pattern in which technology is standardized. The process of standardization in such manner may be of interest with particular terms and conditions of licensing. Nevertheless, this paper will not deal with such de facto standard.

CHAPTER 1. TREATMENT OF INTELLECTUAL PROPERTY RIGHTS (IPR) BY STANDARDIZATION ORGANIZATION -- AS IT IS AND ITS FUTURE TREND

Technical standards are regulated to secure mutual communication and maintain interchangeability of products or parts. Standardization permits manufacturers to supply the products manufactured under standardized technology in a large scale and users to buy and make use of these products without inconvenience.

To achieve such purpose, standardization organizations are established and act as a main player in various technical fields.

This paper will discuss how the IPR, which are basically exclusive rights, are treated in the cases where they relate to the technical standards at present, and the future trend of treatment of such rights, as well as our opinion thereof.

1-1 Treatment of IPR in Various Standardization Organizations -- as it is

In telecommunication technology, competition, however active it may be, may not contribute to improvement of public convenience unless interconnection or compatibility is warranted. In other words, whoever the manufacturer of telecommunication equipment may be, and whoever the telecommunication business running the facilities may be, communication must be possible among all countries of the world.

Owners of IPR, on the other hand, are entitled under their respective domestic laws to the property right, by which they are entitled to monopolize such rights, and which may not be infringed even for the standardization.

In the case where the IPR is involved in a particular line of technology to be standardized, if the alternative lines of the

technology are available, standardization will not stand in a difficult position because we may select one of the alternatives to get rid of the IPR. However, if the IPR is essential for development of the standard, we must consider how we could request the owner of that IPR to provide a license or licenses and how the owner would respond to the proposed standardization.

In Japan, there are about 200 organizations, exclusive of minor ones, dealing with the standard. In some of these organizations, standardization members are requested to make their own IPR available royalty free among themselves. However, some of these organizations make it a rule not to be concerned with treatment of IPR of their members, and leave settlement of dispute to their members.

In the telecommunication technology requiring intercommunication as an essential requirement not only domestically but internationally as well, treatment of the patent and other IPR involved in the standardization is mostly made subject to certain conditions, except for differences in terminology employed according to respective standardization organizations, as explained later. If such an IPR is made available as may satisfy such conditions, the standardization organization may adopt the technology involving that property to be standardized.

Typical standardization organizations dealing with international standards are the Comité Consultatif International Télégraphique et Téléphonique (CCITT), International Standardization Organization (ISO), and International Electrotechnical Commission (IEC).

Domestic standardization organizations in Japan are the Telecommunications Technology Committee (TTC), Research & Development Center for Radio Systems (RCR) and Japan Industrial Standards Committee (JISC). Domestic standardization organizations in the U.S.A. are the American National Standards Institute (ANSI) and Institute of Electrical and Electronics Engineers (IEEE). Domestic standardization organization in Europe is the European Telecommunication Standards Institute (ETSI).

Treatment of the IPR by these organizations is outlined in Appendix 1.

In the following, we will discuss features of treatment of the IPR by each of these organizations. We hope you will find Appendix 1 is useful for reference.

(1) CCITT (Comité Consultatif International Télégraphique et Téléphonique)

Patent policy was discussed at the general meeting level at its 6th meeting (1976) and 7th (1980) but no decision was reached because of different unreconcilable opinions. Since then, no discussion has been made on a general meeting basis. A document titled "CCITT Patent Policy" directed in March 1984 to respective Study Groups by the CCITT Secretariat is oftentimes used as guidelines by the Study Group.

According to this Guideline, CCITT may develop its technology involving its particular patent to be standardized or recommended if the patent holder(provider) is prepared to make it available;

(i) with no particular conditions and at no royalties;

or

(ii) on an non-discriminatory basis with reasonable terms and conditions.

In the procedure required for the standardization, the patent holder must submit the statement under (i) or (ii), above-mentioned, to the CCITT Secretariat. The statement will be made public as meeting-related document. If the patent holder has neither intention of (i) nor (ii), the standardization will not proceed further.

This guideline is not based on the resolution at the general meeting, thus leaving somewhat variances among respective Study Groups. Although CCITT requires to its members to provide the information on the particular patent, CCITT provides no warranty in respect of the information so furnished.

Results of study at the respective Study Groups in respect of treatment of the patent are as follows:

i) Standardization in SG (study group) VIII (In the case of Terminals for Telematic Service):

The technology may be standardized if the terms and conditions meet requirement under (i) or (ii) of the Guideline. It is also required that conditions be coordinated with ISO and other standardization organizations.

ii) Standardization of 32KbpsADPCM in SG XVIII (ISDN):

Respective telecommunications businesses, domestic and international, are required to submit a statement separately in writing, to the CCITT Secretariat in respect of treatment of the patent involved.

Subject to a proviso reading "solely for the purpose of use thereof with the observance of the standard," and conditioned upon the patent being made available on a royalty free basis, the statement requires as condition of implementation;

(a) Patent Holder (provider) X shall provide a royalty free license;

(b) the patent right shall be patents covering inventions essential to the algorithm, the use of which cannot be avoided whatever the implementation (in order to adopt to the standard); and

(c) the user who has any patent right (applicable to the standard) shall provide a royalty free license to Patent Holder (provider) X within the similar scope.

Although the license is provided on a royalty free basis, a license must be negotiated individually between the user and the Patent Holder (provider).

iii) Standardization of 64Kbps ADPCM in SG XVIII (ISDN):

It was agreed in respect of treatment of patents that the chairman at the Study Group shall directly contact possible patent holders involved in the standardization who may be within or outside of experts' meetings.

iv) Standardization of G3 facsimile in (the then) SG XIV:

No definite arrangements are in effect in respect of treatment of patents. It is noteworthy that a Japanese patent holder in 1979 made a declaration of royalty free disclosure of the technology in the two-dimensional coding scheme of G3 facsimile, which was standardized in 1980 as Modified Modified READ system, showing prompt progress.

(2) ISO (International Standardization Organization)

Treatment of patents by ISO is basically similar to that by CCITT, except that non-discriminatory conditions applicable to users is not described clearly. The patent holder's statement is kept by the central secretariat. Any member proposing technology for standardization is required to pay attention to patents and similar property or pending patent applications known worldwide.

There is a comment that, if, after the standard is disclosed, implementation of patents is found to be unavailable on reasonable terms and conditions, the case will be returned to the standardization committee for study of necessary steps to be taken.

ISO require to its member etc., to furnish information on patents, but ISO provides no warranty in respect of the information so furnished.

(3) IEC (International Electrotechnical Commission)

Treatment of patents by IEC is similar to that of ISO. It must be noted that if, after the technology is standardized, it is found that some patent involved in the technology cannot be available on reasonable terms and conditions, the case will returned to the committee for study necessary steps to be taken.

(4) TTC (Telecommunications Technology Committee) (Japan)

Treatment of patents by TTC is very similar to that by CCITT, except for the following:

(i) Technology may be standardized if the property holder (provider) selects either one of the following:

"The holder shall not assert any rights in respect of the industrial property right involved in the technology to be standardized, and shall grant license on the industrial property rights unconditionally to those using TTC standards."

"Upon making clear details and conditions of the particular property involved in the technology to be standardized, the property holder shall grant a license for implementation of the industrial property rights to those using TTC standards on a non-exclusive basis and on reasonable terms and conditions."

(ii) In the course of standardization, a statement on licensing of the patent shall be submitted to the TTC chairman.

(iii) If any other person using the TTC standards owns and asserts rights in respect to its industrial property rights, the property holder (provider) under (i) may exclude such other person from the licensing.

(iv) Copyright shall be excluded and left to the future study.

(v) Non-members are also entitled to make declarations (to TTC) in respect of industrial property rights they have.

(5) RCR (Research & Development Center for Radio Systems) (Japan)

In respect of treatment by RCR of Industrial Property Rights (IPR) involving standards, "to promote the RCR Standard for universal use, it is desirable that the Essential IPR (Industrial Property Rights) which relates to any or all parts of the contents of the RCR Standard should be used free of charge by

anyone and that it would not block the use of such Essential IPR in any other country where such an RCR Standard is adopted."

For this reason, RCR has issued the following guidelines in respect of treatment of IPR.

According to the basic guidelines, the technology involved shall be standardized if the Right Holder of Essential IPR elects either (i) or (ii) below:

If the Right Holder:

(i) agrees not to assert such Essential IPR and to grant a license unconditionally for use of such Essential IPR to anyone who uses such RCR Standard;

(ii) agrees to grant a non-exclusive and non-discriminatory license for use of such Essential IPR on reasonable terms and conditions to anyone who uses such an RCR Standard.

When the Right Holder does not agree to either of the aforementioned alternatives referred to in (i) or (ii), the RCR Standard shall not be issued.

In addition, Working Guidelines applicable to the above-mentioned basic guidelines are in force. It says, "If the holder of Essential IPR (this relates only to those holders of Essential IPR who selected Section (i) of the Guidelines) requests a license from the holder of Non-Essential IPR to use such Non-Essential IPR in the system in Japan in compliance with such an RCR Standard, such a holder of the Non-Essential IPR shall pay due consideration to the fact that such a holder of Non-Essential IPR received a royalty free license under the Essential IPR from such a holder of Essential IPR. Such a holder of Non-Essential IPR shall therefore negotiate in good faith with such a holder of Essential IPR for such licenses on reasonable terms and conditions (including royalty free) so that a mutually acceptable agreement can be reached."

It will be noted that, prior to other standardization organizations, RCR announced, in respect of Non-Essential IPR owned by others, that holders of Essential IPR should be entitled

to use of other Non-Essential IPR on reasonable terms and conditions.

(6) Treatment of Patents by JISC (Japan Industrial Standards Committee) (Japan)

Treatment of patents by JISC may be summarized, as follows:

(i) Provisions applicable to products related to patents or utility models will require consideration so that a particular member or members will not be discriminatively treated and, as condition, be disclosed on reasonable terms and conditions.

(ii) International or principal foreign technical standards, such as ISO and IEC, will be investigated and, with due reference to them, the standardization to be adopted will be international insofar as possible, and in consistence with the actual circumstances.

(iii) With respect to portions violating patents, specific notation will be made as "Reference" in respect of, among other things, the patent number, portions of the patent adopted and publication date of the patent.

(7) ANSI (American National Standards Institute) (USA)

If the right holder furnishes its property royalty free, treatment of patents by ANSI is similar to (i) of the CCITT Guidelines, with the exception that, while the right holder is required to disclose the information on reasonable terms and conditions, there is no provisions requiring its disclosure to users on a non-discriminate basis.

In addition, the right holder is required to submit the statement prior to permission of the standard, and ANSI members are entitled to inspection of the statements in storage.

As basic approach, ANSI does not go into details of the terms and conditions of the agreement, leaving leeway to the right holder.

(8) IEEE (Institute of Electrical and Electronics Engineers) (USA)

Treatment of patents by IEEE is the same as (i) and (ii) of CCITT Guidelines. In addition, in respect of the technology involving standardization, the members are required not to hold and does not anticipate holding any United States patent. Also, the right holder submits the statement in respect of patent licensing to IEEE.

If the standard requires use of a patent, IEEE requires notice to be made by statement.

(9) ETSI (European Telecommunication Standards Institute)

Treatment of IPR by ETSI is basically similar to that by CCITT. It provides that:

(i) ETSI members are obligated to license the IPR on reasonable terms and conditions.

(ii) No specific reference is made with respect to treatment of IPR held by non-ETSI members.

(iii) When participating in ETSI, the member will be required to sign the undertaking to guarantee licensing on reasonable terms and conditions and on a non-discriminative basis.

ETSI has recently issued what is known as the patent policy, on a provisional basis. We will deal with this in the next section.

1-2 Recent Trends of Standardization Organizations

(1) Trends of Standardization and IPR among Japanese Standardization Organizations

In the following, we will discuss the trends of TTC, RCR and JISC, each of which was referred to in 1-1 (4), (5) and (6) respectively.

i) TTC

Objective of TTC is to make and popularize standards for connection of telecommunication terminal of Japan. Due consideration is given, as the basic policy for standardization activities, to the making of benefits available on an equitable basis to all interested parties. While CCITT makes it an objective to promote the international telecommunications smoothly, the standardization activities of TTC observe the international standards as its basic policy in support of the activities of CCITT. With the background as stated above, TTC makes the industrial property right subject to standardization only if such property is made available either unconditionally or on reasonable terms and conditions and on a non-exclusive basis, as mentioned before.

Although TTC has been organized as a standardization organization for connection of domestic telecommunications network, TTC considers it necessary to cooperate with standardization organizations of foreign countries to prepare for itself for internationalization of the industry.

ii) RCR

RCR basically prefers making Essential Industrial Property Right available royalty free. But, it is prepared to respect the industrial property rights by standardizing the technology involved on condition that they are made available on reasonable terms and conditions. According to its working guidelines, in particular, RCR encourages a third party to whom Essential IPR has been made available, to make available to the holder of that Essential IPR in turn any Non-Essential IPR which that third party may have, showing its positive posture for dealing with the industrial property rights.

iii) JISC

As previously stated, JISC makes it a policy to review and adjust its treatment of patents and other IPR in accordance with movement of international standardization organizations. It is expected that patented technology remain basically unchanged as

long as the patent involved is made available on reasonable terms and conditions.

(2) Trends of Standardization and IPR among Foreign Standardization Organizations

In contrast with the movement of the standardization in Japan, there are some countries and companies which hold that the IPR should be given priority to standardization inasmuch as business activities are basically on a free competition basis. In other words, some businesses even regard technology of their own as de facto standards, based on their IPR applicable to them. Apart from such extreme cases, the trend of intellectual property policy as it relates to standardization may generally be classified into two, as discussed in the following.

One will be to allow the IPR to a maximum extent possible, as is the case with ANSI in USA. The other will be to restrict the IPR for standardization, as in the case of ETSI in Europe.

i) ANSI

Standardization systems in USA are maintained with the consent of participants. It is ANSI that serves as coordinator among the participants. The patent policy of ANSI is to safeguard patents and to formulate fair balance with the Anti-trust Act and other related laws.

The patent policy of ANSI gives the largest freedom available to participants in the standardization program and exercises the minimum control necessary. This is considered the best in USA.

ANSI makes it a rule to recognize the standard adopted in an invention within that organization only, if the patentee of that invention agrees to licensing thereof royalty free or in consideration of a reasonable amount of license fee. ANSI does not involve itself in decision of the terms and conditions of the license agreement.

In other words, an organization member may apply different terms and conditions of licensing according to who the other party is, is not required to disclose terms and conditions of

the license, and may include pending patent applications. The member is obligated to notify ANSI of the terms and conditions of the licenses and number of licensees.

There remains a question as to whether a territorial standardization organization like ANSI has the power to require a license of a foreign companies which is not its member.

ii) ETSI

ETSI has organized IPRC (Intellectual Property Right Committee) to deal with issues on the IPR.

According to it, as licensing requirements of a standardized patent;

(i) the license fee must be fair and reasonable;

(ii) the terms and conditions of the license must not be discriminatory;

(iii) the patentee shall not require other terms and conditions, such as know-how, in addition to the license fee;

(iv) the license will be applicable only to products made in that particular territory.

Any standardization promotion member must promptly disclose IPR, essential to the standard, which it may have. The patentee must advise ETSI of the broadest terms and conditions affordable for licensing. Negotiations thereafter may result in a royalty free license.

It is noteworthy, from the viewpoint of future treatment of the IPR, that, although subject to review after a certain period of time, requirements of the license under its patent policy relate as far as to the maximum royalty and the applicable territory is restricted.

CHAPTER 2. CONCEPT OF COMPANY FOR MAKING INTELLECTUAL PROPERTY RIGHTS (IPR) AVAILABLE FOR STANDARDIZATION

As discussed in Chapter 1, technical standardization is positively dealt with, through organizations maintained for the particular purpose of the standardization, in many technical fields.

Proposals of technical standardization to the standardization organization, although in the capacity of its members, are mostly based on results of developments achieved by them, and necessarily involve treatment of related IPR. If any IPR involved in a standardization project is held by somebody other than the proposer, the standardization organization will request the holder of that IPR to make it available.

When proposing a standard to a standardization organization or when requested by a standardization organization for IPR, the company will need judgment criteria which should be different from that for general licensing practice. In what circumstances do the companies decide on making their patents and other IPR available for standardization, and what conditions do they consider when making the IPR available?

From this point of view, the following represents results of questionnaires completed by member of companies of PIPA Japanese group. We hope you will find Appendix 2 is useful for reference.

2-1 Makeup of Questionnaires

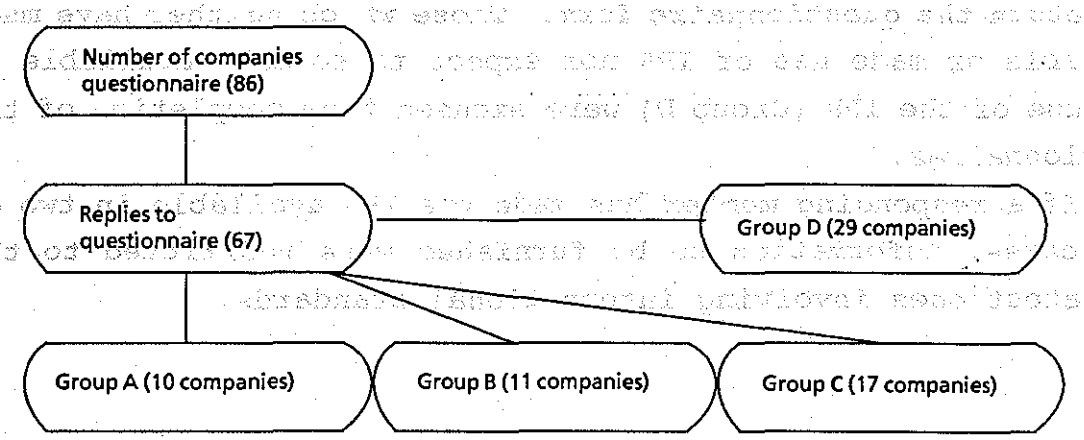
Premises for questionnaires:

- Objective is to find out how the licensing division react. The questionnaire form is on an unsigned basis, but requires identification of the category of business.
- Standardization by standardization organizations only.
- A request was made to those companies which have ever made available their own IPR to others for standardization (Group A), those which have ever used other's IPR made available for standardization (Group B), and those which are likely to make

available or make use of IPR in the future (Group C) to complete and return the questionnaire form. Those which neither have made available or made use of IPR nor expect to so make available or make use of the IPR (Group D) were excused from completion of the questionnaires.

- If a responding member has made the IPR available in two or more cases, information to be furnished were restricted to the two latest ones involving international standards.

Contents of Questionnaire , and Classification of Respondents



Actual results of providing IPR in the past	[Main Questions] Q3: Details of providing (organization, technical fields, target products, etc.) Q4, 5: Motives for providing and reasons thereof. Q6, 7, 9: With/without compensation and reasons thereof. Q10, 11: Rates of compensation Q12: Basis for royalty calculation Q13, 14, 15: Procedure, contracts for providings Q17 ~ 29: (Contents of the above Q3 ~ 15 as to second time providings)	[Assume that you would be providers]
Attitudes for future providings	Q30, 31: Rejection or non-rejection against requests from any standardizing organization and why? Q32, 33: Attitudes for providings and why? Q34 ~ 40: Desirable conditions for providings and why? Q41, 42: Desirable conditions for procedures and why? Q43: Decision for determining providings	

2-2 Results of Questionnaires Analyzed (Reference to Appendix 2)

2-2-1 Details of IPR Made Available to Standardization Organizations: (Q3~11, 13 ~15)

(1) Conditions for Making IPR Available:

16 standardization cases, in which IPR were made available to standardization organizations, were classified into the following:

(a) Royalty free, unconditional (submission of statement letter to standardization organizations only; with no individual agreements entered into)

11 case (of which 4 were international and 7 domestic)

(b) Royalty free, conditional (certain conditions, or individual agreements)

None

(c) Royalty bearing, conditions pending (2 international; conditions pending final decision and unidentifiable)

2 cases

(d) Royalty bearing conditional

3 cases (2 international, 1 domestic)

As a standard applicable is broader, and as more licensees are involved, royalty tends to become free. Classified in terms of technical field, the communications technical field has the largest number of the IPR made available for royalty free (10 out of 12), with those on a royalty free basis considered to be non-discriminatory whoever the licensees may be, assumably because of the public nature involved.

There were no cases in which an agreement was entered into

even when the IPR was made available for royalty free.

(2) Starting Point of Making IPR Available:

A half each of IPR offered by Group A members (which have ever made their IPR available) concerned to each of international and domestic organizations respectively.

The IPR made available by the request of standardization organizations was 9 cases (2 international and 7 domestic) and the IPR made available standardization technology developed by organization's member themselves was 9 cases (7 were international and 2 were domestic). The majority of those furnished at the request of standardization organizations were for domestic standards, and the majority of those proposed by the members were for international standards.

The above results would indicate that IPR is likely to be furnished domestically at the initiative of standardization organizations while companies are willing to make their technology and IPR available, showing difference between their posture toward domestic standardization and the same toward international.

2-2-2 Significance of Making IPR Available: (Q5, 12, 32, 33)

(1) Reasons Why IPR was Made Available for Use:

Out of responses from Group A, the largest share was represented by 12 cases on the grounds that the technology was essential for implementation of standardization, followed by 9 cases because of priority of public and/or users' interest. Shares between international and domestic organizations are 50% and 50%, showing no difference.

The stance of businesses which have made their IPR available reflect that they so furnish essential technology for the purpose of public interest for which the standardization is also.

(2) Difference According to Who Makes their IPR Available:

As previously mentioned, for 9 cases out of 16, providers of IPR so made the technology available as a standard at their own initiatives.

In cases like this, the providers have developed technology relating to the standards in question, and can continue in their developments and maintain their shares. While it is interesting to know whether the said potentialities had anything to do with the terms and conditions for the making of the IPR available for use (whether royalty free or for consideration), it was only one member that admitted that it expected continued income from peripheral patents as the reason why it furnished the IPR royalty free, and we were unable to get further information in respect of the interesting question.

Unless the IPR is furnished at the initiative of the proposer, showing of posture of the particular business, custom in the industry, and practice of making available and making use of the IPR in other standardization projects seem to be the basis of judgment criteria for furnishing the IPR for use.

There was an answer to the questionnaire that the responding member did not comply with the request from a standardization organization for the IPR, on the ground that there were other alternatives easily available and that member saw no necessity for standardization of its technology. It would not be easy to make a judgment of whether implementation of a particular patent is essential for realization of a standard.

2-2-3 Incentives for Making Patents Available (Q7, 9, 34-42):

2-2-3-1 Compensation:

As previously stated, patents furnished for standardization were mostly on a gratuitous basis, with some 30% being for consideration. The reasons for requiring compensation were mostly either one of "A license should be made available with compensation," and "As long as terms and conditions are reasonable, there would be no problem for making the standards available for general use."

With respect to future cases of providing IPR for use, 9 members out of 21 in Groups A and B stated a license should be available with compensation and 8 members say it depends on cases. Responses to the same questionnaire by Group C (with

potentialities of making available or making use of patents involved in standardization) were mostly that it must be for consideration.

The responses in favor of use of the IPR for consideration would be indicative of the fact that the value of the IPR must be respected, even for standardization. The fact that the cases of Groups A and B in the responses as combined are more than the cases of Group C, shows the difficulty of dealing with the IPR within standardization organizations.

In determining the amount of consideration, there is a question of how far expenses incurred should be recovered. There will be different approaches in this regard, such as:

(a) Within the cost of patent acquisition and maintenance;

(b) Part of the cost of patent acquisition and maintenance, and part of cost of related developments; and

(c) Part of the licensee's profit from the market; and

(d) In the same manner as under general license cases.

Answers to the questionnaire are varied and seem to be affected by such circumstances leading to the decisions of companies for making the IPR available as were previously discussed.

2-2-3-2 Other Incentives:

If placed in a position to furnish its IPR for standardization, what else terms and conditions could the right holder require in addition to royalty? This question would likewise depend on the circumstances in which the provider of the IPR is placed.

In cases where provider of IPR is products' manufacturer to which the standard is applied, the manufacturer might want to require alternative conditions which are equivalent to a royalty rate under usual license agreements. The questionnaires arbitrarily assumed the following alternative propositions for

inclusion in the agreement:

(i) A provision entitling the provider of the IPR to terminate the license if the licensee enforce its IPR relating to the standardization technology.

(ii) A provision entitling the provider of the IPR to negotiate with its licensee to enter a cross-license agreement, if the licensee acquire an IPR that provider would like to be licensed.

(iii) A provision in respect of improvement invention made by the party making use of the IPR so made available, in connection with standardization of technology so licensed (grant back of license etc.)

Out of 21 members which favored an agreement to be entered into with the party making use of the IPR, 12 members preferred (i), 13 (ii), and 11 (iii). In addition, there was an answer suggesting a hold harmless clause on technical quality.

If the provision under (i) is invoked, working of the standards will become unstable and confused. Where a fully competitive market place is organized, it may be an unavoidable approach. The provision under (ii) would be effective from the viewpoint of equitable balance with the provider of the IPR, although there may be cases in which it is difficult to obtain consent of the licensee.

In case where provider of IPR is user of products to which the standard in question is made available (such as service provider); in cases like this, the provider of the IPR would generally be in a position to enjoy the benefit of the standard and demand for extra conditions, if any, would be almost nil. In proposing royalty, consideration will be given to the balance between the profit estimated as the result of the service rendered and the development cost. No particular comments were available from the completed questionnaires.

2-2-4 Which Department Decides on Making IPR Available:

In almost all companies, it is the license department that decides whether a patent should be made available. In making decision, the license department refers in most cases to opinion of departments involved in promotion of technical standards. It is the license department in almost all responding members that makes the final corporate decision.

2-3 Conclusion

As was seen from the use of the IPR made available free, the IPR seems to have been furnished for technical standardization with the emphasis on promotion of public interest and showing of the corporate posture.

Also, one of the factors that decide whether the IPR should be made available free or for consideration is the likelihood of inevitable competition in proposal of the standard with competitors. In order to have your own proposal adopted as the standard in paricular standardization item in the course of discussion in the standardization organization, judgment seems to be made that a license will have to be necessarily at a small amount of royalty or even on a royalty free basis.

Future trend is observed from the questionnaire data obtained that companies tend to make the judgment on the basis of payment of consideration or case-by-case, rather than on a royalty free basis.

With respect to incentives to be offered other than royalty, many providers of the IPR require to be entitled to certain rights, such as the one to cross-license etc.

Under the circumstances in which even the provider of IPR can hardly control related IPR in entirety, such requirement seems to have a significant meaning. It is noteworthy that the RCR committee as standardization organization suggested that providers of the IPR should be entitled to such terms and conditions.

Great expectation in respect of the standardization organization is expressed in the free comment space in the questionnaire form. Activities of standardization organizations

in respect of the IPR have been restricted to a minimum and rather on a passive basis.

In areas where the IPR necessarily take part in technical standards, would it be advisable to make efforts for introducing guidelines for licensing terms and conditions into use. Such guidelines dealing with the IPR which include terms and conditions of the licensing will contribute significantly to facilitation of searching for and deciding on proper standards.

COMPARISON OF TREATMENT OF PATENT AND OTHER PROPERTY BETWEEN VARIOUS STANDARDIZATION ORGANIZATIONS

	CCITT	ISO	IEC	TTC	RCR	JISC	ANSI	IEEE	ETSI
Must standardization be made even when it violates a patent.	-	Basically "Yes," if such standardization is justifiable on technical grounds.	-	-	"Yes," for absolutely necessary patents.	-	"Yes," if such standardization is justifiable on technical grounds.	"Yes," if such standardization is justifiable on technical grounds.	-
Statement from patent holder	Necessary	Necessary	Necessary	Must be received by the Organization before draft standardization is adopted.	Necessary	-	Must be received by the Organization before draft standardization is adopted.	Must be received by the Organization before draft standardization is adopted.	Must be obtained in advance from a participating member.
Conditions of licensing: ① Royalty free; unconditional. ② Non-discriminatory; reasonable terms and conditions. ③ Reasonable terms and conditions. ④ Reasonable amount of consideration. ⑤ Without undue discrimination.	① Royalty free; unconditional or ② Non-discriminatory; reasonable terms and conditions.	③ Reasonable terms and conditions (including "royalty free").	③ Reasonable terms and conditions.	① No exercise of right; unconditional or ② Non-exclusive under reasonable terms and conditions Others (as specified)	① Royalty free; unconditional or ② Non-exclusive and non-discriminatory under reasonable terms and conditions Others (as specified)	Reasonable terms and conditions.	① Royalty free; unconditional (as restricted to the scope of the purpose of licensing of the specific standard) or ④ Reasonable amount of consideration Others (different contract terms permissible for each of different licensees; publication of contract terms unnecessary).	① Royalty free1; unconditional or ③ Reasonable terms and conditions. ⑤ Without undue discrimination.	Member guarantees acceptance of license on ② non-discriminatory and reasonable terms.
Checkup license terms at the time of examination.	-	-	-	-	-	-	License terms and number of licensees	License terms	-

Notes: 1) * Description herein contained are not reproduction of provisions of respective organizations, as they are.
2) Indication " - " denotes that no corresponding description is contained or found within the scope of research.

Appendix 1 (2/2)

COMPARISON OF TREATMENT OF PATENT AND OTHER PROPERTY BETWEEN VARIOUS STANDARDIZATION ORGANIZATIONS

	CCITT	ISO	IEC	TTC	RCR	JISC	ANSI	IEEE	ETSI
Patent notice	Organization requests to parties for presentation of patent information but provides no guarantee as accuracy of the information so furnished.	Organization requests to parties for presentation of patent information but provides no guarantee as accuracy of the information so furnished.	Organization requests to parties for presentation of patent information but provides no guarantee as accuracy of the information so furnished.	No guarantee provided as to existence of any other patent rights in conflict with the one hereunder.	The standard provides no guarantee whether in whole or in part, which is included in subject matter of essential industrial properties. No responsibility is assumed for any dispute which may arise.	-	-	Organization does not specify individual patents for standard. The organizatiopn does not guarantee that standardization is the sole means of solving patent problems.	-
Territory within which Patent may applied	-	-	-	Domestic use only.	Domestic use only.	-	Domestic use only.	Domestic use only.	Within the region only.
Others	Treatment of patent and other property is set out as guideline, not as rules.	After laid down the international standard, if the Patent is found unusable, it will be returned for review.	After laid down the international standard, if the Patent is found unusable, it would be returned for review.	① Assurance of interconnectability of various domestic telecommunication equipment and of equitableness and transparency in the market. ② Future study on copyright.	① Applicable to those satisfying standards used in Japan. ② If the third party who has unessential industrial property, organization would be encourage to furnish it to the party who provide essential property on reasonable terms.	Standardization will be arranged in such manner, that a particular party or parties will not be benefited.	Patent Policy ① Maintains equitable balance between the protection of patent and the Anti-Monopoly Act. ② Provide the maximum freedom permissible, and exercise minimum control necessary, to participants in standardization. ③ Basically, free competition.	When standardization requires patent use, a notice shall be given by means of statement.	Standardization promotion members shall promptly disclose essential intellectual properties for standard.

Notes: 1) * Description herein contained are not reproduction of provisions of respective organizations, as they are.
2) Indication " - " denotes that no corresponding description is contained or found within the scope of research.

Results of Completed Questionnaires on "Standardization vs Licensing"

Total number of copies of questionnaire form sent out:
86 (compaines)

Number of copies of completed questionnaires returned:
67 (compaines)

(1) Group A will consist of those companies which have ever made their own IPR available to others for standardization in the past.

(2) Group B will consist of those companies which have only made use of the IPR of others for standardization in the past.

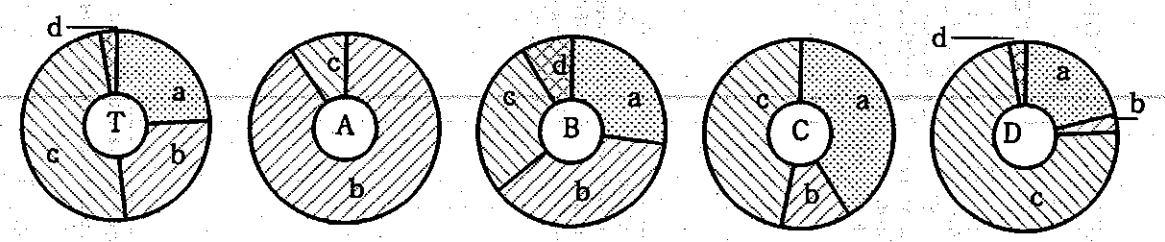
(3) Group C will consist of those companies which have neither provide nor use of the IPR of others for standardization in the past but would have it in the future.

(4) Group D will consist of those companies which have neither provide nor use of IPR for standardization in the past and also in the future.

Q1, Q2: Have you had provide or use of an intellectual property right (IPR) for technical standardization recently?

Answer

Group of companies	Total	A	B	C	D
Technical field	(cos)	(cos)	(cos)	(cos)	(cos)
a. Machinery, Metal	16	0	3	7	6
b. Electrical equipment	16	9	4	2	1
c. Chemical	33	1	3	8	21
d. Others	2	0	1	0	1
Totals	67	10	11	17	29



Concrete response to the following Q3 ~ 15 by ten companies (group A) who provided the above-mentioned IPR with respect to a total of 16 cases (with two cases or less for each companies) are given below.

Q3,Q17: What are the contents of the technical standards which your company's IPR have provided?

Answers

1. Names of standardizing organizations receiving providings (the name may be doubled)	Committee Consultant International Telegraphique et Telephonique (CCITT)		5 (cos)	(6 cases)
	Research & Development Center for Radio Systems (RCR)		2	(2)
	Japan Industrial Standards Committee (JISC)		2	(2)
	European Computer Manufacturers Association (ECMA)		1	(2)
	Telecommunications Technology Committee (TTC)		1	(1)
	Road Automobile Communication System Conference		1	(1)
	Electrical Instruments Association of Japan (EIAJ)		1	(1)
	Japan Wood Preserving Association		1	(1)
	Total		14	(16)
2. Classification of provided technical standards into international and domestic standards.	International standard:		6 (cos)	(8 cases)
	Domestic standard:		8	(8)
	Total		14	(16)
3. Technical fields to which provided technical standards belong (company, case)	Telecommunications equipments:	8 (cos) (6: international cases, 6: domestic cases, total: 12)		
	Computer	1 (2: international cases)		
	Electronic parts	1 (1: domestic case)		
	Organic chemistry	1 (1: domestic case)		
4. Contents of IPR	Patents, utility models:	10 (cos)	(16 cases)	
	Designs:	1	(2)	
	Trademark;	1	(1)	
	Copyright, etc.	None		
5. Names of standardized target products.	Voice band compression, Optical connector, Connectors, Modem, Data transmission systems, Tele-writing terminals, TV-telephone conference systems, Digital mobile telephone system, Magnetic disc, Insecticide-treated plywood, Image coding system.			

Q4, Q18: What prompted you to make your IPR available?

Answer	Cos.	international	domestic	Total
a. Request from a standardization organization	8	2	7	9
b. At the result of your company's standardization offer	7	7	2	9

Q5, Q19: For what reason or reasons (up to top three) did you make available your IPR for use?

Answer	Cos.	international	domestic	Total
a. It was essential for implementation of standardization	8	6	6	12
b. For priority of public or users' interest	6	4	5	9
c. Your company thought it could retain its own interest as predecessor in the market	1	1		
d. Your company thought it would be entitled to consideration for the IPR so furnished for use	None			

Q6, Q20: Was the IPR so made available for a consideration or on a royalty free basis?

Answer	Cos.	international	domestic	Total
a. For consideration	9	4	7	11
b. On a royalty free basis	4	4	1	5

Q7, Q21: Give the reason or reasons (up to top three) why you made your IPR available on a royalty free basis:

Answer	Cos.	international	domestic	Total
a. Public interest involved made it effective to assume the corporate posture as such	7	3	6	9
b. For competition with a standardization proposal by another	4	2	2	4
c. In the hope of establishing an industrial custom so IPR of others may be obtained on a royalty free basis	2	1	2	3
d. In expectation of license income from peripheral technology	1	1		
e. Subject to industrial custom and practice	1	1		
f. At the request of standardization organization	1		1	

Q8, Q22: If the answer to Q6 or Q20 is "a," have you paid Compensation to inventors of the IPR so implemented?

Answer	Cos.	international	domestic	Total
a. No, not yet	3	2	1	3
b. No, not yet but will pay	3		3	
c. Yes, paid	1	1		
d. Others (unidentifiable, standardization was not achieved, etc.)	4	1	3	4

Q9, Q23: For what reason or reasons (up to top 3 reasons), did you make your IPR available for consideration?

Answer	Cos.	international	domestic	Total
a. We saw no reason why it should be treated differently from other license arrangements	4	3	1	4
b. We expected the standard will prevail on favorable conditions	3	3		
c. Technology so made available was superior as compared with that of competitors	1	1		
d. Subject to industrial custom and practice	1	1		
e. To recover cost of investment for technical development	None			

Q10, Q24: If your answer to Q6 or Q20 is "b," how did the license fee compare with that of general license agreements?

Answer	Cos.	international	domestic	Total
a. Lower	3	2	1	3
b. No particular difference to speak of	1	1		
c. Higher	None			
d. Undecided yet	1	1		

Q11, Q25: If your answer to Q6 or Q20 is "b," to what extent was the license fee?

Answer	Cos.	international	domestic	Total
a. No comment	2	1	1	2
b. Fixed amount basis	1	2		
c. Still in the course of negotiation	1	1		
d. Rate basis	None			

Q12; Q26: If the answer to Q6 or Q20 is "a," on what thought did you base your calculation of royalty fee?

Answer	Cos.	international	domestic	Total
a. Recovery of market advantageousness of the licensee	2	3		
b. Recovery of acquisition and maintenance cost of patents or other IPR	1		1	
c. Recovery of development cost of technology so made available	1		1	
d. On the same basis as general licensing programs	1	1		
e. Consideration on our own advantageousness for standardization	1	1		

Q13, Q27: What procedures did you follow for making your IPR available?

Answer	Cos.	international	domestic	Total
a. Submission of confirmation letter and statement only	9	4	7	11
b. Submission of confirmation letter etc. to standardization organizations, make an agreements with the parties making use of our IPR	2	2	1	3
c. Abandon of patents or IPR	None			
d. Nothing done	None			
e. Individual contact or agreements with the parties making use of our IPR	None			
f. Others (Not finally determined yet, unidentifiable)	2	2		

Q14, Q28: If your answer to Q13 or Q27 is "e," what did you do specifically?

Answer	Cos.	international	domestic	Total
a. Entered into a bilateral licensing agreement	2	2	1	3
b. Sent a letter confirming non-assertion of IPR and non-exclusive licensing agreement (unilateral)	None			
c. Others	None			

Q15, Q29: What were provided for in your letter to, or non-exclusive license agreement or license agreement with, the party making use of your IPR?

Answer	Cos.	international	domestic	Total
a. Negotiability of cross-licensing with the right which belongs to party making use of your IPR	1	2		
b. Free grant-back clause for improvement technology	1		2	
c. Assign-back clause for improved technology	None			
d. Cancellation of making our IPR available if the party making use of our IPR asserts rights related to standard	None			

Q16: Have you recently made available two or more technical standards in which your IPR were involved?

Answer	Cos.
a. Yes.	7
b. No.	2

Q30: Have you ever been requested by a standardization organization for patents or other IPR and declined it?

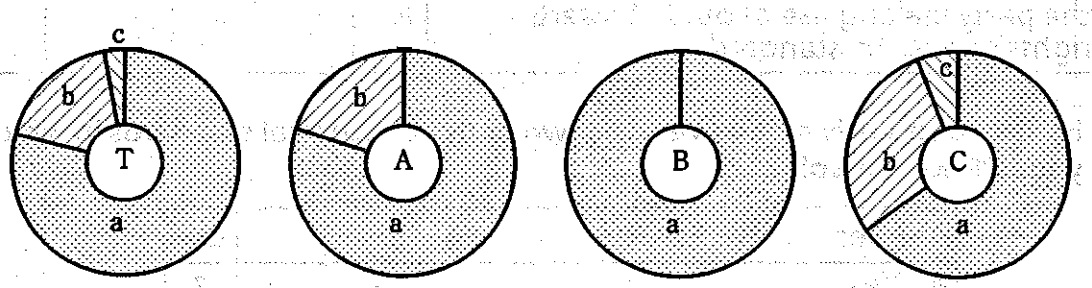
Answer	T	A	B	C
a. No.	35	8	11	16
b. Yes.	1	None	None	1

Q31: If you have declined such a request, state the reason or reasons:

Answer: a. There were other alternatives easily available and there was no necessity for standardization. Also, because of moral obligation to joint applicant(s).

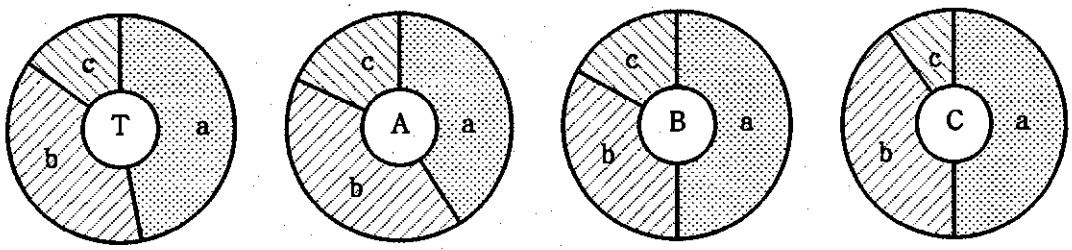
Q32: Give your opinion as to making your IPR available for technical standardization:

Answer	T	A	B	C
a. Prefer to make it available	30	8	11	11
b. Subject to case-by-case decision	7	2	None	5
c. No definite idea	1	None	None	1
d. Should decline it.	None	None	None	None



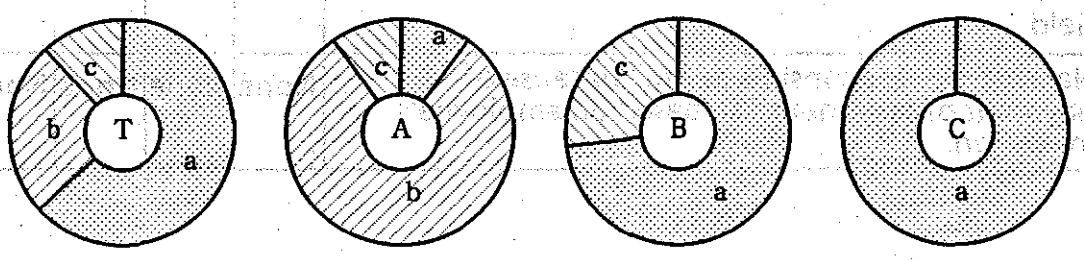
Q33: If you prefer to make IPR available, give your reason or reasons:

Answer	T	A	B	C
a. For interest of the public/users	26	7	9	10
b. For progress of certain industrial field as a whole	21	7	6	8
c. For making custom and practice as to make available the IPR which is related to standardization	8	3	3	2



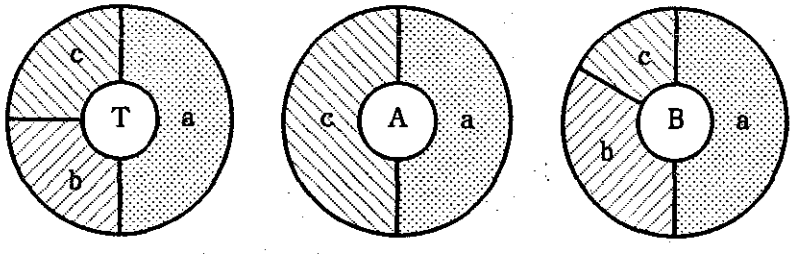
Q34: On what terms and conditions, do you feel the IPR should be made available?

Answer	T	A	B	C
a. For consideration	20	1	8	11
b. Subject to case-by-case decision	8	8	None	None
c. Hopefully, royalty free	4	1	3	None



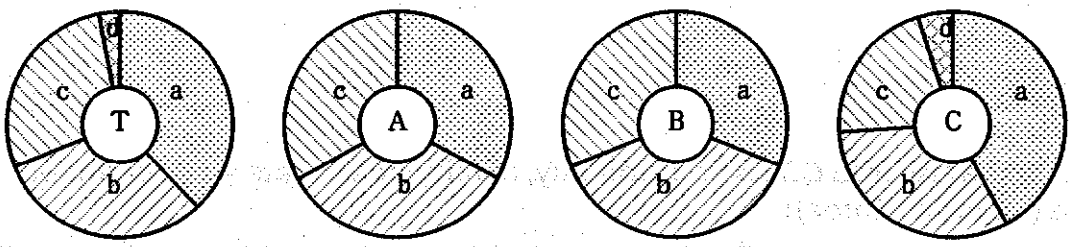
Q35: If your answer to Q34 is "c. Hopefully, royalty free," state your reason or reasons (up to top three):

Answer	T	A	B	C
a. Will help development of industrial custom or practice as such and encourage others to license standardization technology royalty free.	4	1	3	None
b. Will promote improvement of technology.	2	None	2	None
c. Will further promote standardization of that particular technology.	2	1	1	None
d. Will be effective for showing corporate attitude because of public interests involved.	None	None	None	None
e. Subject to custom and practice of that industrial field	None	None	None	None



Q36: If your answer to Q34 is "a. For consideration," give your reasons (up to top three):

Answer	T	A	B	C
a. Even on a "for consideration" basis, standardization will be further promoted by setting a reasonable conditions.	15	1	6	8
b. To recover part of cost of investment in technical development and acquisition of IPR.	12	1	5	6
c. No particular reasons why it must be "royalty free," differently from other licensing practice.	11	1	6	4
d. Subject to custom and practice of that industrial field.	1	None	None	1
e. Necessarily "for consideration," because of payment of remuneration based on employee's invention.	None	None	None	None

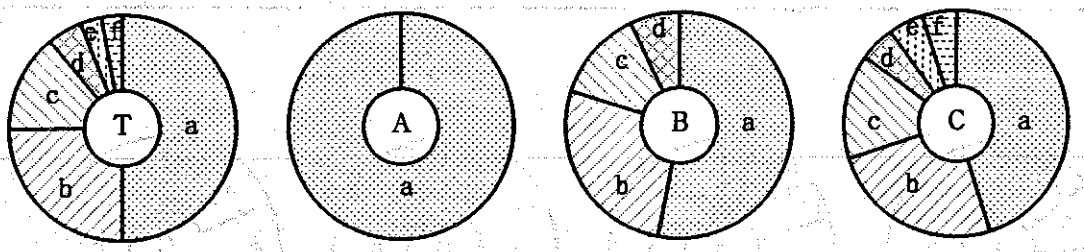


Q37: If your answer to Q34 is "a. For consideration," how, in your opinion, should the license fee be in relation to that of other license agreements?

Answer	T	A	B	C
a. Hopefully, lower	20	1	8	11
b. No reason why it should be lower	1	None	1	None

Q38: If your answer to Q37 is "a. Hopefully, lower," give reasons (up to top three):

Answer	T	A	B	C
a. Necessary for realization of standardization smoothly.	18	1	8	9
b. For popularization of your own products.	9	None	4	5
c. Will make general custom and practice as to make available the standard related IPR at lower cost.	5	None	2	3
d. Go with the custom and the practice of that industrial field.	2	None	1	1
e. For public interest.	1	None	None	1
f. More reduction to practice will mean more license fee income.	1	None	None	1



Q39: If your answer to Q32 is "b. Subject to case-by-case decision," state your reasons:

Answer:

Co. A: There are some unavailable for publication because of development investments or business strategy.

Co. B: Would withhold the right to negotiate with any third parties who do not publicize.

Co. C: There may be such industrial sectors in which standardization may not be appropriate because of industrial circumstances.

Co. D: Would refrain from making a judgment now on a future issue.

Co. E: Achievements reached because of original research and development should be entitled to so much advantageous marketing position commensurate with investment cost incurred.

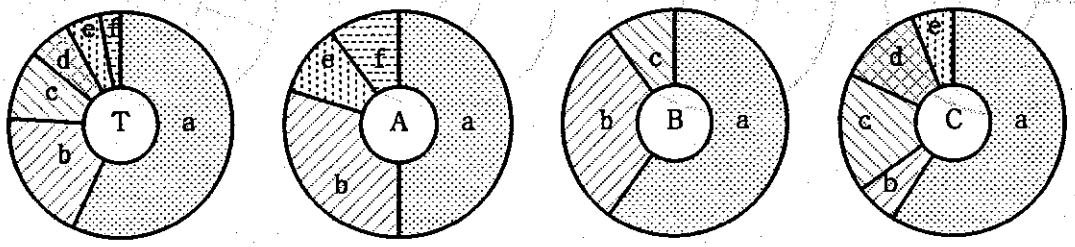
Co. F: Interests and necessity for publication (standardization) of the IPR holder vary on a case by case basis.

Co. G: Depends on contribution to, or market share of, products (goods) by the patent involved, and also on needs of the community.

Co. H: Difference in characteristics of technology, products or industry.

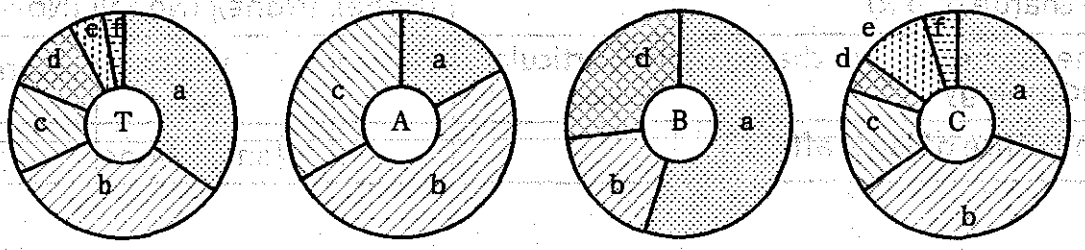
Q41: What procedure, in your opinion, would be appropriate in making your IPR available?

Answer	T	A	B	C
a. Sign an agreement with the individual licensee.	21	5	6	10
b. Letter of confirmation or statement sent to standardization organization, only	7	3	3	1
c. Subject to custom or practice of that industrial field.	4	None	1	3
d. Send notice of non-exclusive license individual users.	2	None	None	2
e. Subject to case-by-case decision.	2	1	None	1
f. Use an agreement together with individual notice of license.	1	1	None	None
g. Do nothing in particular.	None	None	None	None
h. Waive rights.	None	None	None	None



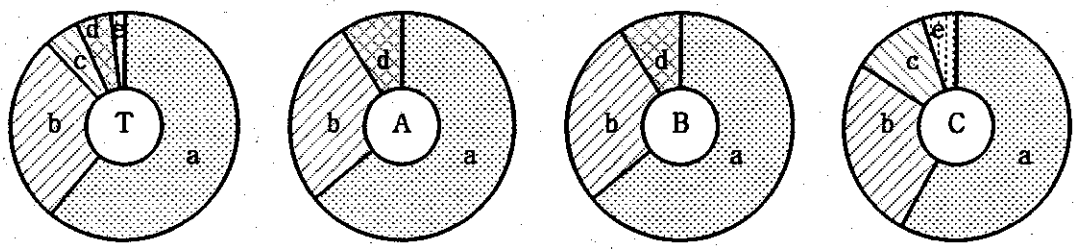
Q42: What provisions do you think should be included in an agreement or non-exclusive license notice?

Answer	T	A	B	C
a. A provision permitting negotiation of cross-licensing.	13	1	6	6
b. A provision permitting cancellation of the arrangements if the opponent party insists other right.	12	3	2	7
c. Gratuitous grant back provision of improvement patents.	5	2	None	3
d. Grant back provision of improvement patents for consideration.	4	None	3	1
e. "Assign back" provision of improvement patents.	2	None	None	2
f. Hold harmless provision with no patent warranty.	1	None	None	1



Q43: What department is (are) in charge of licensing of technical standards?

Answer	T	A	B	C
a. The department in charge of IPR:	25	7	7	11
(with consultation with technical standardization department)	(24)	(7)	(6)	(11)
(without consultation with technical standardization department)	(1)	(None)	(1)	(None)
b. Consultation between the IPR department and technical standardization promotion department:	11	3	3	5
(with final decision made by the IPR department)	(6)	(2)	(1)	(3)
(with final decision made by the technical standardization promotion department)	(5)	(1)	(2)	(2)
c. The department which promotes technical standardization:	2	None	None	2
(with consultation with the department in charge of IPR)	(2)	(None)	(None)	(2)
(without consultation with the department in charge of IPR)	(None)	(None)	(None)	(None)
d. The department in charge of the particular technology	2	1	1	None
e. The office of legal affairs	1	None	None	1



Q44. Please state your opinion in respect of treatment of IPR involving technical standards:

Answers:

Opinions of those companies which have made their IPR available:

Company A: The objective of technical standardization, particularly that in the telecommunications field, is to guarantee mutual connection, and assure users of broader use of telecommunications technology they have, thereby promoting public interests. Patents and other IPR relating to standardization should preferably be made open for the benefit of the public. Patents and other IPR, on the other hand, are achievements reached in the course of competitive development with investment. Those who have developed the IPR with heavy investment must recover cost of the development and their efforts must also be respected in order to prevent their motivation for development from being discouraged. Right holders of the IPR, therefore, believe that the IPR should be made available and made use of for the benefit of the community subject always to reasonable terms and conditions.

Company B: Because of the fact that which IPR is adopted as being standard is unascertainable, we refer to respective committees (standardization organizations) and oftentimes find that even the committee secretariats do not have accurate information. We would propose, therefore, that information be publicly released annually in respect of each line of technical standard, by way of a table of IPR adopted for standardization, showing, among other things, patent numbers, title of the patent, names of right holders, and whether they are available for consideration (in which event what the license fee etc. would be) or on a gratuitous basis. Publication of such information would encourage the users to cooperate for standardization, thereby safeguarding the social interest and contributing to progress of the technology.]

Company C: The technology should not necessarily be made available for consideration. It will be necessary at least to give consideration for safeguarding of honor of inventors or patentee of the technology involved (by, say, specifying the name of the source of that right).

Company D: We are basically in favor of standardization of technology because it is a social demand. In Japan, however, there is a climate in which essential IPR is demanded free of charge, as if it should be so, disregarding appropriate return to which the right holder as prior developer are reasonably entitled. A framework for equitable standardization agreements must be established as soon as possible.

Opinions of those companies which have made use of IPR of others:

Company E: It is difficult to determine whether reasonable consideration payable should be in the form of fee for use of technical information furnished or license fee for patent or other IPR. In other words, it is difficult to determine rights and obligations individually where two or more different property are in existence. It will also be necessary to specifically agree with respect to how to solve any infringement of intellectu-al

property of a third party that may take place as the result of implementing the technical standards. If such infringement case take place, the standardization organization should take cooperative action at least.

Company F: We believe the standardization organization should investigate which patents are necessary for standardization and negotiate with the right holders about the fair terms and conditions for licensing on which basis the IPR should be made available and the price which should be as low as possible. Although it may be unrealistic that a standardization organization which is not the right holder enters into an agreement, the standardization organization should actively involve itself in setting up of the abovementioned reasonable terms and conditions. As an approach to it, it will be advisable to study and decide on standardized terms and conditions (standardization of royalty will be difficult, however).

Company G: Copyright is excluded from the technical standardization. Standardization organizations should seriously discuss whether it is really in order. In ANSI, we hear, there is movement among some of US companies to discriminate Japanese companies on the ground that Japan is an unfair trading country. We request that related organizations deal with such situation properly.
The technical standard must be adopted based on the general consensus among members of the standardization organization through a fair and transparent procedure. It must also provide a reasonable extent of leeway for competition or, to state it differently, the technical standard adopted should not be too detailed. Otherwise, we fear, different expectations and interests which the companies making use of such standard have will get involved complicatedly, with treatment of the IPR diversified, resulting in failure in completion of "useful technical standardization." We are confident that treatment of the IPR will be properly formulated automatically depending on how the "technical standards" are.

Company H: Basically, licensing for a reasonable amount of consideration will be advisable, with respect to the IPR on technical standard as well. A license involving any technical standard should not be regarded simply as a license on IPR. Various factors surrounding the industry must be taken into consideration. As a result, treatment of the IPR involving technical standard will have to be solved on a case-by-case basis after all.
Opinions of those companies which are likely to make available or make use of IPR in the future:

Company I: We do not feel this particular issue close to feel because it is not a matter of intimate. Intellectual properties should not be treated uniformly but be dealt with on a case-by-case basis depending on where the technology afforded stands. At any rate, the provider of the IPR should be entitled to some sort of advantage.

Company J: Any standardization project should be conditioned upon the mutual understanding among participants in discussion about technical standards that they are prepared to furnish the IPR they have, for use by other companies on reasonable terms and conditions with no discrimination.

Company K: At an early stage of the standardization discussion, information must be furnished mutually among the members so each will

know any IPR each of the rest has. While it may be possible to make two technologies available (one with IPR involved and the other without it) in parallel, there is a doubt as to how far the technology with IPR involved could be made popular. It may be made popular if on a gratuitous basis, but otherwise would not.

Company L: Standardization of technology is (i) to keep users from being inconvenienced (public interest) and (ii) not to retard progress of technology. In the case of (i), door must be wide open for making the technology available.
The technology, if the right holder has contributed largely to its development and acquisition of the IPR thereon, should be made available for consideration.
License fee should be lower than that applicable to other general licenses, because of its public nature.

Company M: International rules should be established, based on the fundamental understanding that the IPR must be respected.

Company N: Those of extremely high public nature (e.g. involving environmental issues) should be made avail-able on a gratuitous basis, depending on particular circumstances.

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Title of the Presentation

PRACTICE AND LAWS WITH RESPECT TO PATENT INFRINGEMENT LITIGATION IN JAPAN

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Abstract:

As the intellectual property becomes more important, patent infringement cases take place more frequently. The international disputes on patent are likewise becoming everyday concerns. This paper is intended to explain a series of Japanese laws relating to lawsuits, from an initial stage of the infringement cases to the conclusion.

Patent infringement cases largely taken up in the mass media are mostly those in the United States and, in fact, cannot be ignored by foreign businesses operating in the United States.

Thus, understanding of American laws seems to have been fairly promoted. Are Japanese laws covering the same issue known to foreign countries so as to satisfy the minimum requirement? Most probably, "No."

In this paper, we will discuss those areas of the Japanese Patent Law, Code of Civil Procedure and other related laws which pertain to the patent infringement cases. We will further go on to report practical aspects of patent infringement cases as they are.

Introduction

With respect to general infringement cases in Japan, protection is available from, among other things, the Civil Code, Code of Civil Procedure, and Civil Preservation Law. With respect to the patent infringement cases, the Patent Law provides additional protection.

There are marked, essential differences in the patent system between the American law based on the first-to-invent principle and the Japanese law on the first-to-file principle. There are also differences in the judicial system between both countries.

This paper will explain the duration of patents, trial for invalidation of patents, right to the provisional protection, injunction, lawsuit, provisional disposition and claims for damages. It will proceed further to the framework of Japanese litigation, what companies would generally practice, from the view point of warning and lawsuit, in case an infringement activity takes place, and arbitration systems.

Part 1 Patent Right and Legal System with Respect to Patent Infringement

1. Duration of Patent Right; Trial for Invalidation of Patent; Right to Provisional Protection:

1-1. Duration of Patent; Trial for Invalidation of Patent:

Patent right expire 15 years after the date of publication of the patent application, but not to exceed 20 years from the filing date of the patent application (Article 67 Par. 1 of Patent Law). Patent applications will be laid open 18 months after the filing date of the patent application (laying open of patent application -- Article 65-2 Par. 1 of Patent Law).

Where the examiner finds no reason for refusing a patent application, he shall render a ruling that it is to be published (Article 51 Par. 1 of Patent Law). After the publication of the application, the applicant for the patent will have the exclusive right to commercially work the invention claimed in the patent application (Article 52 Par. 1 of Patent Law).

Any person may file an opposition to the grant of a patent with the Director-General of the Patent Office within three months of the date on which the patent application is published (Article 55 Par. 1 of Patent Law).

The examiner shall make a decision, as to whether a patent is to be granted or refused with respect to the application after rendering a ruling on the opposition to the grant of the patent (Article 60 of Patent Law). If no opposition to the grant of the patent is filed, the examiner shall render a decision that a patent is to be granted on the application unless a decision of refusal is to be made (Article 62 of Patent Law).

After a patent is registered following a decision of the grant of a patent, a trial for invalidation of the patent may be filed under certain circumstances (Article 123 Par. 1 of Patent Law) and a decision thereon may be made even after the patent right has been extinguished (Article 123 Par. 2 of Patent Law).

1-2. **Right to Provisional Protection:**

Some people seem to believe that in Japan, it takes a long time before a patent is registered, and that for this reason, patent applicants may not fully enjoy their benefit under the patent right. The Japanese Patent Law, however, grants certain rights to patent applicants before its registration.

After the laying open of the patent application and following a warning by the applicant in writing, setting forth details of the invention, the patent applicant is entitled to demand the payment of compensation in a sum of money equivalent to a customary license fee in respect of the commercial working of the invention after the warning is so served.

If no warning has been given, the patent applicant is likewise entitled to demand the payment of compensation in a sum of money by any person who has commercially worked the invention with the knowledge that the invention has previously been laid open (Article 65-3 of Patent Law). The demand for the compensation shall not be exercised until the application is to be published (Article 65-3 Par. 2 of Patent Law).

In addition, once the patent application is published, the

Japanese Patent Law grants to the patent applicant ~~and exclusive licensee~~ certain rights equivalent to those the patentee and its licensees would have under a patent right: Claim for injunction, preclusion of infringements, claim for damages, etc. (Article 52 Par. 2 of Patent Law).

If the patent is not registered, however, the patent applicant (and the exclusive licensee) shall be liable to indemnify any damages caused to another party because of the exercise of its right (Article 52 Par. 4 of Patent Law).

2. Right to Injunction:

2-1. What is the Right to Injunction?

The patent right essentially entitles the patentee to commercially work the invention patented thereunder -- the patent right -- on an exclusive basis.

Should any third party without due authority or title commercially work the patented invention, the patentee's exclusive right to control of the patented invention is unduly interfered with. The patent right would almost be nothing unless the patentee has the power to exclude such interference. It is the right to injunction, as the power essential to the patent right, that exclude such interference.

2-2 Substantive Conditions of Claim for Injunction:

In order for a person to be entitled to the claim for an injunction in respect of a patent infringement case, the following requirements must be satisfied:

(a) The patent is lawfully in effect;
(b) An unauthorized third party commercially works the patented invention.

2-3. Right to Injunction; Claim for Destruction:

The patentee or exclusive licensee is entitled to a claim for cessation or prevention of any infringement of the patent right which is present or likely to be present, whether it is a direct infringement or indirect (Article 100 Art. 1 of Patent

Law).

It must be added that, different from a claim for damages, the claim for injunction needs no evidence of willfulness/knowingness or negligence with which the infringement is made.

2-4. Particulars of the Right to Injunction:

With respect to direct infringement of an invention, a patentee or an exclusive licensee may require a person who is infringing the patent right to discontinue or refrain from such infringement and may also demand the destruction of the articles by which the act of infringement was committed (including the articles manufactured by the act of infringement in the case of a patented invention of a process of manufacture), the removal of the facilities used for the act of infringement, or other measures necessary to prevent the infringement (Article 100 Par. 1 and 2).

The indirect infringement is particularly provided for in Article 101 of the Patent Law: The indirect infringement of an invention of a thing will take place in the form of production, assignment, loan, exhibition for assignment or loan, or import, as business, of things used solely for production of a thing falling within the patent right: and the indirect infringement of an invention of a method will take place in the form of production, assignment, loan, exhibition for assignment or loan, or import, as business, of things used solely for commercial working of a method falling within the patent right.

The right to injunction may, therefore, operate to demand cessation of any of infringement activities present, as described above.

The claim for the destruction of the articles by which the act of infringement was made, the removal of the facilities used for the act of infringement, and other measures necessary to prevent the infringement may be made only together with the claim for injunction and may not be made independently (Article 100 Par. 2 of Patent Law).

3. **Lawsuit:**

Proceedings of lawsuit in Japan are provided for in the Code of Civil Procedure, which is different from it in the U.S., among other things, the Japanese Code has neither the discovery which takes place prior to oral proceedings nor the verdict by jury. Before going into details, we will briefly discuss basic principles under the Japanese Code of Civil Procedure:

(1) **Open Court:**

The principle of open court is provided for in Article 82 Par. 1 of the Japanese Constitution which requires trials to be taken and a judgment delivered at an open court. An exception to this rule is applicable where there is the likelihood of impairing public policy in which case the trial may be held on a closed basis, but its applicability is extremely restricted. Any law suits relating to patent infringements will, therefore, be held on an open basis.

(2) **Debate:**

A lawsuit is maintained on the basis of allegations of the parties with the scope of examination determined and production of evidences conducted on the responsibility of the parties or, to state it differently, any dispute as to interests between individual persons must be solved by themselves and the state should not involve itself beyond such limit as shall be necessary for it to help them solve it.

(3) **Oral Arguments:**

Under the Code of Civil Procedure, a lawsuit must always be based on oral argument (Article 125 of Code of Civil Procedure), and all required evidence must be produced at the place of the oral argument, except with respect to those decisions to be rendered without the oral argument.

(4) **Direct Examination:**

Under the Direct Examination principle, only the judge who

has personally examined evidence at the oral argument has the authority to render a judgment on the case.

In the following, we will pick up some of the points of the civil procedure with particular reference to the patent infringement cases.

3-1. **Requirements of Lawsuit:**

The term "requirements of lawsuit" refers to those to be satisfied in order for the plaintiff to be entitled to a judgment as sought in its complaint. This section will relate only to standing.

In the case of a suit, a person who directly has a legal interest in the right in controversy has the standing to sue. Where a plaintiff does not satisfy that requirement, his complaint will be rejected. In the case of patent infringement suits, a patentee or exclusive licensee and an infringer of the patent right would normally have the standing to sue.

3-2. **Time Limit for Filing Lawsuit:**

The period within which a suit may be filed under the torts law is 3 years from the time the injured party or his legal representative know of the loss sustained ~~or~~ and the person who caused the damage (Article 724 of Civil Code). Under the torts law, a claim for damages may not be made unless willfulness/knowingness or negligence is present.

Apart from the torts law, an action for recovery of unjust enrichment may also be filed. A person who has derived benefit from property of another person without due grounds therefor and thereby inflicted loss upon that another person shall be obligated to return the benefit so derived even when he is so enriched in good faith (Article 703 of Civil Code). The claim for recovery of unjust enrichment will be time-barred in 10 years, in the same manner as in general obligatory rights.

For the purpose of a patent infringement suit, either approach may be available. In actual practice, however, actions appear to be instituted under the torts law rather than the

other, because the patentee as the plaintiff does not have to prove willfulness/knowingness or negligence of the patent infringer, as further discussed later.

An action for a patent infringement may not be instituted until the patent is published (Refer to the Right to Provisional Protection).

3-3. Oral Proceedings:

(1) **What is the "Oral Proceedings"?**

The term, "oral proceedings," is defined as any and all acts of procedure practiced by the court and parties to the lawsuit on the date of oral proceedings. It includes, not only oral argument, but also examination of evidence and delivery of judgment.

(2) **From Commencement of Oral Argument to Delivery of Judgment:**

1) **Date of Trial Fixed by Presiding Judge; Summons (Article 230 of Code of Civil Procedure):**

A writ of summons will be served upon the plaintiff within a few days of filing of the complaint, as well as upon the defendant together with the complaint.

2) **Written Answer Submitted:**

The writ of summons served upon the defendant sets forth the deadline for submission of a written answer. The defendant will not be treated prejudicially, however, even if he fails to so submit the answer by the designated deadline, as long as he does so on or before the designated date for the first oral argument. If the defendant fails to submit the answer and either the defendant or his agent fails to appear at the court on the date set for the first oral argument, the defendant will be considered to have admitted the assertion of the plaintiff (Article 140 Par. 3 of the Code of Civil Procedure).

3) **Date of an Oral Argument:**

(a) If, on the date of an oral argument, the parties employ means of attack and of defense without any preliminary notice thereof, the court will find it difficult what the issues are and the parties will not be able to understand and respond to assertion of the other. Thus, the preliminary pleading is in use to give prior notice of what each party intends to assert in the argument. If the complaint contains description of the method of attack or defense, it serves as the preliminary pleading as well. The written answer is a kind of the preliminary pleading.

(b) On the date of the first oral argument, the plaintiff gives a statement of his claims and the defendant answers to it.

(c) If the defendant in his answer makes an allegation (e.g. to reject the complaint or to ask for delivery of a judgment dismissing the claim) against the claim of the plaintiff, each of the parties will make his allegation in law as well as in fact and expresses his reaction to the allegation by the other.

4) **Continuation of Oral Argument:**

When the oral argument is not finished with on the date first designated, the presiding judge will designate the next date for the subsequent argument, with due consideration for the convenience of the parties. For the moment, the oral argument seems to be held once a month or every two months. The oral argument will be treated as constituting one as a whole how many times it may be made.

Thus, the parties may exercise his method of attack or defense until the close of the oral argument, and the method of attack or defense has no difference in value whenever it is exercised. Submission of the method of

attack or defense may, however, be rejected if, because of willfulness/knowingness of negligence of the party submitting it, it fails to be submitted earlier in the case it could have been done or if submission of the method could give rise to delay in the conducting of the lawsuit (Article 139 of Code of Civil Procedure).

5) **Examination of Evidence:**

Trial is conducted to solve a dispute between the parties by verifying facts and applying the law. It is the evidence that establishes the facts (and laws wherever applicable). The evidence must be collected and produced by the party involved.

(a) **Examination of Evidence Commences:**

Offer of Evidence:

When to Offer:

The party may offer evidence at any time before close of the oral argument.

How to Offer:

Facts to be proven, identification of instructions as to the concrete method of establishing evidence, and relation between the facts to be proven and the method of establishing evidence will be particularly specified.

Examination of Evidence Decided on:

When an offer of evidence is made, the court will investigate whether the fact to be proven is material or not and whether the evidence is necessary or not and, after hearing the statement of the other party, will determine whether to commence the examination of evidence or not.

(b) **Evidence Examined:**
When a decision is given in favor of examination of evidence, the examination is conducted at the court with which the complaint is filed, on the date of oral argument. The method of establishing evidence will consist of interrogation of witnesses, experts' opinion, interrogation of parties by the judge, documentary evidence, and view of verification.

6) **Evidence Evaluated:**
Evidence is evaluated by the judge subject to free estimation of evidence. Facts are ascertained at the discretion of the judge who has examined evidence based on the general trend of oral proceedings.

7) **Conclusion of oral proceedings:**
The presiding judge will conclude the oral proceedings when he judges that no further proceedings is necessary for final judgment.

8) **Delivery of Judgment:**
Judgment is delivered at an open court on the date designated.

3-4. Effect of Judgment:

(1) **Formal Force of Judgment:**
The judgment delivered will become final and binding when the period provided for appeal has elapsed and an appeal (whether "Koso" or "Jokoku") may no longer be made. Incidentally, the "Koso" is defined as an appeal made against finding of facts or construction of laws by the court alleged to have been present at the first instance, and the "Jokoku" is defined as an appeal against contraventions to laws allegedly effected by the court to which the "Koso" appeal is made, in its judgment.

(2) **Force of Judgment or Res Judicata:**

When a judgment becomes formally binding, the judgment of the court in respect of rights or legal relation contained in it becomes enforceable, serving as the basis on which the same subject should be decided.

3-5. Settlement:

It is not seldom that the parties enter into a settlement in the course of oral proceedings. One of the motives for which they do so is the recommendation by the court for settlement. The court may try a settlement at any stage of the proceedings (Article 136 of the Code of Civil Procedure).

4. Provisional Disposition:

4-1. What is the Provisional Disposition?

The provisional disposition provides for such provisional measures to be taken prior to the judgment on the proceedings in respect of the principal action as would give rise to advantageous effect as under the judgment, if there is a dispute in respect of interests which would be subject to serious loss or damage (disadvantage) or may not avoid impending infringement unless an action is taken urgently before the said judgment on the proceedings. Any petition for provisional disposition which is not found to require an urgent action will be rejected. The provisional disposition is stipulated in the Civil Preservation Law.

4-2. Role of Provisional Disposition in Patent Infringement Proceedings:

In the proceedings claiming injunction as the principal action, it is impossible to enforce upon the infringing party prohibition of infringing products from being manufactured or sold unless and until the plaintiff obtains a judgment in his favor and the judgment becomes finally binding. In order that the lawful patentee will not be required to simply sit and see the infringing products prevailing in the market, it is considered, at the time of instituting an action for injunction,

whether to apply for the provisional disposition. The provisional disposition system entitles the patentee to have the manufacturing and sale of the infringing product by the infringer prohibited provisionally subject to certain conditions.

4-3. Provisional Disposition for Injunction:

The provisional disposition seeking cessation of infringing activities, with the claim for injunction as the interests to be safeguarded, is the typical provisional disposition exercised in the patent infringement actions. It is generally called the provisional disposition for injunction.

Requirements for issuance of the provisional disposition order are presence of interests to be safeguarded and of necessity for such safeguard.

(1) **Interests to be Safeguarded:**

The interests to be safeguarded under the provisional disposition for injunction are the interests otherwise lost by infringement of the patent right held by the petitioner. In order to make a petition for the provisional disposition, therefore, the petitioner must substantiate by prima facie evidence that the petitioner has the patent right and that the defendants manufacture or sell the product which comes under the scope of the patent right of the petitioner.

(2) **Necessity for Safeguard:**

An application for the provisional disposition for injunction under the patent right is required to make specific how material the loss or damage sustained has been or how impending the danger of the loss or damage would be. In typical cases in which the provisional disposition for injunction is required, the monopoly or oligopoly by the petitioner should have been destroyed (an decrease in the market share), with the result of a decrease in sales of the patented products, because of patent infringement activities undertaken by the party against whom the petition is made. The necessity for the safeguard will, therefore, have to be

demonstrated by specifically stating what infringing activities of the party against whom the petition is made have inflicted loss or damage upon the petitioner and what the loss or damage so inflicted upon the petitioner has been.

5. Claim for Damages:

5-1. Presumption of Negligence; Estimation of Damages:

The right holder (the patentee or the exclusive licensee) may demand payment of damages against the infringer by virtue of the provision of torts stipulated in and after Article 709 of the Civil Code. This claim requires establishment of (1) willfulness/knowingness or negligence of the infringer, (2) facts of infringement of the right or interest involved, and (3) the amount of damages.

With respect to (1), negligence is presumed to be present under Article 103 of the Patent Law and there is no problem in this regard. With respect to (2), it will suffice the requirement to prove that the patented invention is commercially worked without proper authority. It would not be difficult to do so.

The establishment of (3) is extremely difficult, however. Therefor, the Patent Law contains provisions for estimation of the damages to relieve the injured right holder of the difficulty as much as possible. (Article 102 of Patent Law).

(1) **Presumption of Damages:**

The amount of any benefit received by an infringer because of his infringing activities shall be presumed to be the amount of loss sustained by the right holder (Article 102 Par. 1 of Patent Law). Thus, it will suffice for the right holder to prove the amount of benefit received by the infringer. This provision is made from the viewpoint that it would be somewhat easier for the right holder to prove the amount of infringer's benefit rather than the amount of his loss sustained by infringement.

For the purpose of establishing the amount of infringer's

benefit, the right holder may request the court, by virtue of the provision of Article 105 of the Patent Law, to invoke an order for submission of such documents in the possession of the infringer as are necessary for calculation thereof.

The term "benefit" is generally held to mean the net profit (sales price of the infringing product less all cost and expense) rather than the gross profit (sales price of the in fringing product less direct cost of production). On the other hand, the infringer may disprove the presumption by affirmatively substantiating the amount of right holder's loss, for which purpose the infringer may equally demand the court to issue the order for production of the documents in possession of the right holder.

In the case the right holder does not commercially work the patented invention by himself, the infringer may get rid of the presumption by proving that fact, on the ground that the right holder has not sustained the loss equivalent to the benefit which could have otherwise been enjoyed by the right holder.

It is also held that the infringer may likewise get rid of the presumption if it is successfully proven that the benefit derived by the infringer is firmly based on particular capability or circumstances peculiar to the infringer.

(2) **Demand for Payment of Equivalent of License Fee:**

Article 102 Par. 2 of the Patent Law provides for the demand for payment of equivalent of license fee, to enable the right holder to collect payment of, at least, the sum equivalent to non-exclusive license fee but for any affirmative proof otherwise. There is no uniform basis which decides what the sum equivalent to non-exclusive license fee is. Hence, there is no alternative but for deciding on a case-by-case basis what it should reasonably

be.

As a method of calculating the license fee, however, there is an approach known as the "method of distribution of net profit by three factors." It is based on the approach that the net profit is not derived solely from the patented invention but infringer's capital and his sales efforts also contribute to it and, therefore, should each be entitled to a share of the net profit, according to the contribution of respective factors (shares to be individually determined on a case-by-case basis).

5-2. Punitive Damages

In Japan, there is no system equivalent or comparable to the punitive damages in the United States. Any issues raised in Japan in connection with the punitive damages relate principally to whether, in connection with execution in Japan of a judgment delivered in the United States, the punitive damages can reasonably be executed in Japan.

With respect to execution of a judgment delivered in a foreign country, Article 200 of the Code of Civil Procedure provides that it may be executed in Japan if all requirements set forth in it are met. The issue will, therefore, relate to the question of whether the judgment delivered by a court of a foreign country satisfies one of the requirements that such judgment shall not be against the public order or good morals in Japan. The only precedent case involving the punitive damages available in Japan, although not a patent infringement case, is a decision delivered by the Tokyo High Court on February 18, 1991, which held that, while the punitive damages themselves would not generally be against public order or good morals, a case-by-case judgment must be made, and that it will be against the public order or good morals to execute a foreign judgment ordering payment of a huge amount of punitive damages based on insufficient grounds, and did not allow the execution of punitive damages in that case.

Part 2. Aspects of Patent Infringement Cases

1. After Detection of a Patent Infringement:

1-1. Detection of a Patent Infringement:

What is done after detection of any product of competitors which may infringe your patent appears to be almost the same between Japan and the United States as to the method and steps, there being no substantial difference. What you do first is to confirm the fact of infringement, followed by the confirmation of validity of your patent.

Prior to sending a warning letter following the confirmation of the above, it is necessary to establish your policy as the right holder -- as to whether you grant a license or invoke the right to injunction, or whether you settle it on an amicable basis or by a lawsuit.

If you have your own products based on your own patent, it would be the basic approach, for the purpose of precluding patent infringements, to specify the patent number on your product so your competitors will notice the existence of that patent.

If the product of the other party is found to fall within the scope of the claims of your patent, then you will have to confirm whether your patent is valid, including at least whether the annual patent maintenance fee has been paid and whether you have made any contradictory statement in the file wrapper. (Scope of the claims, Article 70 of Patent Law; Principle of Fair and Equitable Trade, Article 1 of the Civil Code).

Prior to the giving of a warning, it is necessary to make sure of validity of your patent because your patent may be invalidated or scope of the claim of your patent reduced as the result of any objection to it filed by the other party. In Japan, a petition for Trial for Invalidation may be filed even after the expiration of the patent right. Care should be taken to make sure that your patent is valid. (Making of opposition, Article 55 of Patent Law; trial for invalidation, as above-mentioned)

1-2. **Notice of Warning:**

If infringe is found, a notice of warning is usually dispatched, including an offer for grant of a license. The notice is generally given in writing, by certified mail, identifying your interests infringed by the other party and the fact of infringement activities of the other party, and designating the deadline by which answer of the other party must reach you.

Unless it is evident that specific infringement activities are present, the first notice is usually so drafted as not to use the specific word, "Infringement," simply drawing its attention to the presence of your patent by a letter inquiring whether it is interested in it.

The notice of warning often serves as a starting point for negotiation with the other party. If you intend not to file a complaint with the court immediately after it but to start negotiation with the other party for solution of the case by grant of a patent license with or without a cross license, it may prove useful.

2. **Patent Infringement Lawsuits:**

In the case of infringement of your patent, you may make a petition for cessation of the infringement activities and demand payment for damages under the Japanese law system discussed in the previous Part. Usually, notice of warning is served upon the other party and, if the infringement activities are still continued, then you will consider a remedy by lawsuit. In the case of patent infringement lawsuits, the question of whether things constituting such alleged infringement are within the scope of patent right will be the issues to be argued.

The scope of patent right is determined principally by the granted claims. The defendant will try various defenses, as discussed later. If you want to solve the infringement case by lawsuit, you as the right holder must be fully prepared for it by making sufficient investigation of the case.

3. Declaratory Action for Confirmation of Non-Existence of Right to Injunction:

The party who is served with the warning of patent infringement or against whom a statement that he is an infringer is publicized is entitled to a petition for a provisional disposition for prohibition of disturbance, by instituting as the main action a lawsuit for confirmation of non-existence of the right to injunction.

He may also take the statement publicized by the patentee saying that he is an infringer as statement and distribution of falsified facts provided for in Article 1 Par. 1 Sub-par. 6 of the Unfair Competition Prevention Law, and seek the provisional disposition by way of prohibition of the said statement and distribution of falsified facts.

4. Defense in Lawsuit:

4-1. Defense Alleging that the Patent is Clearly Anticipated by Publicly Known Technology:

In the patent infringement cases, the defendant may well challenge the validity or the scope of the claims of the patent. Here is an important matter to be kept in mind under the Japanese Patent Law. It is the Patent Office who has the authority to determine whether a patent right is valid or not. The court does not go into this particular area.

In order to invalidate a patent, a petition for trial for invalidation of the patent must be filed with the Patent Office and the decision for invalidation must be obtained. Therefor, in the case of patent infringement lawsuit, the court assumes that the patent on issue is valid. Thus, the question will arise with respect to a complaint based on the patent whose claims are identical to publicly known technology or contain publicly known technology.

In cases like this, it would not be proper from the viewpoint of realization of justice to simply protect interests of the patentee. Courts cope with this question through various means.

If the scope of the claims contains, in part, publicly known

technology, courts have held in their precedents that the scope of patent right should not be automatically determined by the scope of the claim but should be determined excluding that publicly known part of the technology, to protect the person who is commercially working the invention from unfair exercise of right (August 4, 1964, Supreme Court.). Courts are positively participating in construction of the scope of patent right.

Then, what about if the claims in entirety are identical to publicly known technology? The person who is commercially working the invention will deal with the case by defense alleging abuse of rights or Technology of Free Use. Article 1 Par. 3 of the Civil Code says, "Abuse or misuse of right is not permissible", strictly prohibiting undue exercise of rights.

The defense alleging abuse or misuse of right is to assert that the patent rights in issue are identical to the publicly known technology and exercise of such rights amounts to abuse of rights. On the other hand, the defense alleging Technology of Free Use is based on the approach that any person may commercially work any publicly known technology freely and such commercial working should not be disturbed in any way.

A couple of precedents have held those defenses based on abuse of right or Technology of Free Use (November 26, 1976, Nagoya District Court; April 17, 1970, Osaka District Court). But it is rare that these defenses are held as alleged by the court because, as previously mentioned, the court does not deliver a judgment as to whether a patent is valid or not. Most of the precedents and prevailing theories construe the claims narrowly and tend to exclude assertion of the patent right rather than excluding exercise of patent rights as abuse, with due consideration for the competence of the Patent Office. In actual cases, the court construes the scope of technology within the description of examples in the patent specification. (July 19, 1990, Osaka District Court etc.)

4-2. Defense with License by Virtue of Prior Use:

(1) What is the License by Virtue of Prior Use?

The license by virtue of prior use is the non-exclusive license provided for in Article 79 of the Patent Law. In short, it is a non-exclusive license of right of the person who has been commercially working the invention in Japan or has been making preparation therefor at the time of filing of a patent application.

More specifically, where, at the time of filing of a patent application, a person who has made an invention by himself without knowledge of the contents of an invention claimed in the patent application or has learned how to make the invention from a person just referred to, has been commercially working the invention in Japan or has been making preparations therefor, such person shall have a non-exclusive license on the patent right under the patent application. Such license shall be limited to the invention which is being worked or for which preparations for working are being made and to the purpose of such working or the preparations therefor.

In other words, license by virtue of prior use is established to restrict the patent right and protect the prior user within his invention which is being worked or for which preparations for working are being made.

It differs from invalidation of patents by virtue of public use before application and also from the first-to-invent principle of the United States in which, where a substantially identical patent application is filed by two different applicants, the patent right is granted to the one who made the invention before the other.

The license based on prior use and the public use may be compared, as follows:

	License by virtue of prior use	Public use
Used as:	A plea of non-infringement	Ground for of patent.
When applied:	When warning of infringement or suit for infringement is served.	When filing an opposition or filing a petition for invalidation of patent.
Petition filed with:	Court	Patent Office
Means of evidence:	Internal documents relating to manufacture/ sale or preparation therefor.	Goods sold in the market and internal and/or external documents relating thereto.
Advantageous effect:	Non-exclusive license	

(2) **Requirements for License by Virtue of Prior Use to Take Place:**

In order for the license by virtue of prior use to take place, the commercial working of the invention or the preparations therefor must be present at the time of filing of a patent application. If the commercial working of the invention or the preparation therefor is discontinued prior to the patent application, the license by virtue of prior use does not occur.

The commercial working of an invention or preparations therefor, if undertaken at the time of filing of a patent application, will be sufficient in order for the license by virtue of prior use to take place. The prevailing theory says that the license by virtue of prior use will occur as well even if that activity is discontinued after the time of filing of a patent application.

It is not specific at what stage the preparation for the commercial working of an invention commences to occur. Any such stages as mere thinking of the business or testing or research is not considered the preparation for the commercial working of the invention. The invention must be completed and the actual activities of having started the preparation of business with the

intention of reducing the invention to commercial practice must be present.

Under a number of the precedents, the license by virtue of prior use was disapproved at the stage at which only design drawings were made. A license by virtue of prior use was awarded on a case in which, in respect of a product which is not manufactured until a specific order therefor is placed, preparations have been made to such extent that the final manufacturing drawings could readily be made out as soon as an order therefor is received and detailed arrangements made, and an estimate has been submitted to a prospective customer in response to its inquiry (February 27, 1984, Nagoya District Court.)

In another case, the license by virtue of prior use was awarded when part of a plant has been purchased and a subcontractor to whom manufacturing was sublet has placed orders for manufacturing and purchase of necessary equipment and for required raw materials (May 30, 1964, Tokyo District Court.)

(3) **Scope and Advantageous Effect of License by Virtue of Prior Use:**

There is a theory which restricts the scope of continued use by the prior user to the technical mode that he has been commercially working or has been preparing therefor at the time of filing of a patent application. But only few precedents support this.

Article 79 of the Patent Law provides, in part, "Such non-exclusive license shall be limited to the invention which is being worked or for which preparations for working are being made and to the purpose of such working or the preparations therefor."

The scope of a license by virtue of prior use, therefore, should be construed not so as to be restricted to the technical mode which is being worked or for which preparations for working are being made at the time of filing of a patent application, but so as to include modified mode as long as the invention and the purpose of such working or preparations therefor remain the same

as before.

Many precedents, in fact, approve of the license based on prior use on the basis of such reduction to practice or preparations therefor as may have been varied, rather than such reduction to practice or preparations therefor present at the time of application of the patent application.

Part 3. Arbitration

Recently, attention to arbitration as a means of dispute resolution is increasing in the area of the intellectual property. The arbitration has reasonable advantages over the lawsuit. To cite a few, examination of the arbitration case is finalized sooner than that of the lawsuit, the arbitration costs less than that of the lawsuit, and examination of the arbitration case is held on a closed basis with the result that the case is not made open.

The settlement of the case by arbitration will be worth receiving more attention in the future, particularly when the time and cost required for dispute in the lawsuit between the plaintiff and defendant are considered.

There is no basic difference between the arbitration in the United States and that in Japan. As far as the intellectual property is concerned it will be worthwhile to note the following. First, while validity of patents may be challenged by arbitration in the United States, it is the Patent Office, and not the court, in Japan that decides whether a patent is valid or not, and it is very unlikely that validity of a patent is argued in the arbitration case. Nevertheless, use of the arbitration system would often prove to be advantageous in Japan as well.

Provisions relating to the arbitration are contained in Articles 786 through 805 of the Code of Civil Procedure. In the same manner as in the United States, the arbitration leaves its solution to arbitrators, by way of an agreement previously entered into between the parties with the specific understanding that each party will be bound by the award rendered. Outline of

the arbitration system in Japan is shown below:

(a) Adoption of arbitration requires consent of both parties.

(b) Except where the parties to the dispute have an agreement in effect to the contrary, each party may appoint an arbitrator.

(c) In the case two or more arbitrators are present, an opinion supported by a majority will constitute the decision to be made.

(d) The arbitration award has the same legal effect between the parties involved as the final judgment.

(e) With the judgment of execution, the arbitration award rendered may be executed.

Specialized in commercial arbitration, the Japan Commercial Arbitration Association has arbitration rules of its own.

PIPA COMMITTEE 2, GROUP C

Practice and Laws with Respect to Patent Infringement Litigation in Japan

Part I: Scheme of Law		
Subject (Reference pages in the paper)	Japan	U.S.A.
Duration of Patent Right (Page 2)	15 years from the date of publication of the patent application but not to exceed 20 years from the filing date of the patent application.	17 years from the patent registration.
Laid-open application (Page 2)	Patent application will be laid open after an 18 months period has elapsed from the filing date of the patent application	No equivalent provision.
Provisional protection right (Page 3-4)	Upon laid-open application, applicant is entitled to the provisional protection with the right to the payment of compensation. <Article 65-3, Patent Law> Exercise of the right to commercially work the invention claimed in the patent application after publication of the application; absolute liability if the patent is not granted. <Article 52 Part 4, Patent Law>	No equivalent protection as Japan. Patent applicant is not protected until the patent is registered.
Injunction (Page 4-5)	Patentee may require discontinuance or refrainment of infringement <Article 100, Part 1, Patent Law>	Injunction, with almost the same purpose as under Japanese Law.

PIPA COMMITTEE 2, GROUP C
Practice and Laws with Respect to Patent Infringement Litigation in Japan

Part I: Scheme of Law		
Subject (Reference pages in the paper)	Japan	U.S.A.
Lawsuit (Page 6-12) (1st instance)	(1) Complaint (2) Answering (3) Oral proceeding 1) Preliminary pleading * Argument, showing * Defense 2) Evidence Hearing * Means of evidence - Documents - Examination of witnesses - Expert evidence - Interrogation of parties by Judge(s) - Real evidence or view Evaluation of evidence Free estimation of evidence (4) Judgment	(1) Complaint (2) Answering (3) Discovery 1) Deposition 2) Interrogatories 3) Request for production of documents and things etc. (4) Pretrial conference (5) Selection of jury (only if jury is adopted/the first instance) (6) Oral argument - Argument, showing -Defense (7) Verdict by jury (8) Judgment

PIPA COMMITTEE 2, GROUP C
Practice and Laws with Respect to Patent Infringement Litigation in Japan

Part I: Scheme of Law		
Subject (Reference pages in the paper)	Japan	U.S.A.
Lawsuit (Page 6-12) (2nd instance) (3rd instance)	Appeal Settlement: * Timing of settlement in the course of proceeding. Recommendation of settlement by judge(s).	Appeal Settlement: * Timing of settlement in the course of proceeding. Likely to take place at pretrial stage
Provisional desposition (Page 12-14)	It is granted provisionally, prior to judgment on main action, in the case of serious loss/damage or inability to avoid impending loss or damage. <Article 23 ff. of Civil Preservation Law>	Preliminary injunction

PIPA COMMITTEE 2, GROUP C
Practice and Laws with Respect to Patent Infringement Litigation in Japan

Part II: Aspects of Patent Infringement Cases		
Subject (Reference pages in the paper)	Japan	U.S.A.
If an infringement is found (Page 17)	* Investigate contravention and patent validity. * Estimate size and loss of infringement. * Business relation/licensor-licensee relation. * Company policy.	Seemingly, substantially same as Japan.
Warning (Page 18)	Warning letter	Warning letter
Patent infringement lawsuit (Page 18)	Injunction, claim for damages	Injunction, claim for damages
Declaratory action for confirmation of non-existence of right to injunction (Page 19)	Declaratory action for confirmation of rights or other legal relation in respect of disputes between parties involved.	Declaratory Judgment
Defenses in infringement litigation (Page 19-24)	* Abuse or misuse of right * Invalid patent * Technology of free use * Limitation of actions * Prior use * Violation of Anti-Monopoly Law	* Laches and estoppel * Prescriptions * Invalid patent * Abuse or misuse of right * Violation of Anti-trust Law * Fraudulent acquisition of patent

Part III: Arbitration		
Subject (Reference pages in the paper)	Japan	U.S.A.
(Page 24-25)	Available subject to agreement between parties involved. <Article 786 ff., Code of Civil Procedure> Rules of the Japan Commercial Arbitration Association. Available in Japan for intellectual property rights.	Substantially same as Japan Rules of AAA Watched with interest as alternative dispute resolution (ADR).

Title of the Presentation

PATENT INFRINGEMENT LITIGATIONS IN EUROPEAN COUNTRIES AND JAPAN

Date: October, 1992 (The 23rd Okayama Meeting)

Japanese Group, Committee No. 3

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Keywords: Patent Infringement Litigation, Civil Procedure, Litigation Cost, Discovery, Temporary Injunction.

Abstract:

There are some publications on patent infringement litigations in European countries. However, procedure for actual patent litigations are not well known. A questionnaire was prepared to conduct surveys among European patent attorneys. Comparative analysis was made including Japan.

I. Introduction

There has been an increasing interest in jury trial in the U.S.A. among business people in Japan. Taking this into account, this committee chose last year the topic of jury trial in U.S. patent litigations for the discussion by panelists at the 22nd International Congress in Rochester.

This year, this committee focuses on European Community which shortly appears as a single market, with more emphasis on aspects of patent infringement litigations in Europe.

Initially, members intended to study the "Judgment Convention" which provides for the jurisdiction of courts and the enforcement of judgments across the board of European countries. We thought that study in that area would be practical information for business activities. But we shortly realized that although there are some articles on "forum shopping," European patent attorneys are not putting much weight on this area.

Consequently, we have changed to study procedures of patent infringement litigations in major industrialized countries in Europe, with specific emphasis on flows and steps of litigations and available evidences. Discussion here is incorporated below with Japan and the U.S.A. for comparison purposes.

II. Collection of Data

The committee has selected, as countries to be surveyed, Germany, France, Italy and the United Kingdom (U.K.). For each country, two patent attorneys were selected to whom questionnaire on patent infringement litigations was sent. Discussion is based on information collected through the questionnaire. With respect to Japan and the U.S.A., information was sought from available reference materials. A comparative table is shown in Attachments 1 ~ 5.

III. Process of Patent Litigations

Processes of patent infringement litigations in the searched countries were compared with that in Japan. There is basically a similarity in the process between the European countries and Japan so that the process and procedure in Japan is discussed as an example.

1. Lawsuit

A lawsuit is commenced when a plaintiff files a complaint before a district court. A copy of the complaint is served to the defendant in 1 to 3 days. Then, the defendant answers in writing within a month or so, and a copy of the answer is served to the plaintiff. Thereafter, preparatory pleadings are submitted to the court so as to cover all the issues, and hearings are held based on the pleadings, respectively. Such a pleading and hearing, open to public, is repeated 10 to 20 times at 1 to 2-month intervals until the judge forms conviction on the issues. During the period for trials, technical lecture is provided to the judge with regard to the technical background, scope of patent claims and the accused product/process. The district court decides the case in 2 to 3 years from the commencement of the lawsuit.

Parties may appeal to High Court against the decision of the district court. After the written answer is filed by Appellee in about one month, preparatory pleadings are filed before the court several times and then hearings are held a couple of times. High Court usually decides the case in 1 to 2 years from the appeal.

Supreme Court may hear appeal against the decision of High Court. A written answer is filed and a preparatory pleading may be filed, and a hearing based thereon may follow. The pleading and hearing is held one time at most. Supreme Court usually decides the case in 6 to 8 months from the appeal.

2. Temporary Injunction

A case for temporary injunction claims an urgent judgment by

the court. The judge usually hears the allegation of the claiming party and makes its decision without hearing the other party's rebuttal. However, in the case of industrial property, the judge decides whether to issue temporary injunction after the hearing from both parties. This is because of the complexity of an industrial property case.

A temporary injunction case starts with a claim filed by a claimant. A copy of the claim is served to the other party. Preparatory pleadings are submitted, and a hearing based thereon is held once in each month for about 10 times. The hearing is not open to public. During this period, the judge is provided with technical lecture on the technical background, scope of patent claims and the accused product/process. After having sufficient understanding of the case, the judge suggests a settlement to the parties. If the parties agree to the settlement, the case is withdrawn. If either party is not agreeable to the settlement, the court must issue a temporary injunction or dismiss the claim. This judgment is solely for the temporary purpose. Generally, the claimant is to bring the case into a main suit thereafter. In some occasions, however, the temporary injunction procedure and the main suit can be carried in parallel. Enforcement of the temporary injunction usually requires a bond in the legitimate amount.

IV. Comparative Review

1. Patent Applications and Granted Patents

(1) The number of Applications and Granted Patents

Fig. 3 shows the number of patent applications and granted patents in Germany, France, Italy, the U.K., the U.S.A. and Japan.

Compared with Japan and the U.S.A. where the patent applications reach approximately 350,000 and 180,000 per year, respectively, the number of patent applications in these four European countries are not large, where it roughly varies from 10,000 to 100,000.

The number of granted patents reach about 40,000 per

year in Germany and France. It is less than US where about 100,000 patents are issued, but it is comparable with Japan where about 60,000 patents are granted.

(2) Applications and Patents per GNP

Fig. 4 shows the number of patent applications and the number of granted patents per GNP. This review was made to compare the number based on a unit economic level.

It is clear that in Germany and France, the number of patent applications per GNP is almost twice as much as the number in the U.S.A., and is about a half of the number in Japan. While these two countries show very large figures, the U.K. is at the U.S. level.

An interesting tendency is seen that the statutory law countries have large numbers while the case law countries have small ones.

The number of granted patents per GNP in Germany and France exceed those in Japan and the U.S.A. The U.K. and Italy remain at the same level of Japan and the U.S.A.

2. Patent Litigations and Litigation Costs

Fig. 5 shows the total number of patent litigations and its ratio to granted patents in a year. Fig. 6 compares litigation costs.

It is noticeable the number of patent litigations reaches 300 in Germany, and about 10 in the U.K.

The ratio is high in Germany and Italy. It accounts for 50 ~ 60% of that of the U.S.A. The ratio in the U.K. is almost the same as that in Japan.

Litigation costs at the district court in the European countries remain approximately $100,000, which is close to the costs in Japan. The U.S.A. is outstanding where $ 3 million is shown.

3. Steps of the Court

Fig. 7 shows judicial hierarchy depending upon the issues.

(1) Validity of Patent

The issue of patent validity can be argued within a litigation procedure for patent infringement in France, Italy, the U.K. and the U.S.A. In Japan and Germany, patent validity is separately heard. In Germany, it is heard in the Federal Patent Court.

In Japan, the Patent Office examines patent validity. Tokyo High Court has an exclusive jurisdiction over the appeal against the decision by the Patent Office.

(2) Patent County Court

In the U.K., Patent County Court (PCC) was established in September, 1990 which is available as a first instant court for patent infringement litigations.

While High Court in the U.K. usually requires more than 36 months for conclusion of a case, PCC is scheduled to conclude in 12 to 18 months. However, depending upon complexity, a case may be transferred from PCC to High Court. On the other hand, if the parties wish to go faster and cheaper, their case can be transferred from High Court to PCC.

4. Characteristic Features of Litigation Procedures

Table 1 shows characteristic features of patent litigations in each country.

(1) Jury Trial

The U.S.A is the only country that introduces Jury trial for patent litigations.

(2) Trial Lawyer

In each country, general lawyers play a main role in procedures, and patent attorneys support them. In the U.S.A., however, patent attorneys are the additionally equipped with technical education among general lawyers and play a main role in procedures.

In France and the U.K., only barristers correspond to general lawyers and can speak before the court on behalf of

the parties. Solicitors participate only in the course of preparing legal documents.

Before PCC in the U.K., solicitors and patent attorneys are qualified to proceed.

In Italy, general lawyers include three categories, namely: Procuratore legale, Avvocato and Avvocato patrocinate in Cassazione. The first one, Procuratore is limited to specific district courts and high courts while the second one, Avvocato is available for all district courts and high courts in Italy. The last category is for all the district courts, high courts and Supreme Courts.

(3) Collection of Evidence

Discovery is a means of collecting evidences employed only in the U.K. and the U.S.A. In the U.K., however, discovery cannot be used as a fishing exercise.

Seizure is a means for getting evidences under court's order. Except for Japan and Germany, seizure is available.

(4) Trial

Except for U.S. courts and ~~PCC~~ the High Court in the U.K., patent trials are conducted mainly in writing.

In Japan, theoretical procedure is to prepare pleadings in writing and to orally state based thereon. In actuality, however, oral statement is usually omitted by simply saying "The description of the preparatory pleadings is hereby stated."

(5) Temporary Injunction

Each country admits temporary injunction under specific conditions thereby to establish an earlier remedy against damages by infringement.

In the U.S.A., there are two types of temporary injunction, namely; Temporary Restraining Order (TRO) and Preliminary Injunction. TRO is issued without hearing to allow a short term injunction. Preliminary injunction is ordered only after necessary hearings.

(6) Working by Defendant after Injunction is Ordered

When an injunction is ordered, restraints on Defendant's working (making, using and selling) differ from country to country. In the U.K. and the U.S.A., Defendant cannot continue its working during the pendency of the case in the appellate court or Supreme Courts. In Germany and Italy, Defendant can continue its working until the appellate court decides the case. After the appellate court decides in favor of the injunction order, Defendant can no longer continue its working. To the contrary, Japan and France allows the continuance of working in principle during the pendency in the appeal court or the Supreme Court.

However, in any countries, working is unavailable in case an interim enforcement is ruled. In the U.K., Defendant has to deposit a bond in order to continue working. In Germany, to the contrary, Plaintiff has to deposit a bond to legally prevent Defendant from working.

(7) Summary Judgment

Summary judgment is a system only adopted in the U.S.A. to assure an earlier decision. In view of earliness of court decisions, PCC in the U.K. may have substantially the same effect.

(8) Reinbursement of Attorney's Fees

Attorney's fees are recoverable in Germany, France, Italy and the U.K. in principle, while in Japan and the U.S.A. they are rarely recoverable.

To be more specific, attorney's fees are recoverable in Japan when the complaint is obviously groundless causing an unjustifiable burden to Defendant. However, chances for being found recoverable are quite small.

The U.S. courts usually find attorney's fees recoverable in such groundless cases, and in a case where a patent at issue was obtained by fraud.

Germany provides for statutory amounts for reinbursement in proportion to the litigation costs.

Reinbursement is available in France by 10% or less of the actual legal costs, by 10 ~ 30% in Italy and about 75% in the U.K.

5. Claim Interpretation

Table 2 summarizes available doctrines for claim interpretation.

(1) Scope of Protection

Description of the claim defines the scope of protection. In actuality, however, the scope of protection is determined differently depending on the countries.

European countries have traditionally been protecting the principle of inventions. This tradition allows flexible interpretation of the claim even after the protection based upon the claims has been introduced. While following the claim descriptions, European countries tend to draw a line somewhere between the narrow scope defined by the claim wording and the broad scope under the essential concept of inventions. Consequently, broadness of their claim interpretation resides between Japan and the the U.S.A. Among European countries, the U.K. seeks narrowest protection with France, Italy and Germany to follow.

Since its law amendment in 1979, Italy has weighed claim wordings for determining protection scope. However, a high level of flexibility is applied in case of determination of the scope of patent protection.

In the U.K., claim wordings define the scope of protection with reference to the description of the specification and the drawings.

In Japan, basically, claims are interpreted literally. However, because of its linguistic nature, the scope of individual words are flexible according to the legal interpretation method, and thus the coverage of the claim can be extended or shortened with reference to the purpose of the invention. This may be named a doctrine of word interpretation. In any event, however, this doctrine cannot

expand the scope so as to cover such things that the constituent words can by no means reach with their inherent meanings.

The U.S.A. is a contract oriented society in which the meaning and the scope of words tend to be severely costructed. If such a severe construction would be applied to the claim interpretation, the protection of patent rights might be too narrow and weak. Thus, a doctrine of equivalents was introduced in which the protection is extended to the "equivalents" apart from the literal scope of the claim. Currently, this doctrine seems to have been applied expandedly to cover unjustifiable "equivalents."

(2) Doctrine of Equivalents

In Germany, if equivalent elements are patentable, such elements will be judged infringing.

French courts review the appearance, function and result of a means to conclude its equivalency.

In France, conclusion on equivalency is led based on the following.

1) When an invention includes means which is new in its appearance and function, an item having different appearance but achieving simillar results by the same function will be regarded as an equivalent. Then infringement is found.

2) When an element of an invention is not new in its function but new in its appearance, an item will be regarded as an equivalent and found infringing the invention only if they have an equivalent appearance.

The U.K. adopts a method called "purposive construction" which includes a 3-step test. The first and second steps determine the magnitude of effects and their unobviousness respectively. The third step reviews the intent of the patentee as to claim wordings. Based on these steps, finding of

infringement is made in the way similar to the doctrine of equivalents.

The purposive construction in the U.K. includes following methods for interpretation.

1) If the variant exhibits a significant difference in the way the invention works, it is considered outside the scope.

2) If it is not obvious to those skilled in the art at the time of publication that replacement by the variant would not cause any material difference, then, it is considered outside the scope.

3) Even if that is obvious to the skilled in the art, it is considered out of scope if he/she would have understood that the patentee's intention was directed to the strict meaning of the words used in the claim. Otherwise, infringement will be found.

In Japan, the doctrine of equivalents could be adopted when and if a literal scope is unreasonable in view of the gist of the invention. However, the doctrine of equivalents in Japan is only applicable to elements for replacements having the same function and effect, provided that such an identical function and effect was anticipated by those who are skilled in the art. Its application is restricted to items which have the same principle of solution.

(3) File History Estoppel

In Germany and the U.K., statements made during the prosecution of a patent application constitute estoppel and affect the determination of scope of protection.

In Japan, statements during the prosecution stages do not constitute estoppel in strict meaning. However, they can be referred to for the interpretation of the to-be-granted claims.

(4) Review

It should be aware that scope of protection is influenced by the character of languages. In Japan, practice flexibly defines the meaning of words to consider whether an object falls within or not. In contract, U.S. practice brings the object closer to the words to decide infringement.

A patent claim is inherently a contract between the patentee and the general public. Whether the patentee should be responsible for the wordings he/she used in the claims thereby to minimize a nuisance to the public, or should be fully protected at the sacrifice of and the harassment to the public would be a matter of balance and social policies in respective countries. Their history and culture are prevailing factors.

V. Conclusion

Some aspects of infringement litigations in four European countries (Germany, France, Italy and the U.K.) have been discussed with comparison to corresponding aspects in Japan and the U.S.A. Interesting point to be noted is that litigation costs in these four countries are approximately $100,000 which is about the same as Japan, and that U.S. litigation costs are extremely expensive. This fact raised another question: How do U.S. companies regard the expensive litigation costs and how do they cope with such costs? It would be precious opportunities to hear from the U.S. groups on this point.

In the future, the member of infringement litigations will increase not only in the U.S.A. but in European countries. It would be a pleasure of the committee members if this report should provide with some insights for patent practitioners.

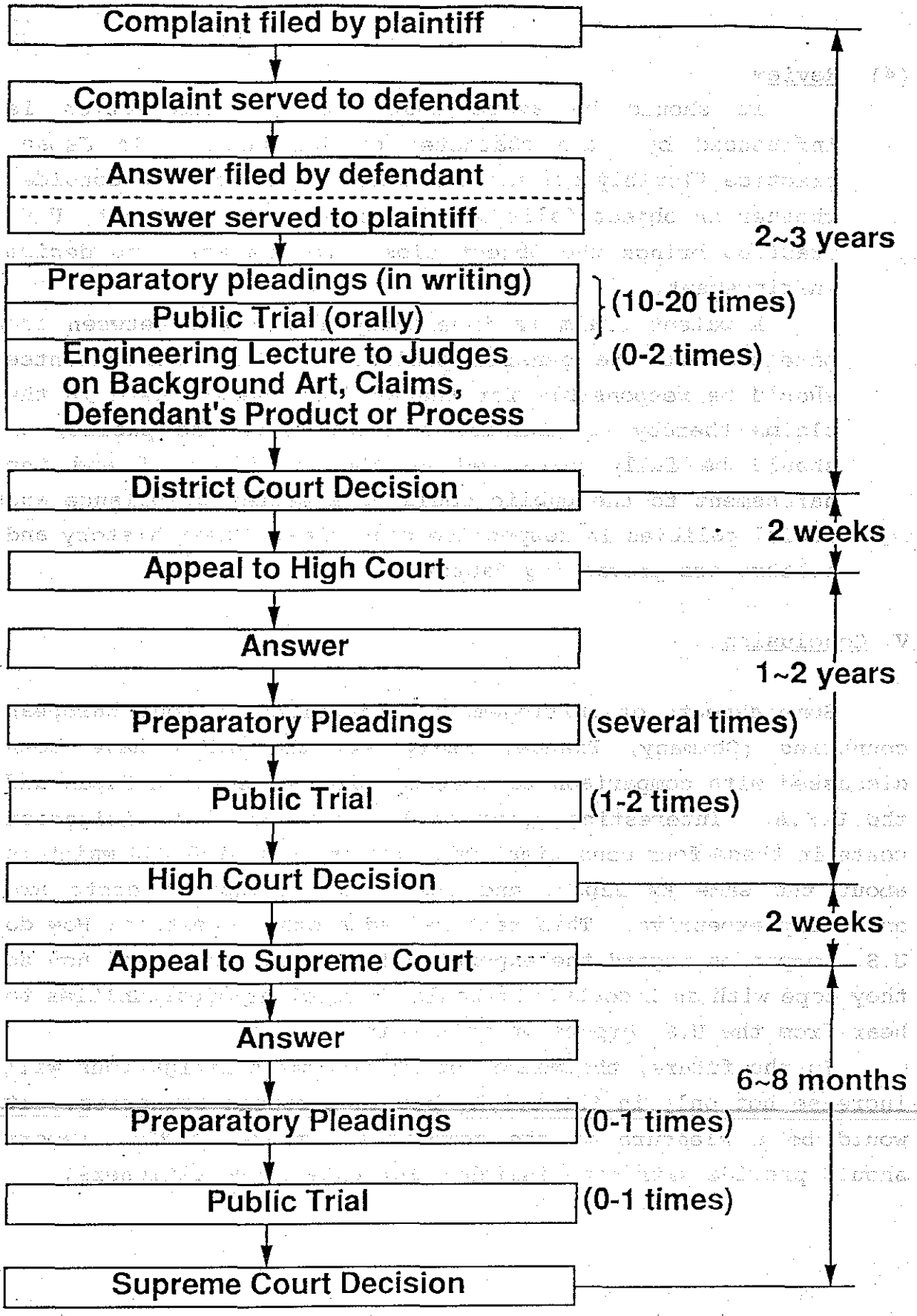


Fig. 1 Flow of Suit in JP

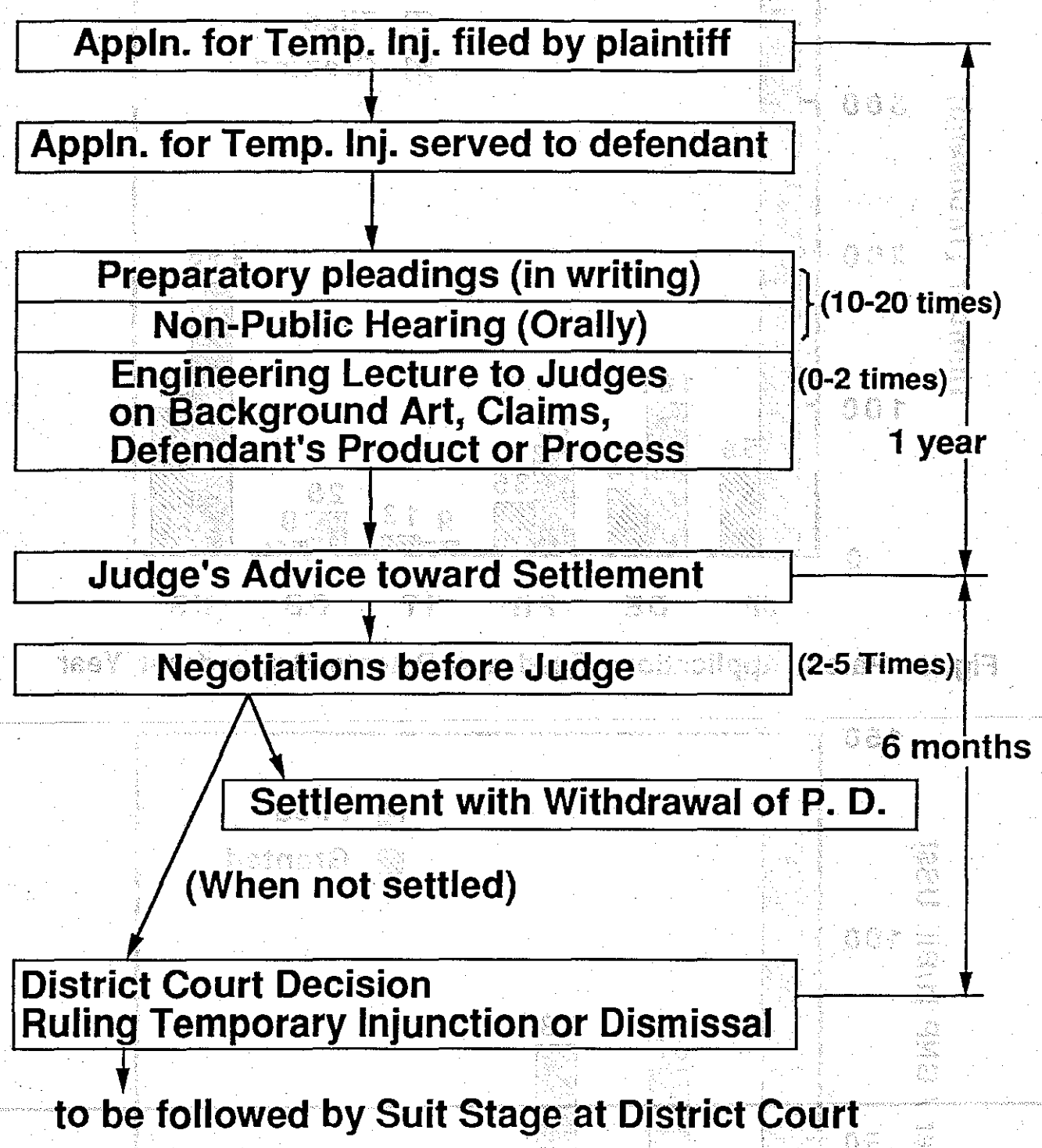


Fig. 2 Flow of Temporary Injunction in JP

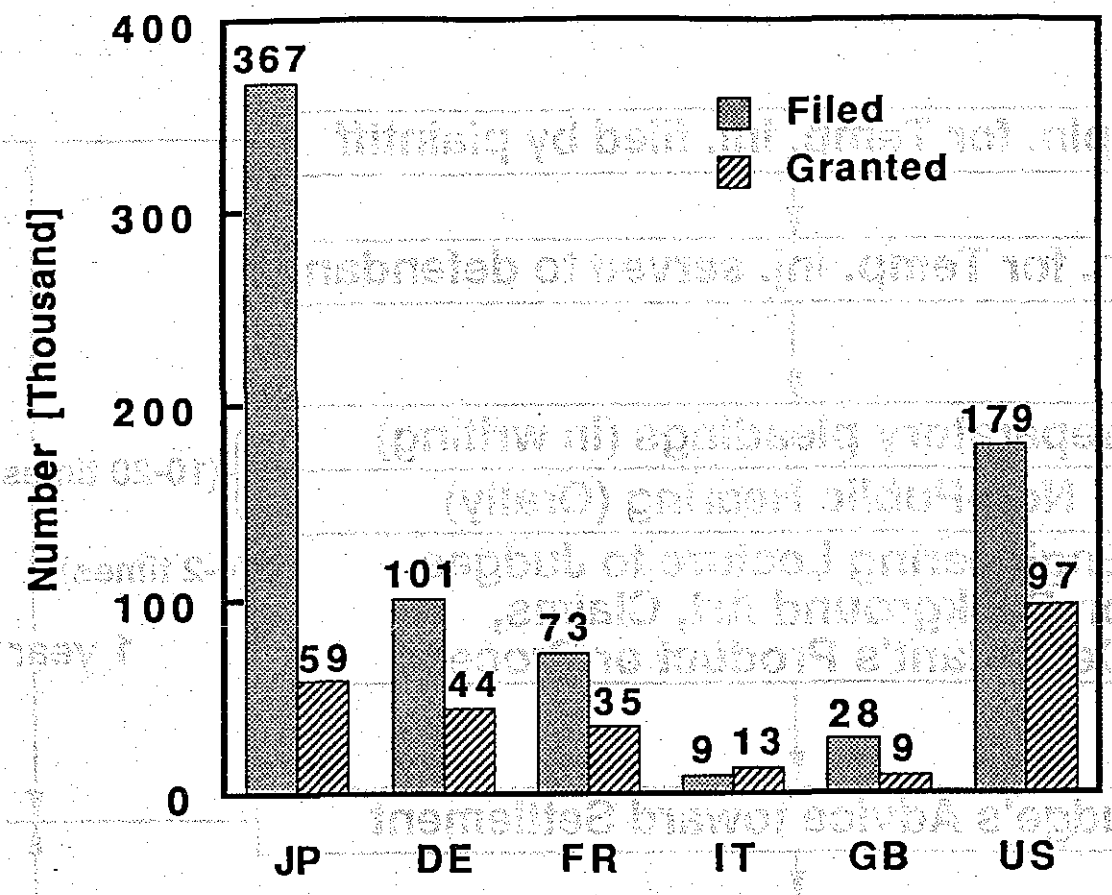


Fig. 3 Patent Applications Filed and Patents Granted per Year

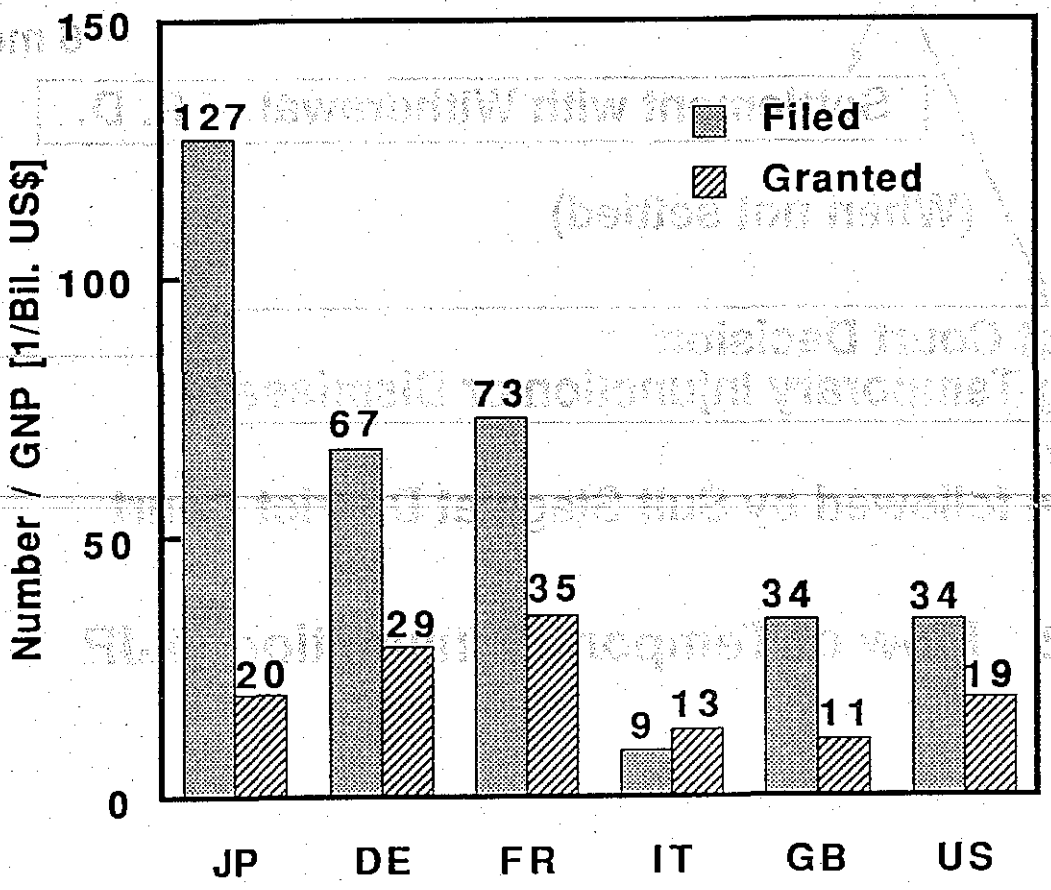


Fig.4 Patent Application Filed and Patent Granted per GNP

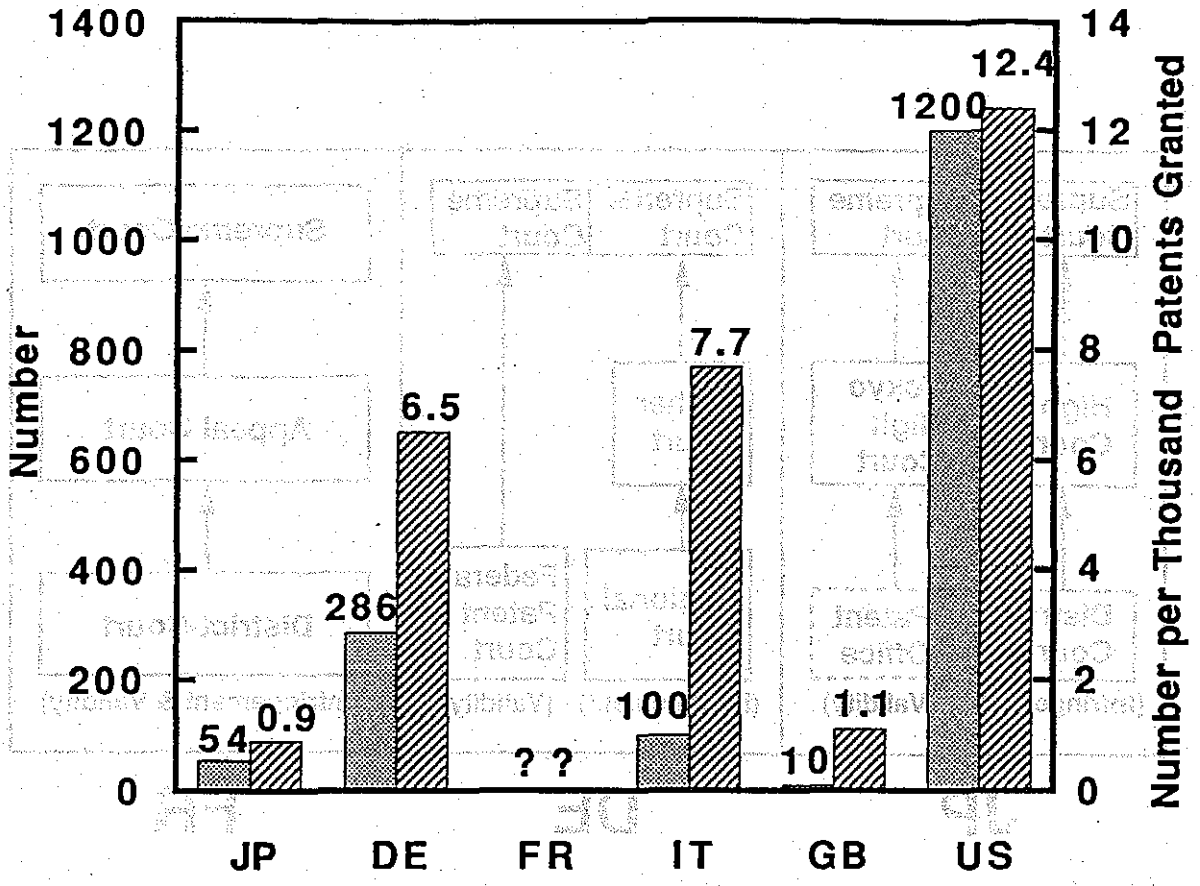


Fig. 5 Patent Infringement Litigations per Year

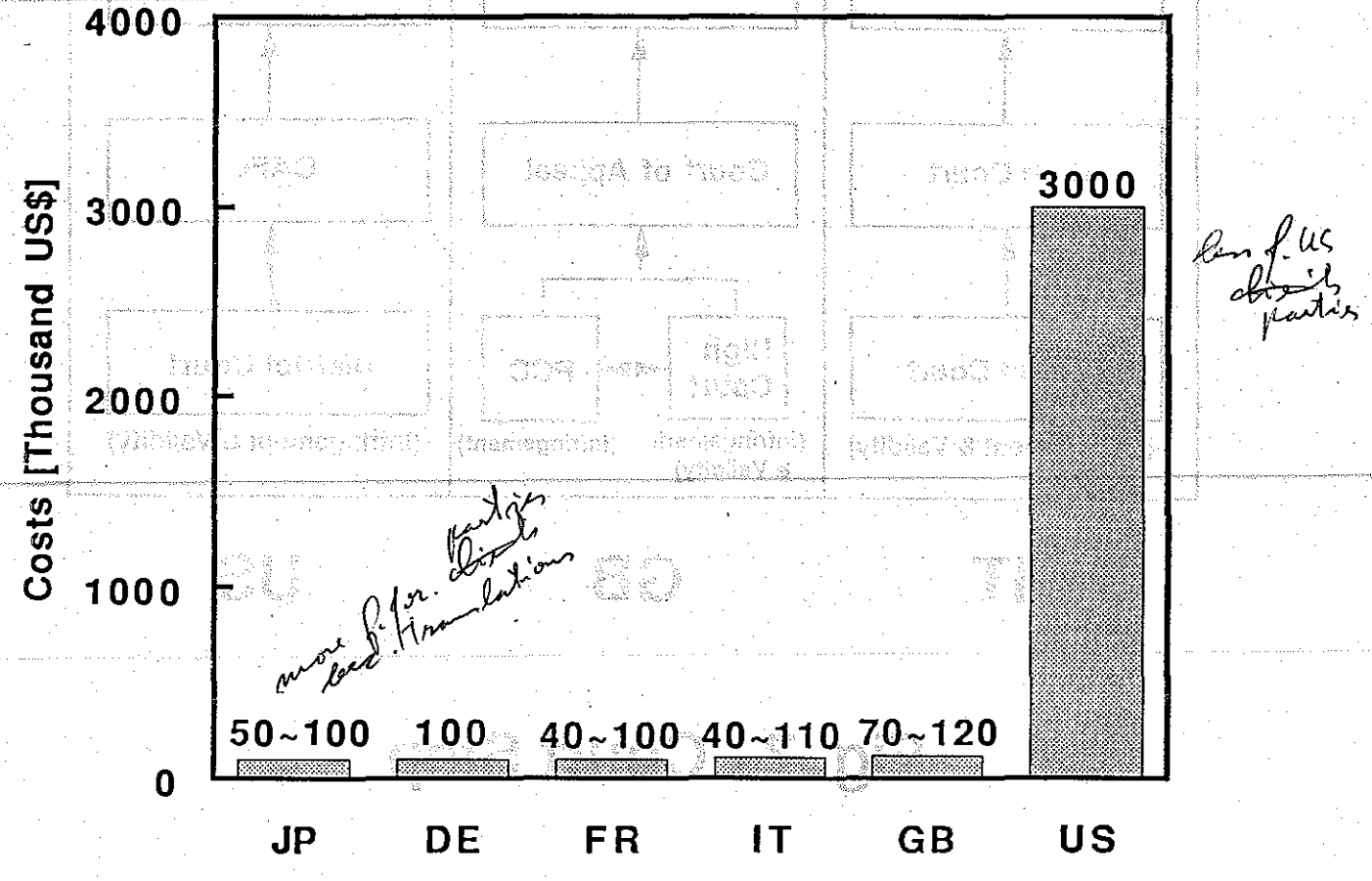


Fig.6 Litigation Costs at District Court

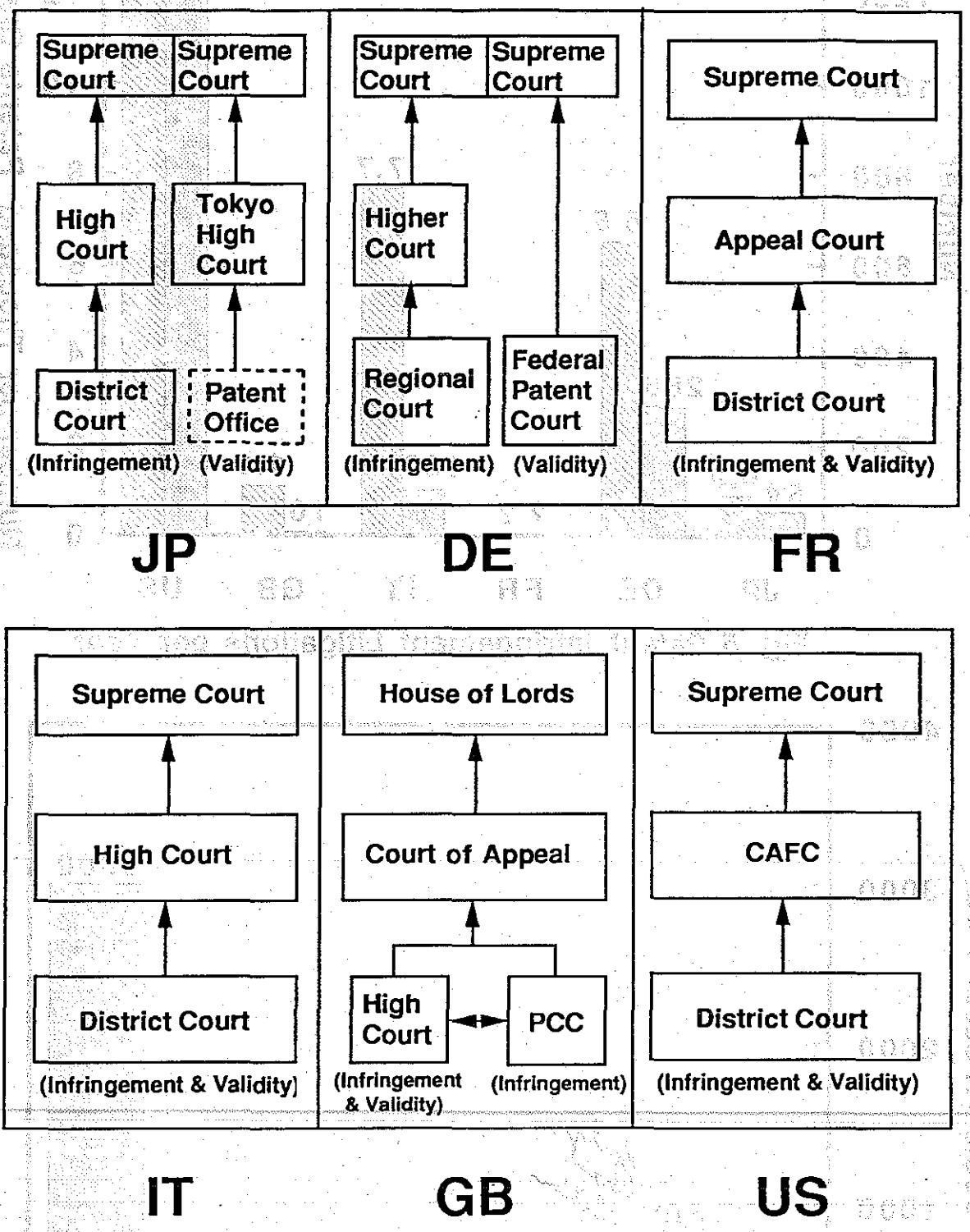


Fig. 7 Court Step

Table 1 Characteristics of Patent Litigation

	JP	DE	FR	IT	GB	US
Jury Trial	×	×	×	×	×	○
Attorney before court						
•General Lawyer	○	○	○	○	○	○
•Patent Attorney	×	×	×	×	× Available at PCC	○
Evidence						
•Discovery	×	×	×	×	○	○
•Seizure	×	×	○	○	○	○
Argument (mainly)					High / PCC	
•Paper	○	○	○	○	○ →	
•Oral			○		← ○	○
Temporary Injunction	○	○	○	○	○	○
Defendant's Working Pending Appeal 3rd	○	×	○	×	×	×
Defendant's Working Pending Appeal 2nd	○	○	○	○	×	×
Summary Judgment	×	×	×	×	×	○
Reimbursment of Attorney's Fee	△ (RARE)	○	○	○	○	△ (RARE)

○ =Yes △ =sometimes Yes × =No

Table 2 Claim Interpretation

	JP	DE	FR	IT	GB	US
Doctrine of Equivalents	△	○	○	○	△	○
File History Estoppel	△	○	×	×	○	○

Attachment 1

(19)

——Patent Litigation Procedures——
(in JP, DE, FR, IT, GB, US)

Countries		JP	DE	FR	IT	GB	US
Population (million)		124('90)	80('91)	58('90)	58('90)	57('89)	246('88)
GNP (Bil. US$)		2,900('90)	1,516('90)	1,001('90)	1,000('90)	834('89)	5,200('88)
Patents Filed (Thousand)		367('90)	101('90)	16(national), 57(EPC+PCT) ('90)	9('90)	28('90)	179('91)
Patents Granted (Thousand)		59('90)	44('90)	13(national), 22(EPC+PCT) ('90)	13('90)	9('90)	97('91)
Civil Lawsuits Filed ('90)		610,000(District Court)	360,000(District Court)	?	1,060,000	90	?
Patent Infringements Filed		54+?	286('90)	?	about 100('90)	10('90)	about 1200
Decisions	In favor of Plain.	12	(52%)	?	?	7('90)	?
	In favor of Def.	42	(48%)	?	?	3('90)	?
Settlements		?	(25%)	?	about 75%	20	?
Court Step		Supreme Court / Supreme Court; High Court / Tokyo High Court; District Court / Patent Office; (Infringement) (Validity)	Supreme Court / Supreme Court; Higher Court; Regional Court / Federal Patent Court; (Infringement) (Validity)	Supreme Court; Appeal Court; District Court; (Infringement & Validity)	Supreme Court; High Court; District Court; (Infringement & Validity)	House of Lords; Court of Appeal; High Court ↔ Patent County Court (PCC); (Infringement & Validity) (Infringement) [optionally Validity]	Supreme Court; CAFC; District Court; (Infringement & Validity)
Litigation Period/Costs (Months/Thousand US$)	3rd	12/	24~36 / 100	24~36 / 8~15	24~36 /40~70	/	/
	2nd	24/	12 / 100	24~36 / 15~40	36~48 /60~90	/70~80	/
	1st	24~48/50~100	10 / 100	24~48 / 40~100	36~60 /40~110	High 36~/70~120 PCC 12~18/	24/3000
Courts Location		decentralized	decentralized	centralized upon Paris	decentralized	centralized upon London	District Court : 1-3 per states

Attachment 5

(23)

——Patent Litigation Procedures——
(in JP, DE, FR, IT, GB, US)

Countries		JP	DE	FR	IT	GB	US
Claim Interpretation	Doctrine of equivalent	Yes (sometimes)	Yes	Yes	Yes	Yes (similarly)	Yes (widely)
	Prosecution History Estoppel	Referable (not estopping)	Yes	No	No	Yes	Yes
		・Claims are interpreted fundamentally literal. However, words constituting the claims can be understood flexibly so that scope of claims can be slightly expanded. ・ File history is reasonably referable for the interpretation.	・Claims are interpretated between the exact wording and the general guiding principle of the claims. ・Doctorine of equivalent is applied if an equivalent has inventive step.	・Equivalence is found where means are applied which, although having different appearance, fulfill the same function in order to produce similar results . If the patent relates to an invention in which the appearance and the function of a means are both new, then the above definition covers infringing means. ・ If the patented means are only new in its appearance but not in its function, infringement will be found only if the new means can be considered as an equivalent to the appearance of the patented means also, because , since the function itself is already known, it is the appearance which is patented.	Patents are granted without examination. If there are corresponding foreign patents and the claims thereof are limited after examination, the Italian court will consider both the traced anteriorities and the acknowledgements of the patentee for evaluating the substantial validity of the patent.	A variant of the literal wording of a claim is to be considered according to following three questuions. (1) If the variant has a material effect upon the way the invention works, it is outside the claim. (2) In the case the variant has not a material effect; (a)if such a fact would not have been obvious at the date of publication of the patent to one skilled in the art, it is outside of the claims; (b)If such a fact would have been obvious; i)if the one skilled in the art would have understood that the patentee intended to have the strict meaning of the claim language, it is outside of the claim; ii)if no, the claim is infringed.	According to linguistic feature of English, scope of word meaning tends to be strictly limited. In order to secure sufficient protection of invention, interpretation method is widely taken to include within scope of protection thing that cannot be meant by claim wording but exhibits substantially same function, way and result to be as equivalent.

Attachment 2

(20)

——Patent Litigation Procedures——
(in JP, DE, FR, IT, GB, US)

Countries		JP	DE	FR	IT	GB	US
Jury Trial		No	No	No	No	No	Yes
Attorney before Court		General Lawyer (Patent Attorney :Support)	General Lawyer (Patent Attorney :Support)	General Lawyer (Patent Attorney :Support)	General Lawyer (Patent Attorney :Support) (1) "Procuratore legale" who can plead only before District Court and High Court of one geographical region. (2) "Avvocato" who can plead before all Italian District Court and High Court without any geographical limitation. (3) "Avvocato patrocinante in Cassazione" who is an elder "Avvocato" and can plead before all Italian District Court and High Court and also before the Supreme court in Rome.	High Court : General Lawyer (Patent Attorney :Support) PCC : Patent Attorney or Solicitor or Barrister	General Lawyer (including Patent Attorney)
Evidence	Discovery	No	No	No	No	Yes	Yes
	Seisure	No	No	Yes (85% of cases)	Yes (32% of cases)	Yes (The Anton Piller order)	Yes
		・Only the perpetuation of evidence is admitted. ・In litigation relating to the infringement of a patent right or exclusive license, the court may, upon the request of a party, order the other party to produce documents necessary for the assessment of the damage caused by the infringement. However, this provision shall not apply when the person possessing the documents has a legitimate reason for refusing to produce them. (Japanese Patent Law Article 105)	・The right of inspection is granted only if there exists a considerable degree of probability.	・Seizure action is available before the beginning of a court procedure. Patentee and patent attorney, accompanied by a police officer and a bailiff, can force access to the alleged infringer's premises and collect whatever evidence they can find. The seizure action needs to obtain permission of a judge, and is always given if patentee can show a validity of the patent.	・It is possible to appeal to the Court to obtain descriptions with designs or photos of products.	・Discovery cannot be used as a fishing exercise when there is no evidence for the case put forward. ・The Anton Piller order is very rarely allowed.	・Each party must comply with all of other party's interrogatories and requests for documents production, etc. except for ambiguous questions, irrelevant matters and privileged matters. ・Access to confidential things can be limited to jugdes and lawyers under protective order. ・Inspection will be permitted only when court finds it necessary.

Attachment 4

(22)

——Patent Litigation Procedures——
(in JP, DE, FR, IT, GB, US)

Countries		JP	DE	FR	IT	GB	US
Defendant's Working pending Appeal	3rd	Possible	Prohibited	Possible	Prohibited	Prohibited	Prohibited
	2nd	Possible	Possible	Possible	Possible	Prohibited	Prohibited
		In case of interium enforcement the claimed invention cam not be carried out.	The defendant must obey the 1st instance decision during the trial in the appeal court if he does not succeed in stopping the interium enforcement and the plaintiff serves bond to the defendant.	The first instance judgement is marked by the judge if it is immediately effective or if execution may be suspended untill the end of the period in which appeal may be filed (or until the appeal results). If the jugdement is marked "immediately effective", no further selling is possible.	The first instance decision is not immediately enforceable in principle. Therefore, it is possible to continue selling products during the Appeal Trial only unless the District Court stated expressly to be immediately enforceable. On the contrary, the second instance decision is immediately enforceable.	Possible with payment of bond (20 % of sales amount)	
Summary Judgement		No	No	No	No	No	Yes
						Transfer to the PCC is probable for the expedited procedsures.	Summary jugdement will be ruled without trial when no dispute on material fact and only question of law involved. Thus district court step end. Next step is to appeal court.
Reimbursement of Attorney's Fee		Reimbursement of attorney's fee may rarely be acknowledged in case when suit was raised by clearly illogical argument to cause the defendant unreasonable expenditure of money.	Defeated party bears the court fees and refundable lawyer's fees of the opposing party which depends on the amount in dispute which is determined by the court.	A request has to be made right at the beginning of the procedure.	The loosing party has to pay counterpart's expense, but the jugde determines the amount of the payment, which is usually only 10~30% of the attorney's fee.	75 % of actual cost	Reimbursement of attorney's fee may be acknowledged in case when suit was raised by clearly illogical argument to cause the defendant unreasonable expenditure of money or patent had been obtained fraudulently.

Attachment 3

(21)

——Patent Litigation Procedures——
(in JP, DE, FR, IT, GB, US)

Countries	JP	DE	FR	IT	GB	US
Argument at Trial	Paper > Oral	Paper > Oral	Paper → Oral	Paper > Oral	High Court : Paper < Oral PCC : Paper > Oral	Paper < Oral
	Argument is prepared in writing in advance. At trial, oral argument is made according to the content of the writing in the court.	All cases have to be prepared in writing by filing briefs containing all arguments. A decision will be made only after an oral hearing in which parties may bring thier arguments (only exception is that a preliminary injunction may be granted without previous oral hearing).	Paper arguments are submitted until the judge is satisfied that the file is complete. Hereafter he will set a date for the oral hearing (one only).	Trials are provided in principle to be oral and written, but are actually mostly written.	High Court : At cross-examination of witness, there is much greater scope for developing one's arguments at trial orally. PCC : There is greater emphasis on documentary evidence and written argument. Generally it is thought that the more important or complex cases will be brought in the High Court.	
Temporary Injunction	Yes	Yes	Yes	Yes	Yes	Yes (within the litigation)
	• In the patent infringement case, usually argument of the defendant is heard before the judge of the court. • Temporary Injunction is very rarely ordered. • The plaintiff needs to pay bond.	The infringer has no possibility to avoid the enforcement of the court order by payment of bond.	Injunctions are possible if all of the following conditions are fulfilled: • Strong presumption of validity of patent. • Danger that infringer may not be able to pay damages after conviction or irremediable damages. • Request must be made within a short period of infringement.	(1) Seisure Order Seisure of counterfeiting goods and possibly of the means for manufacturing them. (After a seizure, in principle, it is not forbidden to sell counterfeiting products which were not seizured.) (2) Prohibitory Injunction Injunction to prohibit to manufacture and/or to sell counterfeiting goods	• If damages are an adequate remedy and the defendant has the ability to pay these, no injunction should normally be granted. • If a patentee wants an Temporary Injunction, it is essential to move very fast after infringement starts. • If granted a Temporary Injunction, a plaintiff must give a "cross undertaking" to the court to pay the defendant damages if he is successful at full trial. • If the patentee has offered to grant a license (or has granted a license to others) the injunction will normally be refused.	• Temporary Restraining Order will be ruled for 10 days (or + 10days) without hearing when court finds urgency. • Preliminary Injunction will be ruled after hearing other party, where bond is required for enforcement.

PACIFIC INDUSTRIAL PROPERTY ASSOCIATION

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(1) **TITLE:** PATENT LITIGATION BEFORE THE EUROPEAN NATIONAL COURTS: TODAY AND TOMORROW

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(4) **AUTHORS:** M. J. Pantuliano

(5) **KEYWORDS:** LITIGATION IN EUROPE

(6) **STATUTORY PROVISIONS:**

(7) **ABSTRACT:** The UK, Germany and France are the three major litigation countries in Europe and represent the different litigating systems in Western Europe.

Patent Litigation Before The European National Courts: Today And Tomorrow

M. J. Pantuliano

As far as a more unified Europe is concerned, "tomorrow" is scheduled to begin at the start of 1993. There are, of course, some questions as to the extent of this new unification, and indeed the extent of the latter may very well depend upon the nationality of the person to whom the questions are addressed. European unification may have a different meaning to a German than to a Frenchman, and, almost certainly, than to an Englishman. There are even some questions which may occur to Americans; for example, will the new Europe be more inward-looking and excessively parochial? Will it perhaps even be protectionist or quasi-protectionist?

However, while Europe may change in many ways, perhaps even dramatically so, after 1992 there appears to be little or no change contemplated in the basic philosophies of law and procedures governing patent litigation for the nations of the EEC. The United Kingdom and the Republic of Ireland will presumably remain common law countries, and will continue to espouse an essentially adversarial system of conducting litigation; the continental nations will continue to be civil code countries and will conduct patent litigation in an essentially inquisitional manner. However, even among the civil code countries, the procedural differences in

conducting litigation will evidently remain; the French, Italians and Belgians will continue to have a effective means of obtaining evidence of and proof of infringement; the Germans, as a prime example, apparently will continue to resist the inclusion of such means in their system of jurisprudence. In the latter country, proving the infringement of a process patent will thus continue to be an adventure not for the timid or faint of heart.

In short, the philosophical and procedural national manifestations of "Patent Litigation Before The European Courts" is likely to be the same "Tomorrow" as it is "Today." However, this is not to say that at least some change in the trappings of European patent litigation may not be in the offing, post-1992. A fairly profound change in (at least) the way in which suits are brought and considerations of infringement and validity are determined could in time result if, and it is still an if, the Community Patent comes into existence, and if, and it is still a big if, the latter is widely used.

The Community Patent

Under the European Patent Convention, a bundle of national patents are obtained. These are then separately enforceable in the individual national courts, both in the first instance and on appeal. While pursuant to the EPC and the enabling patent statutes of each country, issues of infringement and validity are ostensibly

harmonized, as we shall discuss later there are still more "glitches" in such "harmonization." Moreover, as we shall also discuss later, the aforesaid philosophical differences remain, as well as the wide variations in the national courts with respect to how evidence is obtained and presented, the manner in which trials are conducted, the remedies and defenses available, etc.

The Community Patent, however, would create a "market" patent which would have equal force throughout the EEC in much the same manner as a U.S. patent has equal force throughout the territory of the United States.

After the issuance of the Community Patent, challenges to validity can be effected by filing a nullity procedure before a special nullity division of the EPO. However, in the event of an infringement within the EEC, special national courts will be designated in the countries of the EEC to handle issues of infringement and patentability, i.e. both will be considered by these courts. In other words, one can file a request for nullity in the nullity division, or file for the nullity of the allegedly infringed Community Patent as a defense to the infringement, along with the defense of non-infringement.

Of special interest to us, however, is the fact that appeals from the decisions of these special national courts can be brought to a new appeals court, termed the "Community Patent Appeal Court" which will have the acronym COPAC. This appeal court will be

exclusively responsible for making appellate rulings on infringement and validity, but only on these two issues. Injunctions, damages, etc. will remain the province of the national courts. COPAC will also be the appeal court for reviewing decisions of the special nullity division of the EPO. It is important to remember again that the decisions of COPAC will be binding on all the community courts on matters of infringement and validity.

An advantage arising from the Community Patent judicial system is that the procedural expense in pursuing and defending patent infringement suits should be considerably reduced since one action for the entire EEC can be brought in a special national court, and one appeal jurisdiction will consider infringement and/or validity.

Aside from cost, another tangible advantage could be the elimination of the "glitches" which now exist among the states of the European Patent Convention concerning such matters as scope of claim protection, equivalency, obviousness, etc. No doubt the "special" national courts will initially issue diverse opinions on some of these matters, just as American district courts have done, but COPAC will be the final arbiter and eventually could provide a consummate body of law on infringement and validity which could provide a harmonized standard for such matters for all the national courts of the EEC to follow. It is not inconceivable that COPAC

could turn into the European CAFC, at least as far as infringement and validity are concerned.

But before we get too euphoric, we should keep in mind again that the Community Patent may not come into being, and if it does, it may not be widely used. It is quite possible that the EPO will continue to be the main instrument for patent protection, and thus the national courts will continue to do "their own thing." Moreover, even under the enforcement procedures of the Community Patent Convention, it would seem hardly likely that the philosophical differences between the common law and civil code countries will disappear or that many of the differences between the continental judicial systems will disappear. (For example, it is not likely that the Germans will adopt the "seizure" proceedings of the French.)

Litigating in the U.K., France and Germany

The three major litigating countries of Western Europe are the United Kingdom, Germany, and France. Perhaps not coincidentally, these three can also be said to represent, to some extent, the different litigating systems to be found in Western Europe. One can say with some logic that the British speak for the Irish (in litigation, not otherwise), the French for the Italians and Belgians (and perhaps the Spaniards, Greeks, etc.) and the Germans for the Austrians and perhaps the Dutch, Swiss and the Scandinavian

countries (though there might be some arguments raised in that regard).

(1) Among these three countries, you have two different kind of systems, one, the U.K., is a common law country; the other two, France and Germany, are civil code countries. The French and Germans also have differences between each other, but these are not philosophical in nature. The differences between the U.K. and others are not merely semantic but translate into basic philosophical procedural differences, including trial methods. These differences can have a profound effect on the outcome of litigation and should certainly be a factor in determining in which of the three countries suit should be brought, if you have a choice.

(2) Whether or not it is a direct result of being a common law country, proceedings in the U.K. (and Ireland, Australia, New Zealand and the United States) are primarily adversarial in nature. The parties through their counsel obtain, present and argue the evidence. Cross-examination of witnesses is integral to the procedures. Within time frames strictly set by the courts, the parties present

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their cases to the courts who are not ordinarily active participants in the proceedings. In these jurisdictions the courts hear the evidence, and come to a decision based thereon. However, the parties try the cases and use the judicial tools commensurate with this undertaking. **(That may explain why the British (and the Americans, the Irish, the South Africans, Australians, (even the Indians) have some form of discovery.)**

(3) On the other hand, the French and German Courts, indeed all the civil code countries, are primarily inquisitional in nature. It is the courts who take evidence, often appoint the legal experts, make requirements of the parties as to the evidence needed, etc. Certainly there is still a great deal of advocacy and skill required by the attorneys handling the cases but the qourts have far greater discretionary power as to how and as to what evidence is to be heard, and on the relevancy and impact of the evidence. Cross-examination, if it can even be called that, is very limited and indeed is more often than not handled by the court.

(4) Can these philosophical differences in the legal systems of our three countries lead to different

results? I think there is no question but that they can and do and that you must tailor-make your case to the forum in which you are bringing suit.

Proof of Infringement

It is in the area of proof of infringement or, better stated, of obtaining the evidence necessary to prove infringement, that we will find the widest differences between the "three" countries. We have already stated that U.K. proceedings are primarily adversarial in nature, a fact which I feel may arise from its common law jurisprudence. Thus, one would expect that the manner of obtaining evidence and advocating such evidence before a court would be different than in a civil code country. As we shall see, this is certainly the case. What is surprising, however, is that although France and Germany are civil code countries, the French have a very effective and viable way of obtaining evidence to prove infringement, while bluntly stated, the Germans do not.

French also have partial infringement

Clearly, where the infringement involves an easily obtainable product or apparatus, it is not overly difficult, even in Germany, to present the facts sufficient to prove infringement. However, all too often, the issue of infringement is not clear, or even more dramatically, the infringement involves an apparatus present only on the defendant's premises, e.g. a turbine for example, or involves a process patent. In these latter situations the burden

of proving infringement in Germany can be extremely difficult. If the product made by the patented process is not new, or even if it could be said to be new, is not identical to the product being sold by the infringer, the task can come close to being insurmountable; it is much less difficult in the U.K. or France.

I mentioned to you previously that the British have "discovery." Be forewarned, it is not U.S. style! The British system is far more controlled, far more restricted, and much less extensive and expensive (although the weak dollar hurts). It is really a kind of "uncovery" procedure, in which the respective solicitors "uncover" to each other documents relevant only, repeat only, to matters in issue between the parties and pleaded by the parties! There are no depositions, and the use of interrogatories is extremely limited, usually only if the court orders such and then only if the information sought is not apparent from the documents disclosed, or which ought to have been disclosed.

Despite these restrictions, British discovery is very effective. With much less effort and expense than in the U.S., evidence of infringement of Patents covering on-site apparatus, and patented processes, can be obtained to a degree not markedly different than that of the U.S.

The British also have another means of obtaining the evidence to prove infringement and that is the Anton Piller order. This is an order for the preservation of evidence and materials pending trial. It requires a defendant to deliver up (**immediately**) all infringing material in his possession together with all documents relating to the infringement. There are other aspects of this order, but it makes for a very lovely way of obtaining evidence of infringement. This is true even in cases where the infringing apparatus or material is (**only**) on the defendant's premises, or where the infringement is of a process patent, even where the product made thereby is not new. (**Incidentally, in its initial form it was primarily intended for the "shifty" and perhaps indigent defendant; indeed some British attorneys maintain this is still the case.**)

The French (**and the Italians and Belgians**) also have a very effective procedure to bring evidence of infringement to the Court's attention. This procedure is termed a "SAISIE" in France or Belgium, and a "Descriptione" in Italy.

Briefly, a Bailiff commissioned by the patentee is authorized by the court to investigate (<u>invest</u> **is probably a better term**) the premises of the alleged infringer in order to obtain evidence of the alleged infringement. There are certain technical and specific procedures involved in this "procedure" but in general the <u>first</u> knowledge the defendant has of the "seizure" is when the Bailiff

shows up at his establishment and serves him with the ordinance authorizing the immediate investigation of his premises. The ordinance specifies the limits of the inspection and whether the seizure will be exclusively descriptive or will also involve seizure of allegedly infringing samples.

N.B. the plaintiff is only present through his attorney (thus the latter has to be carefully briefed on what he is to look for or seize). There are also certain caveats to be followed, but suffice it to say, this is a traumatic experience for the defendant and it is very effective. Suit has to be brought within a short prescribed period after the seizure.

What of the Germans. No discovery, no on-site inspection (except in certain extreme circumstances authorized by the Court), no seizure proceedings! (As an aside, it is a fair question whether a primarily inquisitional system could have a discovery procedure.+ I suppose there could be court-ordered discovery but how this would work is anyone's guess.)

not needed – it makes requirements of parties as to evidence needed

p. 454

Question:

Why do the Germans not have seizure proceedings, or some other kind of on-site inspection? Why does a country with an otherwise brilliant intellectual property system not provide some minimal means of proving infringement, or obtaining evidence of

infringement in those cases where the evidence is not readily obtainable? I have never received a satisfactory answer.

be supplied it — see p. 45a

Of course, the Germans will assert (so will the Austrians and Japanese) that under provisions of their law if the product of a patented process is "new," the burden of proof of infringement of the process patent will shift to the alleged infringer to show he is not infringing. However, note that in these statutes the product made by the alleged infringing process has to be "identical."

Question:

Does an "equivalent product" shift the burden? How close to "identical" does the product have to be?

Question:

What does "new" mean? (In a WIPO harmonization session the question of what constitutes "new" under this exception to the burden of proof, was argued interminably without resolution. Does "new" mean "patentably new," "novelty new," "commercially new"?)

But even if this is a bonafide way of proving infringement in this situation, what of the situation where the product is an "old" product. We all know these can be very important patents. What then? In Germany, as I stated, you then quite often have an

insurmountable problem, which can only be overcome with great difficulty and imagination.

Therefore, even if the scope of protection would be the same in each country, even if the question of validity would be decided in the same way in each country, obviously the results of an infringement suit in each country will be different if you are able to obtain the evidence to prove infringement in one country, but not in another, e.g. Germany.

One should also keep in mind that the adversarial nature of the proceedings in the U.K. could also affect the outcome of the proceedings. In this regard it seems self-evident that the sharp cross-examination and intense scrutiny of evidence and witnesses in an adversarial environment can also result in different findings - even as to infringement and validity.

But even within the continental nations, the conduct of the infringement proceedings (i.e. trial procedures) differ. The French and Italian proceedings are virtually all conducted by written testimony. There is usually very little oral testimony (and that usually only court-directed questioning of expert technical witnesses). On the other hand, the Germans have two oral hearings, one preliminary and one final at which times some questioning of witnesses is permitted. However, even here, the

length of the trial is usually measured in hours (in contrast to a British trial which can last for weeks).

Our three countries also differ in still another procedural sense. As a defense to a charge of patent infringement invalidity can be raised in the U.K. or France. However, it is not a defense which can be raised in a German suit. As in Japan, in Germany infringement and validity are considered in separate actions. Infringement is determined in a general law district court; nullity is determined by the German Federal Patent Court. In some German courts, including Dusseldorf which is the most sophisticated court for hearing patent matters, infringement actions will most often not be stayed pending the outcome of a nullity action or of an opposition before the EPO unless the court is satisfied that there is a very strong possibility that the patent or application will be found invalid or unpatentable. Note: under the Community Patent judicial system, all the designated national courts will consider both infringement and validity. This would clearly be a departure, therefore, for the Germans.

Patentability and Scope of Protection

These are areas in which, at least ostensibly, there should, under the enabling statutes enacted in the national legislatures, be the greatest conformity. In this regard, it should be noted that in discussing patentability and scope of protection or claim

interpretation, the more realistic question would have been, not how these will be changed post-1992 but rather how they were affected by the enabling statutes enacted in 1978. In other words, the European Patent Convention had far more impact on the substantive matters of litigation, i.e. on questions of infringement and validity, than would any contemplated changes in the "new Europe" of 1993.

Scope of Protection

The enabling statutes of 1978 in each of the signatories to the European Patent Convention contain language identical to Article 69 of the European Patent Convention. Note, however, that the word "equivalency" does not appear in this Article. The Germans have already indicated that equivalency under their system will remain as it was before the advent of the EPC. The French have equivalency but I have never seen it really defined. The British have apparently continued their doctrine of equivalency established by their CATNICK decision. Their feeling is that it is in conformity with the provisions of the EPC. Nevertheless without going into detail it would still seem to be somewhat narrower than the German. Therefore until or unless COPAC comes into being what constitutes equivalency in a given EEC country is still something to be considered before you embark on a suit.

In addition to equivalency, the Germans have had a tradition of providing somewhat broader claim interpretation than other countries. Again, until otherwise defined by the German courts, or until the Community Patent Appeal court comes into being, it is likely that the language of Article 69 will be construed rather generously. The British have traditionally been strict constructionists. Will this continue? The feeling seems to be that it will not, and that decisions on scope of claim interpretation will be in conformity with the language of Article 69. Until fairly recently the French did not even have claims in their specifications, so it is hard to confirm that the scope of claim protection will be the same as in the U.K. or Germany. Again, before litigating or deciding on where to litigate, do not take it for granted that our three countries will approach claim interpretation in exactly the same way.

Patentability

The enabling statutes in our three countries contain sections analogous to Article 54 dealing with "Novelty" and Article 56, "Inventive step." This is an area where there should be the greatest harmonization and consistency in our three countries. Nevertheless a fairly recent German decision caused a bit of an uproar, particularly in the U.K., because it seemed to imply that the Germans have a higher standard of patentability, as far as inventive step was concerned, than did the EPO. The Germans with

whom I spoke said this was blown out of proportion, that all the German Federal Patent Court meant was that they were applying the EPC standard on "inventive step" in the light of "German evaluation standards," in effect that the German decision is the way in which the EPO should have ruled. This is rather a subtle distinction when one considers that the counterpart European application was granted after opposition and after opposition appeal. Incidentally, the decision was not appealed to the German Supreme Court so we do not know how definitive it will be. It may very well be an aberration.

The point is, however, that you still cannot take anything for granted. You cannot assume you will get the same reading even for "inventive step," on the same facts in our three countries.

Please keep the magic year of 1978 in mind when considering novelty. There are still plenty of patents lying around waiting to be enforced which were filed prior to the enabling statutes of 1978. Some of these patents will still be around until 1997 or 1998. You may even own some of them or represent clients that do. In this regard it is to be carefully noted that the novelty requirements of the U.K., pre-1978, were not those of post 1978. The U.K. was then a local novelty country, for prior use, sale and/or publication. Germany was a local novelty country for prior use and sale, but absolute for publication. Thus a pre-1978 U.K.

patent could be valid over a prior use in the U.S., whereas a post-1978 U.K. patent could be invalid over such use. The same thing applies to Germany. So another practical question before beginning suit (and/or after being sued) is - what law applies - pre or post 1978?

Let's look at a few preliminary considerations which you might think about prior to initiating suit for patent infringement in Europe, and more specifically, in our three countries.

(1) Determine precisely <u>why</u> you want to sue (or if a defendant why you are being sued) and what is hoped to be accomplished by the suit. In large measure this will dictate the where and the manner of the suit. For example:

(a) If you are the patentee and are really being hurt by the infringement, and damages at the end of the line would be inadequate, then you must think preliminary injunction. Of the above three countries, preliminary injunctions have only been available in France since 1984. Moreover, up to very recently these could only be obtained if you or your licensee were manufacturing in France; however with a new law which has

just recently come into being, preliminary injunctions are now obtainable in France if you or your licensee are manufacturing in any of the Community countries. Nevertheless this is not a requirement of the U.K. or Germany. Moreover, each country has somewhat varying requirements which must be met before a preliminary injunction can be obtained. Obviously, the differences in requirements might very well determine where you should seek this relief.

(<u>One important caveat:</u> In any of these countries, if you seek a preliminary injunction you <u>must</u> act quickly after ascertaining the infringement. Six months delay for example is probably too long.)

(b) If the "why" of your suit is to collect damages for past infringement, you must think statute of limitations. This will also vary country-to-country.

(c) If you merely want to force a license then you should think market-size and the value in controversy. The latter could have a considerable impact on costs in Germany.

(2) You must also think about the kind of patents you are enforcing, and how burdensome will be the chore of proving infringement. As we have seen these three countries differ rather markedly from each other as to the means available for obtaining evidence of infringement, or other evidence as well. If you have a process patent, and you have a choice of jurisdictions, would you pick Germany?

(3) When you choose a jurisdiction you must get your litigation team in place quickly, preferably <u>before</u> you send a warning letter. If you "warn" first and then try to pick a team, i.e. trial attorneys, patent attorneys, etc., you may find your first choices have already been taken by the other side. In many European countries this can be a real problem. With the exception of the U.K. or Germany there is a paucity of qualified specialists in patent litigation throughout Europe.

(4) I have always found it helpful to have the claims of a non-English language patent re-translated, before bring suit. For two reasons:

(a) So that you can seek to amend the claims before suit, if you can amend them. (This can be done in Germany and the U.K., not in France!)

(b) So you will know if there is a problem with the language of the claims, now rather than later.

The Epilady Case

On the subject of preliminary injunctions there was a case not so long ago that further illustrates that the millennia indeed has not arrived and that national courts in Europe can still arrive at dramatically different results. The case in question was a suit brought by Improver Corporation against Remington, and involved a European patent for a depilatory device marketed under the name "Epilady."

To sum up the facts very briefly, plaintiffs sought a preliminary injunction against defendants in the U.K. and Germany. One of the criteria for obtaining a preliminary injunction in either country is that there has to be a reasonably strong presumption of infringement. In this case, if there was

infringement it had to be based on claim interpretation and more specifically, equivalency. The U.K. Patents Court found for the defendant. The requirements of the CATNICK decision had not been met, this court said and a preliminary injunction was denied. The Dusseldorf Court, however, found exactly the opposite; it stated that German claim interpretation did support a case for infringement and accordingly granted a preliminary injunction. Appeals were taken in each country on each decision. By now you can guess the outcome. The English Court of Appeals reversed the decision of the U.K. Patents Court, and found for the Plaintiff, i.e. it granted the preliminary injunction! However, the Dusseldorf Court of Appeals came to the opposite conclusion! It discharged the preliminary injunction granted by the lower German Court! Please also note this decision will <u>not</u> be remedied by the Community Patent or COPAC - preliminary injunctions will still be only the province of the national courts, as at present.

As a final note, should there be and will there be "forum shopping" in the new "post 1992" Europe as in the "old"? For the foreseeable future the answer has to be <u>yes</u>, perhaps even more "yes" than before because of the greater interaction between the countries of Europe and the greater likelihood of interlocking infringements. Perhaps <u>this</u> will be the greatest difference in litigating in post-1992 Europe.

(1) Title:

Up-Date on GATT and Patent Harmonization - Japan Group -

-- Studies on GATT TRIP Agreement and Relations with Japanese, U.S. and German National Patent Laws and WIPO harmonization Treaty --

(2) Date: 10/92 (23rd, Okayama)

(3) Source

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(5) Keywords: GATT TRIP, Harmonization, Uruguay Round, Subject Matters of Protection, Validity of Right, Compulsory License, Duration, Enforcement, Border Measures

(6) Statutory Provisions:

GATT TRIP Article 27-33, 35USC Section 104, Section 154, 19USC Section 1337, Section 32, 2(3), 92, and 67 of Japanese Patent Law, Article 10 of Harmonization Treaty, etc.

(7) Abstract:

In this paper, we will study those provisions of the Dunkel Text of the GATT TRIP which deal directly with patents (such provisions being Part II Article 5 et al.), as they relate to the corresponding provisions of patent laws of Japan, U.S. and Germany. This paper will also study how those provisions of the Dunkel text reconcile with the patent laws of the respective countries and point out any law amendments deemed necessary as a result. In this paper, we will also review the update version of the Patent Harmonization Treaty and, with respect to those provisions of the Treaty related to GATT TRIP, report how both drafts correspond to each other.

I. Introduction

As globalization of economic activities advances and technological innovation rapidly progresses, circulation in the international markets of products and technology which require protection under the intellectual property rights is expanding. Under such circumstances, based on the understanding common to respective countries that issues on protection of the intellectual property rights have a serious impact on their import-export activities, it was decided in September 1986 at the Ministers Conference at Punta del Este to take up the issue on the intellectual property rights as one of items to be negotiated at the Uruguay Round of General Agreement on Tariffs and Trade (GATT).

On December 20, 1991, a comprehensive text of the GATT Uruguay Round which covers the results of the negotiations over the past five years was drafted on the responsibility of Chairman Dunkel and furnished to respective countries for their study.

Since 1985, a little bit before the negotiation on Trade-Related Aspects of Intellectual Property Rights Including Trade in Counterfeit Goods (GATT TRIP) commenced, a study has been in progress at WIPO for harmonization of patent laws between the countries (the draft Patent Harmonization Treaty). The draft Patent Harmonization Treaty incorporates in it practically all major provisions ranging from application for a patent to enforcement of the patent right. As a result, it contains a substantial number of provisions which correspond to equivalent provisions of the GATT TRIP.

In this paper, we will compare those provisions of the Dunkel Text of GATT TRIP which directly pertain to the patent with patent laws of Japan, U.S. and Germany, to see how the Dunkel Text reconcile with the patent laws of the respective countries and what amendments are expected to be made. Also, with respect to those provisions of the Dunkel Text which correspond to equivalent provisions of the Patent Harmonization Treaty, we will see how these two drafts relate to each other.

II. Subject Matters Studied

The Dunkel Text of GATT TRIP consists of 7 parts, containing 73 Articles altogether, covering the basic principles of treatment of intellectual property rights, procedures for grant and registration of rights, enforcement of the rights, and settlement of disputes. This paper will deal principally with Part II, "Standards concerning the Availability, Scope and Use of Intellectual Property Right," Section 5, "Patents," Articles 27 through 34.

III. Results of Study on GATT TRIP Provisions:

Enclosed as Table 1 is "A Comparison of Patent Provisions Between GATT (TRIP) Draft Agreement, Japan, the U.S.A., Germany and WIPO Harmonization." Table 2 shows results of the study, based on the Table 1, on coordination of the GATT TRIP with patent laws of the respective countries.

In the following, we will report results of our studies on those especially GATT TRIP provisions which are not corresponding directly to the national patent laws of the respective countries.

(1) Article 27 "Patentable Subject Matters":

1) Substance of Provisions:

Article 27 provides for patentable subjects, Paragraph 1 citing basic principles, and Paragraphs 2 and 3 referring, as exceptions, to those which may be excluded from the patentable subjects.

Paragraph 1 provides that patent protection shall basically be available for any inventions in all fields of technology. It sets forth what is deemed to be the so-called patentability requirements which consist of novelty, non-obviousness and industrial usefulness. It sets forth, among other things, that patent protection should be available without discrimination as

to the place of invention, the field of technology and whether products are imported or locally produced.

In Paragraphs 2 and 3, technological areas which may be excluded from the patent protection are enumerated on a restrictive, or non-illustrative, basis.

Paragraph 2 states that any inventions against public order or morality may be excluded, and Paragraph 3 stipulates that (a) methods of treatment of humans or animals and (b) plants and animals as well as processes for production thereof may be excluded. With respect to (b) plants and animals as well as processes for production thereof, it requires plant varieties to be protected by an effective system, if not by patents.

These exceptional provisions, conversely, require that those other than enumerated on a restrictive basis must be protected by patents.

2) **Comparison with Patent Laws of Respective Countries:**

[Japan]

Article 32 of Japanese Patent Law makes unpatentable (i) inventions of substances manufactured by the transformation of the atom, in addition to (ii) inventions against public order or morality. In as much as the proposed GATT TRIP provision, as discussed above, is not to make unpatentable anything other than those exceptions enumerated on a restricted basis, "(i) inventions of substances manufactured by the transformation of the atom" under Section 32 of Japanese Patent Law may not be made unpatentable.

[U.S.A.]

Section 104 of the U.S. Patent Law stipulates to the effect that the date of invention may not be established with respect to any invention made abroad. This provision is considered to discriminate patentable invention by the place where the invention was made, contrary to the provision of Paragraph 1 of Article 27 of the proposed GATT

TRIP.

The US Department of Commerce at an earlier stage was considering an amendment to its patent law dealing solely with its incoordination with this particular provision of the GATT TRIP, so that inventions made abroad may be established the date of invention as if it were made domestically.

The latest recommendation of an advisory organ to the U.S. Department of Commerce, however, indicates a shift to the first-to-file system. If the first-to-file system is so adopted, there will be no necessity for establishing the date of invention, removing the incoordination of its patent law with the proposed GATT TRIP provision.

[WIPO Patent Harmonization]

Article 10 [Alternative B] of the proposed WIPO Patent Harmonization provides in paragraph (v), in the same manner as in Japanese Patent Law, that atoms and nuclear fission materials are unpatentable. Since Article 27 Paragraphs 2 ~ 3 of the GATT TRIP do not allow these substances to be unpatentable, the atoms and nuclear fission materials under paragraph (v) of the WIPO Patent Harmonization must be removed if Article 10 [Alternative B] of the WIPO Patent Harmonization is adopted.

(2) Article 28 "Rights Conferred":

1) **Substance of Provision:**

Article 28 provides for patent rights conferred, assignment thereof, and licensing.

More particularly, it classifies the invention to that of products and that of processes, regulating certain acts of third parties which may be excluded with respect to each of such classes.

With respect to invention of the product, it prohibits making, use, offer for sale, sale and import of it by unauthorized third parties, while with respect to invention

of the process, it prohibits use of it. In addition, with respect to invention of the process, it prohibits use of it by unauthorized third parties. In regard to invention of process of production of the product, it prohibits use, offer for sale and import of the product obtained directly by that process.

Paragraph 2 stipulates that the patent right may be assigned or licensed.

2) **Comparison with Patent Laws of Respective Countries:**

[Japan]

Section 68 of Japanese Patent Law provides that the patentee shall have an exclusive right to commercially work the patented invention, leaving descriptions of particular state of the working to Section 2 Paragraph 3.

What is intended by the GATT TRIP is considered to set out the minimum level of protection to be afforded and would in no way be concerned with any more protection any Party may be willing to provide.

Now, if you compare Section 2 Paragraph 3 of the Japanese Patent Law with Article 28 of GATT TRIP, you will notice that the Japanese Patent Law does not define the protection of the right holder in respect of "offering for sale."

The term, "Offering for sale," would reasonably be taken as being broader than "displaying for the purpose of assignment or lease," as provided for in Section 2 Paragraph 3 of the Japanese Patent Law. For this reason, in order to make the Japanese Patent Law fully coordinative with Article 28 of the GATT TRIP, it will be necessary to newly add "Offering for sale" to the definition of "'working' of an invention," in that the "displaying" requires actual existence of the product while "offering" is not conditioned upon the actual existence of the product.

[U.S.A.]

Sections 271(a) and 295 of the U.S. Patent Law provide what constitutes a patent infringement. As far as we can see from the surface of these provisions, they do not fully render protection to the invention defined in Article 28 of the GATT TRIP, because the U.S. Patent Law basically defines the making, use or selling of any patented invention as infringement of the patent.

Other prohibited acts provided for in Article 28 Paragraph 1 of the GATT TRIP, namely "offering for sale" and "importing," are taken as patent infringement for the purpose of administration of law.

Thus, the U.S. Patent Law, as it is, fully coordinates with Article 28 of GATT TRIP.

[Germany]

Section 9 of the German Patent Law enumerates prohibited acts by unauthorized third parties. As it relates to Article 28 of the GATT TRIP, a question arises as to whether the act of "diffusion" provided in it includes "offering for sale" contained in Article 28 of the GATT TRIP.

The act of "diffusion" does not require a product to actually exist, as is the case with the "offering for sale," and patent protection would equally be afforded. Thus, we understand that Section 9 of the German Patent Law is fully coordinative with Article 28 of the GATT TRIP.

(3) **Article 31 "Other Use Without Authorization of the Right Holder:**

1) **Substance of Provision:**

Article 31 of the GATT TRIP allows "other use" or compulsory license in the country of a Party, subject to (a) through (l) of that Article as conditions.

The issue of the compulsory license would include three problems as outlined below:

(i) **The North-South Problem**

One of basic tasks before GATT TRIP is to help the developing countries to align their patent systems with those of other countries. In other words, GATT TRIP aims to maintain the international trade in order by helping those countries which have not signed the Paris Convention (such as India and Thai) to so align their patent systems.

If the exclusive proprietorship of the patentee is easily destroyed in the name of a compulsory license, the significance of the patent system so aligned would totally be lost.

Thus, GATT TRIP specifically states that, in the case of the compulsory licensing, interests of the right holder shall be respected and the right holder shall be paid adequate remuneration (a to c).

(ii) **The North-North Problem**

The compulsory license problem exists in advanced countries as well.

In the United States, use of a patent by the government requires no notice to the right holder and no remuneration to the right holder. What is really intended here is for the government to get rid of a substantial increase in the financial outgo and of being substantially obligated for a patent search before the use, should the government be required to pay royalties of substantial amounts (b and h).

In the GATT TRIP negotiations, this provision does not impose an obligation upon the government to find out a point of agreement and make a patent search before the use in respect of the North-North Problem which involves use by the government. It does require, however, that the right holder be paid adequate remuneration, where the government or contractor knows that a valid patent is used by or for the government.

(iii) Japan-US Issue:

The GATT TRIP negotiation was triggered by pressure of the United States to strengthen and maintain its technological development power by promoting protection of the intellectual property.

According to the United States, if, in the event Americans obtain basic patents, they are surrounded by a substantial number of improvement patents from Japan and required to sign cross-licenses, such American patents would substantially be disabled. Thus, the United States made a strong assertion at the GATT TRIP negotiation meeting that the structural main cause of the U.S. disablement has been the non-exclusive licensing by way of arbitration decision on working of the so-called dependent invention, as provided for in the Japanese Patent Law (Section 92 of Japanese Patent Law) and, therefore, such provision should be removed.

Japan asserted, on the other hand, that assurance of working useful improvement inventions would encourage motivation of inventors, leading to further development of industries and the law provisions should be left as they are regardless of whether there have been such results of the arbitration decision.

As a result, the GATT TRIP found a point of agreement between both parties so that "other use," or compulsory licensing, may be allowed only with respect to improvement inventions involving an important technical advance of considerable economic significance (1).

2) **Comparison of GATT TRIP with Patent Laws of Respective Countries:**

[Japan]

It will be necessary to impose stricter requirements on arbitration decision involving a dependent invention because of the background circumstances outlined in (ii).

Because the scope of such "other use" shall be

authorized "predominantly for the supply of the domestic market" of the Party authorizing such use (Article 31(f) of GATT TRIP), it will be necessary to amend the Law to restrict the scope of authorization in respect of arbitration decision on grant of non-exclusive license in the case of non-working (Section 83 of Japanese Patent Law) and of arbitration decision on grant of non-exclusive license in public interest (Section 83 of Japanese Patent Law).

[U.S.A.]

As mentioned in (ii), it will be necessary to provide for notice and remuneration to the right holder where the government or contractor has demonstrable grounds to know that a valid patent is or will be used by or for the government.

[Germany]

The German Patent Law provides only for the compulsory license for public interests (Section 24), with consideration being given in respect of any disadvantage which may be caused to the right holder (Section 85). Provisions defining the scope of the compulsory license to be authorized (supplies to domestic markets only) and providing for non-assignability and certain other matters will have to be laid down.

(4) **Article 33 "Term of Protection":**

1) **Substance of Provision:**

It must be provided that the term of protection available shall not end before the expiration of a period of 20 years counted from the filing date.

The period of 20 years is intended principally to prevent any attempt of developing countries to minimize the monopoly period under patents from advanced countries.

Also, with respect to counting of the protection

period from the filing date, it must be understood, based on the circumstances under which it has come out, that its intention is to prevent, for example, a divisional application which is kept pending with the Patent Office over a long period of time, from being granted a patent after the technology involved has become obsolescent and to prevent the patent so granted from being validly in effect for a further period of time.

This provision regulates the minimum duration period. While it is essential for development of industries to guarantee the minimum level of protection to the right holder, extremely generous protection, if granted, could well cause damage to third parties unnecessarily. We propose that Parties provide a reasonable maximum limit of the patent duration, with the intent of the GATT TRIP Agreement in mind.

2) **Comparison of GATT TRIP with Patent Laws of Respective Countries:**

[Japan]

Counting of the period from the date of publication must be discontinued. In actual practice, it happens very seldom that an application is made open within 5 years after its filing. Such change, if put in effect, would not give rise to any substantial problem.

[U.S.A.]

A change in the period needs to be made.

Cases requiring a long period of examination in the United States mostly represent continuations and divisional applications.

In order for the filing date of a patent application to serve the purpose of this Section which makes the said filing date the basis for calculation of expiration of the duration period, it would be necessary, where an application

depends on a prior application or applications, to calculate the expiration of the duration period from the filing date of the earliest-filed application invoked in the subsequent application, as provided for Article 22 [Alternative 2] (2) of the WIPO Patent Harmonization Treaty.

(5) PART III: Enforcement of Intellectual Property Right

[Section 1: General Obligations]

Article 41 (2)

1) Substance of Provision:

Procedures concerning enforcement of intellectual property rights shall be fair and equitable. They shall not entail unreasonable time limits.

2) U.S. Tariff Law Section 337 Issue

The examination period provided by ITC is a short one, being 12 months basically, which unreasonably prevents the defendant from fully preparing for the suit brought against him. It is expected, therefore, that it needs to be amended in that the ITC procedure as it is involves an unreasonable time limit.

In addition, under the ITC procedures, (1) the option of taking ITC or domestic juridical trial is available only for imports, and (2) the defendant is not permitted to file a counterclaim with ITC, making imports from abroad extremely disadvantageous when compared with domestic products under domestic lawsuits. Thus, the ITC procedures do not seem to be fair and equitable.

(6) PART III:4 Enforcement of Intellectual Property Rights: [Section 4: Special Requirements Related to Border Measures] Articles 51-58

1) Substance of Provisions:

The customs authorities shall have the authorities to suspend the release of goods in which the intellectual property right is used without valid authority. The right holder shall be authorized to cause goods in which the intellectual property right is used without valid authority to be suspended by the customs authorities.

2) Border Measures of Japan and Germany

In Japan, import of products which infringe the intellectual property right is suspended, pursuant to Section 21 of the Customs Tariff Law, under the authority of the collector of customs. The right holder does not have the right to apply for it nor does he have any means of involving himself in the procedure for suspension of such imports. A new border measure must be adopted.

In Germany, the border measures entitling the right holder to an application for suspension of the disqualified imports are not adopted either. Thus, it will be necessary to make its law system compatible with GATT-TRIP.

(7) PART IV: Acquisition and Maintenance of Intellectual Property Rights and Related Inter-Partes Procedures: Article 62 [Inter-Partes Procedures]

1) Substance of Provisions

The second paragraph requires that grant or registration of the right shall be within a reasonable period of time.

The provision is not so specific as to what the reasonable period of time would be. Requirements of the WIPO Patent Harmonization Treaty, under its Article 16,

that the substantive examination shall commence within 3 years and the final decision reached within 2 years of the commencement of the substantive examination, would approximate the criteria.

2) **Examination Period in Japan**

For examination during 1990, an average patent application in Japan required 32 months (2 years and 8 months) and that in the U.S.A. 18.3 months. It will be necessary to review the time limit for filing of the request for examination and to devise some appropriate, practicable means of reducing the examination period to a more reasonable level.

As far as we are informed, the prevailing examination period in Germany does not satisfy the goal of the final decision within 2 years from commencement of the substantive examination, but that goal would be achieved by making use of non-governmental research institutions and assistance available from EPO.

IV. Conclusion:

As mentioned previously, adoption of a uniform patent treaty is essential for protection of international intellectual property rights and for making such protection really serving its purpose, in order to cope with ongoing globalization of economic activities.

It is an undeniable fact that, as interests of countries involved varied, the place for debate has been GATT, or WIPO or bilateral, simply making the arrangements reached more complicated.

It is also true, on the other hand, that the issue of protection of intellectual property rights is so critical to each nation as to affect outcome of its industrial activities and, therefore, cannot be solved in a short time.

There would be no alternatives but to agree upon a minimum standard to start with, on top of which detailed treaty

provisions should be discussed and agreed upon later.

We are confident that the GATT TRIP, text of which would hopefully be accepted by all signatories by January 1, 1993, would signify a marked advance to the uniform worldwide patent system ever since the Paris Convention. We look forward to great efforts at an agreement within the prescribed target date being made by patent-related parties of respective countries.

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
PART I: General Provisions and Basic Principles PART II: Provisions Relating to Acquisition and Use of Intellectual Property Rights [Chapter 1: Copyright and Related Rights] [Chapter 2: Trademarks] [Chapter 3: Geographical Indications] [Chapter 4: Industrial Designs]				
[Chapter 5: Patents] Article 27 Patentable subjects matters: 1. Inventions, in all fields of technology, that are new, involve an inventive step and can be used in industries. No discrimination shall be made as to place of invention, field of technology, and whether products are imported or locally produced.	Section 29 Patentability requirements: Inventions that are industrially applicable, novel and non-obvious.	Section 101 Inventions patentable: Whoever invents any new and useful process etc. may obtain a patent therefor. Section 102-103 Conditions for patentability: A person shall be entitled to a patent if the invention was not known before the date of the invention thereof or more than one year prior to the date of the application, and was non-obvious therefrom. Section 104 Invention made abroad: Invention made abroad shall not be qualified for establishment of date thereof in the U.S.A. Section 105 Inventions in outer space: Inventions made in outer space under the jurisdiction of the U.S.A. shall be considered to be made within the U.S.A.	Section 1 Inventions on which patent may be granted: An invention which is novel and industrially useful shall be granted as a patent. Section 3 Patentability requirement (Novelty): Section 4 Patentability requirement (Non-obviousness):	Article 11 Conditions of Patentability: Novelty, non-obviousness and industrial usefulness shall be the requirements.

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
2. Parties may exclude from patentability inventions against public order or morality. 3. Parties may exclude from patentability: (a) Diagnostic, therapeutic etc. methods for treatment of humans or animals; (b) Plants and animals, processes for production thereof (other than microorganisms, non-biological and microbiological processes). Parties shall provide for protection of plant varieties either by patents or by other laws.	Section 32 Unpatentable Inventions: ① Inventions of substances manufactured by transformation of the atomic nuclear; ② Inventions liable to contravene public order or good morality, or public health.	Section 161 Patents for Plants: Whoever invents any distinct and new variety of plant may obtain a patent therefor.	Section 2 Inventions on which Patent may not be obtained: ① Inventions against public order or good morality; ② Biological invention on plants, animals. Section 5 Technological Areas in which Patent may not be obtained: ① Those used in agricultural areas are industrially usable and patentable. ② Diagnostic method has no industrial usefulness.	Article 10 Fields of Technology: [Alt. A] Patent shall not be granted in respect of: (1) Inventions contrary to public policy or good morality; (2) Inventions of animals or plants themselves; (3) Materials existing in nature, or discoveries; (4) Means or methods of medical treatments; (5) Atoms, nuclear and fissionable materials. [Alt. B] Patent shall be granted in all fields of technology.
Article 28 Rights Conferred: 1. (a) Invention of product: Make, use, offer for sale, sale or import of products prohibited. (b) Invention of process: Use of process prohibited. Use, offer for sale, sale, or import of products obtained directly by process prohibited.	Section 68 Effects of Patent Right: Exclusive right to work the patented invention. Section 2(3) Definition of Working: ① Inventions of Product: Manufacture, use, assignment, lease, display, import. ② Invention of Process: Use of the process ③ Invention of Manufacturing Process : Use of the process; manufacture, use, assignment, lease, display, and import of the product manufactured by the process	Section 271(a) Infringement of Patent: Making, use or sale of patented invention without authority. Section 295 Infringement of Process Patent: Where a substantial likelihood exists that a product was made by patented process, any importation, sale or use of the product shall be presumed to be an infringement of the process patent.	Section 9 Effect of Patent: The following are prohibited: ① Invention of Product: Make, offer, diffusion or use of products, or import or process process of products for above purposes. ② Invention of Process: Use of the process etc. ③ Invention of Process of Manufacturing: Offer, diffusion or use or, for the above purpose, import or process of the product directly made by the process.	Article 19 Rights Conferred by the Patent: [Alt. A] Deletion of this provision. [Alt. B] (1) Invention of Product: i) Making of product, ii) Offer or put on market of product, use of product, or import or stock of product. (2) Invention of Process: i) Use of process, ii) Any of acts referred to in (1)-ii) in respect of any product directly resulting from use of process, even where patent cannot be obtained for the product.

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
Article 28 Rights Conferred: 2. Patent owners have the right to assign, or to transfer the patent and the license to use the patent.	Section 77 Exclusive Licenses Section 78 Non-exclusive Licenses Section 94 Transfer etc. of Non-exclusive Licenses	Section 261 Ownership; Assignment: Patents, etc. shall be assignable in law by instrument in writing. Patentee etc. may in like manner assign the patent in part or grant license.	Section 15 Assignment of Patents; Licensing: (1) Patents are assignable. (2) Exclusive/non-exclusive license may be granted.	No provision
Article 29 Conditions on Patent Applicants: 1. Specification must disclose the invention in a manner sufficiently clear and complete the invention. Parties may require the applicant to indicate the best mode for carrying out the invention.	Section 36 Applications for Patent: The purpose, constitution and effect of the invention shall be described so as to be carried out the invention by an ordinary skilled person in the art.	Section 112 Par. 1 Specification The specification shall contain a written description of the invention and of manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art ..., and shall set forth the best mode contemplated by the inventor of carrying out his invention.	Section 35 Descriptions in Specification: (2) The specification shall exactly and clearly disclose the invention in such manner that a person skilled in the art may reduce it to practice.	Article 3 Disclosure and Description The application shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by person skilled in the art. Any advantageous effects shall be stated.
2. Parties may require an applicant for a patent to provide information concerning its corresponding foreign applications and grants.	No provisions	Section 37 CFR 1.56(a) Obligation to Disclose: Inventors etc. shall be obligated to disclose such information as is deemed to be considered upon examination.	No provision.	No provision.

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
Article 30 Exceptions to Rights Conferred: Parties may provide limited exceptions to the exclusive rights. Such exceptions can be applied only when the legitimate interests of the patent owner is not unreasonably prejudiced and it has to take account of the legitimate interests of third parties.	Section 69 Non-effective region of Patent Right: The effects of the patent right shall not extend to: ① Use of patented invention in vessels etc. merely passing through Japan. ② Products existing in Japan since before the filing of the patent application. ③ Making up of medicines based upon prescription of physicians.	Section 271 Infringement of Patent: (e) It shall not be an act of infringement to ... use ... a patented invention ... solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture ... of drugs ... Section 272 Temporary Presence in the United States The use of any invention in any vessels ... entering temporarily or accidentally, shall not constitute infringement of any patent, if the invention is used exclusively for ...	Section 11 Scope of Activities to which Patent does not Apply: 1. Personal, non-commercial activities 2. Experimental activities 3. Making up of medicines based on a prescription by a physician 4. Temporary passage etc. of vessels, etc. 5. Temporary passage etc. of aircraft, vehicles, etc. 6. Acts pertaining to the Convention on International Civil Aviation Section 12 Use of Patent by Federal Government for Public Welfare (1) Patent shall not apply to use of patented invention by the Federal Government for public welfare. (3) The Federal Government has an obligation to give notice thereof to the inventor and shall provide reasonable compensation therefor.	Article 19 Rights Conferred by the Patent: (3)(a) ... any Contracting Party may provide that the owner of a patent has no right to prevent third parties from performing, without his authorization, the acts ... in the following circumstances: (i) where the act concerns a product which has been put on the market by the owner of the patent, or with his express consent, insofar as such act is performed after that product has been so put on the market in the territory of that Contracting Party ...; (ii) where the act is done privately and on a non-commercial scale or for a non-commercial purpose, ...; (iii) where the act consists of making ... exclusively for the purpose of experiments ...; (iv) where the act consists of the preparation ... of a medicine in accordance with a medical prescription ... (b) Those provisions (e.g. Article 5-3/Passage of Vessels) of the Paris Convention which restrict the validity of the patent shall not be affected by the provision of this Article.

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
Article 31 Compulsory License Requirements for Compulsory License to be Authorized: (a) authorization of such use shall be considered on its individual merits; (b) such use may only be permitted if, prior to such use, the proposed user has made efforts to obtain authorization from the right holder .... This requirement may not be waived, where the patent holder shall be informed promptly;..... (c) the scope and duration of such use shall be limited to the purpose for which it was authorized; (d) such use shall be non-exclusive.	Compulsory Licenses under Japanese Law: ① Section 92 Arbitration decision on grant of non-exclusive license on one's own patented invention [(3) With respect to dependent inventions, the patentee may request the Director-General of the Patent Office for an arbitration decision on non-exclusive license.] ② Section 83 Arbitration decision on grant of non-exclusive license in case of non-working. ③ Section 93 Arbitration decision on grant of non-exclusive license in public interest. Section 92 (5) Arbitration decision shall not be rendered if grant of a non-exclusive license would unduly injure the benefits of patentee etc. Section 85 Hearing of Industrial Property Council Section 86 Formal Requirements of Arbitration (2) An arbitration decision ordering a non-exclusive license to be granted shall set forth, among others, the scope of the license and consideration for the license.	42 USC 2183 Compulsory license on inventions on nuclear energy with public interests. Compulsory license under Clean Air Act. In either case, the compulsory working by the government does not require notice or compensation to the inventor.	Section 24 Compulsory License for Public Interests: (1) A compulsory license shall be granted where, if the patentee refuses grant of a license to any person who offers payment of a reasonable consideration therefor and security therefor, the license is necessary for public interests. Section 85 Procedure for Grant of Compulsory License: (2) Security shall be provided to prepare for any disadvantage which may be caused to the right holder. (3) Decision of the necessity therefor by the court.	Article 19 Rights Conferred by the Patent: (3)(b) Those provisions of the Paris Convention (e.g. Section 5 A/Grant of Compulsory License Based on Non-Use) which restrict validity of the patent shall not be prejudiced by the provisions of this Section.

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
Article 31 Compulsory License Requirement for Grant of Compulsory License (e) Non-transferable (except with part of the enterprise or goodwill. Dependent invention must be assigned with the inventor's patent); (f) Any such use shall be restricted to supply of the domestic market; (g) If and when the circumstances which led to it cease to exist, the competent authority shall have the authority to review the continued existence of these circumstances; (h) The right holders shall be paid adequate remuneration. With respect to use by the government, notice shall be given to the right holder if there is a specific ground under which the patent could be identifiable (searching not required); (i) The legal validity of any decision relating to the authorization of such use shall be subject to judicial review;	Section 94 Transfer etc of Non-exclusive license: (1) A non-exclusive license may be transferred, ① only together with the business in which it is worked, or ② only with the consent of the patentee (or ...), or ③ in the case of inheritance or other general succession. (3) A non-exclusive license in case of non-working shall be transferred together with the patent, if it comes under ① or ③ above. (4) In the case of a dependent invention, the non-exclusive license shall be transferred together with the patent involved Section 90 Cancellation of Arbitration Decision: Where a person who has obtained a non-exclusive license under an arbitration decision fails to work on the patented invention, the Director General of the Patent Office may cancel the arbitration decision. Section 86 Formal Requirements of Arbitration (notice shall always be given in respect of the arbitration decision ordering a non-exclusive license to be granted). Section 84 Submission of Written Reply			

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
(j) Any decision relating to remuneration provided shall be subject to judicial review. (k) Parties are not obliged to apply the conditions under (b) and (f) where such use is permitted to remedy a practice determined to be anti-competitive. (l) Use based on an independent invention shall be subject to the following additional conditions: i) the invention claimed in the second patent shall involve an important technical advantage of considerable economic significance in relation to the invention claimed in the first patent; ii) the owner of the first patent shall be entitled to a cross-license on reasonable terms to use the invention claimed in the second patent; and iii) the use authorized in respect of the first patent shall be non-assignable except with the assignment of the second patent.	Section 183 (1) Action on Amount of Remuneration Section 92 (5) If the grant of a non-exclusive license would unduly injure the benefits of the patentee etc., the Director General shall not render an arbitration decision ordering a non-exclusive license to be granted. Section 85 Hearing of Industrial Property Council Section 92 (2) Right holder of the first patent may request the right holder of the second patent for negotiation on a cross-license. section 94 Transfer of Non-exclusive License etc.: (4) In the case of dependent invention, a non-exclusive license resulting from an arbitration shall be transferred together with the patent to which the non-exclusive licensee is entitled			

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
Article 32 Revocation/Forfeiture An opportunity for judicial review of any decision to revoke or forfeit a patent shall be available.	Section 178 Action against Appeal Decisions etc. Section 123 Appeal for Invalidation of Patent Section 171 A Second Appeal	Section 306 Court Review The patent owner involved in a reexamination proceeding may seek court review with respect to any decision adverse to the patentability.	Section 73 Appeal to Patent Court: Appeal against invalidation of patent under Section 59 (Filing of Opposition) etc.	Article 18 Administrative Revocation (e) The Office may not revoke the patent ... at the request of a third party, unless the owner of the patent has had at least one opportunity to present his arguments on the grounds on which the Office intends to revoke the patent.
Article 33 Term of Protection The term of protection available shall not end before the expiration of a period of twenty years counted from the filing date.	Section 67 Term of Patent Right The term of the patent right shall be 15 years counted from the date of publication of the patent application, but not to exceed 20 years from the filing date of the patent application.	Section 154 Contents and Term of Patent 17 years from the issue date.	Section 16 Duration Patent shall continue to be in force for 20 years from the date on which an patent application for an invention is filed.	Article 22 Term of Patents [Alt. A] No provision [Alt. B] (1) The patent term of at least 20 years. (2)(a) The patent term to commence on the filing date of the application. (b) Where an application ("the subsequent application") invokes one or more earlier applications without claiming the priority of any of those earlier applications, the starting date of the term of the patent granted on the subsequent application shall be the filing date of the earliest filed application involved in the subsequent application.

TABLE 1 A COMPARISON OF PATENT PROVISIONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Japan	U.S.A.	Germany	WIPO Patent Harmonization
Section 34 Process Patent; Burden of Proof: 1. If the subject matter of a patent is a process for obtaining a product (28.1), the judicial authorities shall have the authority to order the defendant to prove that the process to obtain an identical product is different from the patented process. In at least one of the following circumstances, any identical product when produced without the consent of the patent owner shall, in the absence of proof to the contrary, be deemed to have been obtained by the patented process: (a) if the product obtained by the patented process is new; (b) if there is a substantial likelihood that the identical product was made by the process and the owner of the patent has been unable through reasonable efforts to determine the process actually used.	Section 104 Presumption of Manufacture by Patented Process: In the case of a patent for an invention of a process of manufacturing a product, where such product was not publicly known in Japan prior to the filing of the patent application concerned, any identical product shall be presumed to have been manufactured by the process.	Section 295 Presumption; Product Made by Patented Process: .. if the court finds – (1) that a substantial likelihood exists that the product was made by the patented process, and (2) that the plaintiff has made a reasonable effort to determine the process actually used in the production of the product and was unable to so determine, the product shall be presumed to have been so made, and the burden of establishing that the product was not made by the process shall be on the party asserting that it was not so made.	Section 139(3) Presumption of Manufacture by Patented Process: In the case of a patented invention which represents a new process of manufacturing a product, any identical product manufactured by a different process shall, in the absence of a proof to the contrary, be presumed to have been manufactured by the patented process.	Article 24 Reversal of Burden of Proof: [Alt. A] No provision. [Alt. B] (1) ... where the subject matter of the patent is a process, the burden of establishing that a product was not made by the process shall be on the alleged infringer if either of the following conditions is fulfilled: i) the product is new; or ii) a substantial likelihood exists that the product was made by the process and the owner of the patent has been unable through reasonable efforts to determine the process actually used.
2. Any party shall be free to provide that the burden of proof only if the condition referred to in above-mentioned (a) or (b) is fulfilled. 3. In the adduction of proof to the contrary, the legitimate interests of the defendant have to be taken into account.	Section 105 Submission of Documents: In litigation ..., the court may, ..., order the other party to submit documents necessary for the assessment of the damage caused by the infringement. However, this provision shall not apply when the person possessing the documents has a legitimate reason for refusing to produce them. Code of Civil Procedure	Protection Order: Fed. R. Civ. P. 26(C) Fed. R. Crim. P. 16(d)(1)	Section 139(3) Presumption of Manufacture by Patented Process: If any evidence to the contrary is adopted, reasonable interests of the defendant in respect of maintenance of manufacturing secret and business secret shall be taken into account.	Article 24 (2) Manufacturing and Business Secrets In requiring the production of evidence, the authority before which the proceedings ... take place shall take into account the legitimate interests of the alleged infringer in not disclosing his manufacturing and business secrets.

TABLE 1 A COMPARISONS BETWEEN GATT (TRIP) DRAFT, JAPAN, THE U.S.A., GERMANY AND WIPO PATENT HARMONIZATION

GATT (TRIP) Draft	Problems Area of Each Countries
[Chapter 6: Layout-Designs (Topographies) of Integrated Circuits] [Chapter 7: Protection of undisclosed Information] [Chapter 8: Control of Anti-Competitive Practice in Contractual Licenses] PART III: Enforcement of Intellectual Property Rights [Chapter 1: General obligations] Article 41: 2. Procedures concerning the enforcement of intellectual property rights shall be fair and equitable. They shall not be unnecessarily complicated or costly, or entail unreasonable time limits or unwarranted delays. [Chapter 2: Civil and Administrative Procedures and Remedies] [Chapter 3: Provisional Measures] [Chapter 4: Special Requirements Related to Border Measures] Article 51 Suspension of Release by Customs Authorities Parties shall, adopt procedures to enable a right holder, to lodge an application in writing with competent authorities, administrative or judicial, for the suspension by the customs authorities of the release into free circulation of such goods. Article 52 Application (provision of prima facie evidence etc.) Article 53 Security or Equivalent Assurance Article 54 ~ 55 Notice of Suspension; Duration of Suspension Article 56 Indemnification of the Importer and of the Owner of the Goods Article 58 Ex Officio Action PART IV: Acquisition and Maintenance of Intellectual Property Rights and Related Inter-parties Procedures Article 62 Convenance between Parties: 1. Conditions for acquisition and maintenance of the intellectual property rights shall not be inconsistent with the provisions of this Agreement. 2. Parties shall ensure that the procedures for grant or registration, within a reasonable period of time so as to avoid unwarranted curtailment of the period of protection. PART V: Dispute Prevention and Settlement PART VI: Transitional Arrangements PART VII: Institutional Arrangements; Final Provisions	Individual Problems Peculiar to Respective Countries Problem Areas of U.S. Customs Law; Section 337: * The examination period at the International Trade Committee (ITC) is restricted to such a short period as basically 12 months. * A case was held to be a violation of Section 41(2) on the ground of undue time restriction. * Because (1) the option of taking ITC or domestic juridical trial is available only for import products, and (2) the fact counter trial cannot be filed by the person who imports products from abroad are an extreme disadvantage, when compared with the person who provide the domestic products to which the domestic litigation is available. Therefore, the system does not seem to be fair and equitable. Problem Areas of Border Measures in Japan: * The border measures in Japan are within the authority of the collector of customs, as provided for in Section 21 of the Tariff Law. * The border measures in Japan do not provide the right holder with the right to raise an objection nor do they provide the parties with the means of participating therein. Thus, they do not satisfy even the minimum requirements for appropriate measures to be taken. Grant of Patent within a Reasonable Period: * For examination during 1990, an average patent application in Japan required 32 months (2 years and 8 months), while that in U.S.A. 18.3 months. * Article 16 of the WIPO Patent Harmonization Treaty requires substantive examination to be commenced within 3 years of application and the final decision to be reached within 2 years of the commencement of the substantive examination. * Article 62 of the GATT TRIP draft agreement states, "..., PARTIES shall ensure that the procedures for grant or registration, ..., permit the granting or registration of the right within a reasonable period of time ...." without citing a specific time period. If it is assumed that the time period specified in Article 16 of the Patent System Harmonization Act is considered reasonable, the period required for examination of patent applications in Japan far exceeds it.

TABLE 2 COORDINATION OF GATT TRIP DRAFT WITH PATENT LAWS OF SOME OF COUNTRIES

GATT TRIP Draft		Japan	U.S.A.	Germany	WIPO Patent Harmonization
Article 27	Patentable subject matters	○	X	○	○
Article 27 3.	Subject matters excludable from patentability	X	○	○	X
Article 28	Rights conferred		○	○	○
Article 29	Conditions on patent applicants	○	○	○	○
Article 30	Exceptions to Rights conferred	○	○	○	○
Article 31	Other use without authorization of the right holder (compulsory license)	△	○	○	-
Article 32	Revocation/Forfeiture	○	○	○	-
Article 33	Term of protection	X	X	○	○
Article 34	Process patent; burden of proof	○	○	○	○
Article 41 2.	Basic obligations	○	X	○	-
Article 51	Suspension of release by customs authorities	X	○	X	-
Article 62	Covenants between Parties	X	○	△	-

○: Fully coordinative, requiring no law revision [Coord.].

△: Incoordinate, but adjustable with administration, without requiring law revision unnecessarily [Incord. but administable].

X: Inncoordinate, and hard to adjust with administration, requiring law revision [Req. law rev.].

PACIFIC INDUSTRIAL PROPERTY ASSOCIATION

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October, 1992
Okayama, Japan

U.S. DEVELOPMENTS CONCERNING PATENT ASPECTS OF GATT, NAFTA AND HARMONIZATION

There are three inter-related matters which are the subject of this paper. Specifically, the patent aspects in GATT and NAFTA and the developments concerning harmonization in the United States.

GATT

With respect to the GATT issue, as you know, the Uruguay Round is still being negotiated. The major area of disagreement relates to agricultural subsidies. There are, however, trade related aspects of intellectual property rights (TRIPS) which are also still under discussion.

The United States has objected to certain features of the present TRIPS text. There are two major areas of objection. First, the period of time under the present form of the text which developing countries would have to reform their laws so as to give patent protection to certain pharmaceutical products. Specifically, under the present text certain developing countries would have ten years to reform their laws; the United States has taken the position that this is an excessive period of time. Secondly, the copyright industry in the United States has objected to the present text as it relates to the manner in which copyright royalties may be collected.

These matters will continue to be under discussion when, and if, the agricultural subsidy issues come closer to resolution.

A more immediate result of the GATT negotiations is evidenced by the position of the World Intellectual Property Organization as expressed in WIPO document dated July 31, 1992 numbered P/A/XIX/3. This document, prepared for the meeting of the Paris Union Assembly September 21-29, 1992 and entitled "Continuation of the Diplomatic Conference for the Conclusion of a Treaty Supplementing the Paris Convention as Far as Patents Are Concerned" states that ". . . although the negotiations of the Uruguay Round of GATT have not been completed, the draft of the text dealing with intellectual property (hereinafter referred to as "the TRIPS draft"), which would be part of the final outcome of the Uruguay Round is now known. (It is believed that if the draft is adopted, it will be adopted without major changes)."

The WIPO document continues, in paragraph seven, as follows: "The TRIPS draft gives comprehensive solutions to the issues dealt with in the following six articles of the basic proposal before the Diplomatic Conference:

Article 10: Fields of Technology,

Article 19: Rights Conferred by the Patent,

Article 22: Term of Patents,

Article 24: Reversal of Burden of Proof,

Article 25: Obligations of the Right Holder,

Article 26: Remedial Measures Under National Legislation."

The document continues, in paragraph eight: "It is proposed that these articles be omitted from the Basic Proposal, the more so that they are among the most controversial."

The document then, in paragraph nine, proposes that the second part of the Diplomatic Conference deal with a modified Basic Proposal from which these six articles have been removed.

The WIPO document also recommends that the second half of the Diplomatic Conference be held in Geneva from July 12-30, 1993.

NAFTA

The North American Free Trade Agreement ("NAFTA") has apparently been substantially concluded but its text has not yet been made public. The parties to the Agreement are the United States, Canada and Mexico. The procedure in the United States is that major trade agreements, such as NAFTA, are initially submitted to approximately 46 Industry Advisory Committees ("ISAC") for comment, before being submitted to Congress. After these advisory committees have studied the text and made their recommendations, the trade agreement is then submitted to the Congress. Only after it is submitted to the Congress is it made available to the public. The exact date on which that would occur is not known as of this writing.

With respect to intellectual property matters, it is understood that the provisions, in general, are similar to the TRIPS aspects of the GATT Uruguay Round. There are several differences however. One difference is an agreement modifying Canada's compulsory license law concerning pharmaceuticals. It is also understood that there is a provision in the agreement, referred to as the cultural exemption, permitting a limit on the

percentage of motion picture use and broadcasting permitted from the United States to the other partners to the Agreement.

It is also understood that NAFTA would require a modification of United States patent law as it relates to Section 104 of Title 35, United States Code. More specifically, that Section of the law now provides that activities outside of the United States cannot be relied upon to establish priority for purposes of obtaining an United States patent. There is an exception to this which is the filing of a patent application in a country outside of the United States, where the corresponding application is filed in the United States under the Paris Convention within one year of the filing in the other country. This NAFTA provision apparently would permit nationals of Canada and Mexico to establish priority by establishing conception, diligence, and reduction to practice by proving acts which occurred in Canada or Mexico.

It may be recalled that the delegation of the United States made an offer, at the Diplomatic Conference on Patent Law Harmonization held at the Hague, to change U.S. law in this regard with respect to all countries while retaining its historic "first to invent" patent law.

Harmonization

As previously indicated, the World Intellectual Property Organization will be revising the text of the Basic Document to be presented to the second half of the Diplomatic Conference which will be held next July in Geneva. That text has not yet been published but it will reflect not only the changes mentioned

earlier but also the decisions taken during the first half of the Diplomatic Conference held in the Hague.

In the United States, two bills have been introduced into the Congress entitled "Patent System Harmonization Act of 1992". In the House of Representatives the bill is H.R. 4978 and in the Senate the bill is S. 2605. These bills are, of course, identical.

The bills provides that they would become effective "six months after the date on which the Commissioner of Patents and Trademarks certifies to the Congress that an agreement among at least Japan, the countries of the European Patent Convention that are members of the European community, and the United States has been executed and will come into effect on or before the expiration of such six month period, providing for the substantial harmonization of the laws relating to patent filing and examination procedures and patentability standards among such countries, including the doctrine of equivalence."

On the effective date of the act the provisions of present sections 102, 103 and 104 of Title 35, United States Code, would be superseded with respect to all patents and applications for patents containing one or more claims entitled to an effective filing date that is on or after the effective date of the new act.

The proposed legislation provides that applications filed in a country outside of the United States and filed in the United States under the Paris Convention within one year of their home country filing shall be prior art to a later filed United States application, provided the application in the home country conforms

to the first paragraph of Section 112 of the Patent Act and claims priority within 16 months after the date of the prior application. The legislation also provides for prior user rights where a person has "acting in good faith, commercially used or commercially sold in the United States, or has made effective and serious preparation therefore in the United States, before the filing date or priority of the application for patent."

The proposed legislation also provides for the possibility of relying on an earlier application for priority where it is filed in the United States and contains the information required by the first paragraph of Section 112 of the Patent Act where the later application is filed in accordance with the present requirements for a continuing application.

The proposed legislation also provides for publishing patent specifications and claims eighteen months after the filing date or priority date.

The term of the patent would be 20 years from the application filing date in the United States. A reasonable royalty could be collected from any person who during the period before the grant of the patent made, used, sold or imported the claimed invention or used the process or imported products made by the process where that person had actual knowledge of the published application.

It will be understood that the above comments are only of a general nature and are not intended to be specific as to the precise statement of the legislation to which attention is invited.

It is understood that additional hearings may be held on these bills, probably sometime next year.

Other legislation recently submitted to the Congress of the United States is also of interest. On August 6 of this year Senator DeConcini introduced legislation entitled the "Patent Filing Simplification Act of 1992", S. 3151. Under this bill a publication describing the invention in the English language in the United States which is published, or authorized, shall constitute a regularly filed application for patent filed on the date of publication in the United States if a regular patent application is filed within one year after the date of publication. It is stated that the bill takes advantage of a provision in article 4 of the Paris Convention which affords a right of priority to any "filing that is equivalent to a regular national filing under the domestic legislation of any country. . . ." The description of the legislation indicates that by treating a publication in the United States as a filing, an inventor would enjoy the Paris Convention right of priority, meaning that the inventor would have up to one year to file a patent application in any other Paris Convention member country, notwithstanding the absolute novelty requirements in most countries.

Presumably this would be a provision would could be considered by other countries for incorporation in their own laws to the end that a magazine publication, for example, in any Paris Convention country could be considered a filing equivalent to "a regular national filing" under the domestic legislation of that country.

In addition to the legislation mentioned above, in the United States the Secretary of Commerce formed an "Advisory Commission on Patent Law Reform" which has recently completed its consideration of potential changes in the U.S. patent law. It will recommend to the Secretary of Commerce, among other things, that the patent law of the United States be changed to a "first to file" system and that the "best mode" requirement be deleted from the United States law. This Advisory Commission report is, as of the time of this writing, being prepared for submission to the Secretary of Commerce of the United States. The Secretary of Commerce will determine what, if any, changes in the patent law are to be recommended to the Congress of the United States. In other words, the Secretary may accept or reject the proposals by this Advisory Commission. As of this writing, there has been no indication as to whether the Secretary of Commerce has given any consideration to the report of the Advisory Commission nor what recommendations may eventually be made to the Congress.

1. Title: Filing Policy for Community Patent Convention

2. Date: October 1992 (23rd, Okayama)

3. Source: (1) Source; PIPA
(2) Group; Japan
(3) Committee; No. 3

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5. Keyword: CPC, EPC, Exhaustion of Rights

6. Statutory Provisions: Community Patent Convention

7. Abstract: This report provides the result of survey based on response to a questionnaire asking company's filing policy to EC countries.

The company's policy is characterized by splitting into two groups. The fist group having fewer number of filing countries is negative to use CPC.
One fourth of the second group having larger number of filing countries is positive to use CPC, but still more number of companies of the second group prefer EPC to CPC.
The strongest reason for negative choice of CPC is obligation of documents translation into the official languages. Subject of "Exhaustion of rights" is not considered as an important issue at present.

1. Object

At the 22nd congress, the third committee presented their study report on various subjects of the Community Patent Convention (CPC). Meanwhile considerable amount of publication has been available. For example, November 1991 issue of Patent Management, Japan, was published as the special articles on "Revolution of Intellectual Property System in Europe and its Trend".

It is certain that the said trend will influence expenditure forecast of patent department of companies in 1993. Therefore, department in charge of patent application should establish soon his foreign application planning.

On the above assumption, we sent a questionnaire to the member companies of PIPA Japanese Group, in order to know tendency of planning by Japanese applicants.

2. Result of survey

(1) Questionnaire

The questionnaire we sent comprises 9 questions and a brief explanatory note. Questions are as follows:

- Q1; Line of business
- Q2; Number of application filed in 1991 in each member country of EC
- Q3, Q4; Number of filing countries for one application and filing route
- Q5~Q8; Filing policy with respect to choice of filing route such as CPC, EPC
- Q9; Request and proposal to CPC

The questionnaire is shown in Attachment I.

(2)Obtained response

We sent questionnaire to 87 companies and obtained response from 66 companies.

Yield 66/87×100=76%

Classification by line of business:

Metals, and Machinery	17 companies
Electrical Machinery & Apparatus	15 "
Chemical Products (including pharmaceutical)	34 "

(3)Numerical results and analysis

The numerical results and analysis thereon in graphic manner is shown in Attachment II.

In the obtained results, we can observe characteristic feature in relation to business of the company. Page 1~Page 6 of Attachment II illustrate graphical summary in accordance with line of business.

Page 1. Metals, and Machinery, 17 companies

Page 2. Electrical Machinery and Apparatus, 15 companies

Page 3. Chemical (Process &Equipment oriented), 13 companies

Page 4. Chemical (Specialty oriented), 12 companies

Page 5. Pharmaceutical, 9 companies

When we classify the companies into 5 groups in the above manner, we can summarize their filing policy as the average value without big exception.

Metals, and Machinery shown in **Page 1** —— This group has relatively large number of applications. However, they file in relatively small number of countries, 3 in average.
Only small percentage of companies are interested in using CPC.

Electrical Machinery and Appratus shown in **Page 2** —— This group has quite large number of applications and small number of filing countries, 3 in average. However, concentration into the top 3, Germany, U.K., France, are more extreme than the 1st group. The reason seems that this industry requires well-developed status of production relating to high-technology. No company is interested in CPC.

Chemical companies, process and equipment oriented, shown in **Page 3** —— This group has relatively small number of applications and filing countries, 4 in average number. In addition to the top 3, Netherlands or Italy comes to 4th country. No company is interested in CPC. The said 1st, 2nd and 3rd groups seem to have common policy to CPC.

Chemical companies, specialty oriented, shown in **Page 4** —— This group has relatively small number of applications and relatively large number of filing countries, 6 in average number. About 1/4 companies answered that they will use CPC, though this number is less than number of companies who will use EPC rather than CPC.

Pharmaceutical companies, shown in **Page 5** —— This group has the same characteristic as 4th group, but more extreme. Average number of filing countries are 8. About 1/4 companies are interested in CPC, but still fewer than companies who will choose EPC.

It is understood that companies having more number of filing countries will find more advantage to CPC. The same kind of numerical analysis, for just two groups classified in terms of number of filing countries and regardless of line of business, are shown in **Page 6** and **7**.

We provide another graph on relation between Q3 and Q5, which illustrates preference of filing route according to number of filing countries.

The graph in **Page 8** shows that preference for CPC can not exceed EPC in any cases.

Proposals and requests are summarized also on **Page 8.**

Most of requests concern with subjects of translation of the documents.

Some of those opinions are exemplified as follows:

Number of languages of translation, which the applicant has to prepare and submit, should be reduced.

Only limited number of languages, such as English, German and French should be enough for granting patent. Languages other than the above should be requested only for infringement suit or claiming damage.

EPO should make arrangement so that official organization including EPO itself provides translation in compliance with request from the CPC applicant.

Doctrine of exhaustion of rights does not make big issue for choosing CPC for Japanese applicant.

Another interesting request, which was given from applicant having large number of filing countries, to CPC is to add more member countries, namely Sweden, Austria, Switzerland.

3. Recent Development of CPC

At the 22nd congress, we reported that the CPC will enter in force as from January 1, 1993, in all EC member states excluding Denmark and Ireland. The above mentioned questionnaire were prepared on the assumption that this schedule will be realized approximately in time.

However, recently Spain was said to oppose partial implementation of CPC, which is necessary for enforcement of CPC on schedule, unless Madrid should be location of the Community Trademark Office.

Judging from the information available at present, it is seen that more of one or two years should be necessary before enforcement of CPC.

4. Discussion

The results of this survey seem to represent filing policy of Japanese companies faithfully.

For example, rate of using EPC route in EC member countries is considerably high. A far as cost merit concerns, using EPC route should be advantageous when designated countries are more than 4. In this survey, even companies having filing countries of about 4 show their positive attitude to use EPC route. It agrees with good reputation which EPC system obtained from Japanese applicants with respect to reasonable application procedure, search and examination, etc. EPC is considered to be successful to Japanese applicant.

It may be making contrast with PCT, though it was out of object of this survey. Japanese companies are not willing to use PCT route in most cases. From the statical figure, it can be seen that PCT route is used at certain rate. But some people say that most of such cases are in "emergency escape" manner of filing with application in original language when the applicant does not have enough time for translation.

Applicant has liberty of "not choosing" to EPC or PCT. In contrast, character without liberty of "not choosing" is observed in CPC system. This is a problem for applicants. When we review the past history of CPC, opinion from countries out of EC seems not to be taken. We guess that there has been no chance to discuss with outside countries particularly on EC's patent system. It may be because other important issues have priority to be discussed, such as currency, tariff, multi-national transportation, agriculture protection, and immigration upon unification of EC.

In accordance with present survey and available information, merit of EPC which has good reputation, may not be succeeded by CPC.

Under these situation, it is a question if the foreign applicants should do something.

After every rules and regulations are settled, amendment of CPC according to our request might be difficult to comply. Input of opinion by two big foreign patent countries, USA and Japan, at the present stage when some uncertainties exist, should be beneficial to direction of CPC.

QUESTIONNAIRES ON FILING OF APPLICATIONS IN EC SIGNATORIES

Question 1: Please check your principal line or lines of business:

Metals & Machinery:

[ ] Transportation [ ] Motive power machinery

[ ] Metal, machinery [ ] Iron, steel, metals

Electrical Machinery & Apparatus:

[ ] General electrical machinery and devices

[ ] Computers [ ] Communication

[ ] Household appliances [ ] Acoustic

[ ] Measurement [ ] Wire

[ ] Electronic parts

Chemical:

[ ] General chemical [ ] Organic chemical

[ ] Rubber [ ] Plastics

[ ] Paints [ ] Petroleum

[ ] Petrochemical [ ] Textile

[ ] Pharmaceutical [ ] Foods

[ ] Cosmetic

Others:

[ ] Identify ( )

Question 2: How many applications did you file in E.C. signatories during calendar 1991? Give the number of such applications by country, which should be further broken down into those processed under the European Patent Convention (EPC) and the rest. The number of applications processed under EPC should include those processed under Patent Cooperation Treaty (PCT).

Countries	Under EPC (of which under PCT)	Other than under EPC	Totals
Germany	_____ (_____)	_____	_____
United Kingdom	_____ (_____)	_____	_____
France	_____ (_____)	_____	_____
Italy	_____ (_____)	_____	_____
Netherlands	_____ (_____)	_____	_____
Belgium	_____ (_____)	_____	_____
Luxembourg	_____ (_____)	_____	_____
Spain	_____ (_____)	_____	_____
Greece	_____ (_____)	_____	_____
Portugal	_____ (_____)	_____	_____
Denmark	_____ (_____)	_____	_____
Ireland	_____ (_____)	_____	_____
Total	_____ (_____)	_____	_____

Question 3: How many of EC signatories were your EC applications filed in 1991 on an average application basis ?

Answer: ____ countries

Question 4: With respect to your answer to Question 3 above, please check one which best describes:

[ ] 1. Filing in the above number of countries is enough.

[ ] 2. Cost of filing resulted in the above number countries though it is not enough.

[ ] 3. Number of filing countries will be increased since the above number of countries is not enough.

Question 5: After the Community Patent Convention (CPC) becomes effective in 1993, as currently scheduled, your application with the European Patent Office, designating any one CPC signatory, shall be deemed as application under CPC.

Check one which represents your basic corporate policy, except that if your answer is two or more, depending on kind or significance of invention, you may check as many sections as may be appropriate:

[ ] 1. File under CPC (in which event please answer Question 6).

[ ] 2. Choose to be handled as EPC application, the same as in the past (in which event please answer Question 7).

[ ] 3. Do not apply through European Patent Office (apply directly to the patent office of respective signatories, instead) (in which event please answer Question 8).

[ ] 4. Premature to make a decision now.

Question 6: If you have checked Answer 1 to Question 5, filing under CPC, please check any one or more reasons below appropriate for you:

[ ] 1. It is more advantageous, in that a single application will cover all signatories.

[ ] 2. It is easier for obtaining and maintaining patents, and costs less for maintenance and agents' fees.

[ ] 3. Others (Describe specifically):

_____

_____

Question 7: If you have checked Answer 2 to Question 5, filing under EPC, please check any one or more reasons below appropriate for you:

[ ] 1. A court decision invalidating a patent or a failure in prosecution of an application (e.g. failure to file translated claims after grant of a patent as required) would lead to loss of the CPC patent in its entirety.

[ ] 2. Excessive burden for translation. With respect to certain languages, it is extremely difficult to complete translation within the given period.

[ ] 3. Others (Describe specifically):_____

_____

_____

Question 8: If you have checked Answer 3 to Question 5, filing directly in signatory countries, please describe your reasons specifically:

Answer:_____

_____

_____

Question 9: Please give your suggestions or proposals for improving the Community Patent Convention as presently reported:

Thank you for your cooperation

PIPA, 3rd Committee

Outline of Community Patent Convention (CPC) and Advantages and Disadvantages

1. Outline

(1) The European Patent Convention (EPC) aims at unification of examination of applications. Before grant of the patent, the European Patent Office (EPO) examines an application as a bundle of applications to respective signatory countries. The patent, after granted, serves as patent for each of designated signatories. The Community Patent Convention (CPC), on the other hand, serves to one unified patent throughout E.C. A CPC application, after examined by EPO, becomes one patent valid throughout E.C. (Community Patent, CP) as if the whole E.C. territories were a designated signatory country.

(2) An EPO application, designating a CPC signatory, shall be deemed as applying for the CP. During the transit period, however, EPO applicants are entitled to select either patents for designated signatories, in the same manner as EPC in the past, or the CP.

(3) The CPC procedures to be followed are mostly similar to the EPC, one of major differences, however, being that applicants must file, within three months after publication, the specifications translated into official nine languages of all signatories. Failure to do so will disqualify the applicants for that CP, except that any applications filed with the translated specifications within two months after the otherwise due date will be entitled to grant of patents, but only with respect to those countries for which the translated specifications are filed as required.

(4) The annual maintenance fee under the CPC costs less than the aggregate annual maintenance fees required for all signatories (being reportedly one-third or a quarter). Failure to pay it on a timely basis will be subject to forfeiture of the patent right involved throughout the EC territories.

(5) Any CP infringement suit will be heard, as to existence of alleged infringements and decision of invalidity, at a patent court provided in each of the signatories. Any appeal from it as well as appeal from the EPO for invalidity decision will be made to the Court of Appeal for Community Patents (CAC).

(6) One of the aims of the EEC Treaty in Article 30 is to facilitate free transfer of goods within EC. Thus, because of operation of the Doctrine of Exhaustion of rights employed in many judgments of the European Court, a patent owner cannot prevent any goods brought, by him or any person with his consent, into any EC country in which his patent does not exist, from being parallel-imported into any EC country in which his patent exists.

In addition, it will be easier, after the CPC becomes effective, to obtain a patent right covering all EC signatories. Thus, according to some sources, there is a possibility of a patent owner being held to have given consent to working of his patented invention by third parties in countries in which the patent owner does not have his patent right registered, with the result that circulation of the product so made is treated in the same manner as for the parallel import case.

(7) The CPC is expected to become effective 1 January 1993, leaving Denmark and Ireland (out of 12 EC countries) as non-signatories.

2. Advantages and Disadvantages:

(1)Advantages:

① The unified formality requirements permit acquisition and maintenance of patents in a simplified manner.

② Agents' fee and annual maintenance fee cost less than they would when applying for and maintaining patents in respective countries.

③ A single patent right valid throughout EC makes it advantageous in exercise of it.

④ The unified patent right would eliminate differences in its construction according to countries, leading to uniform interpretation.

(2)Disadvantages:

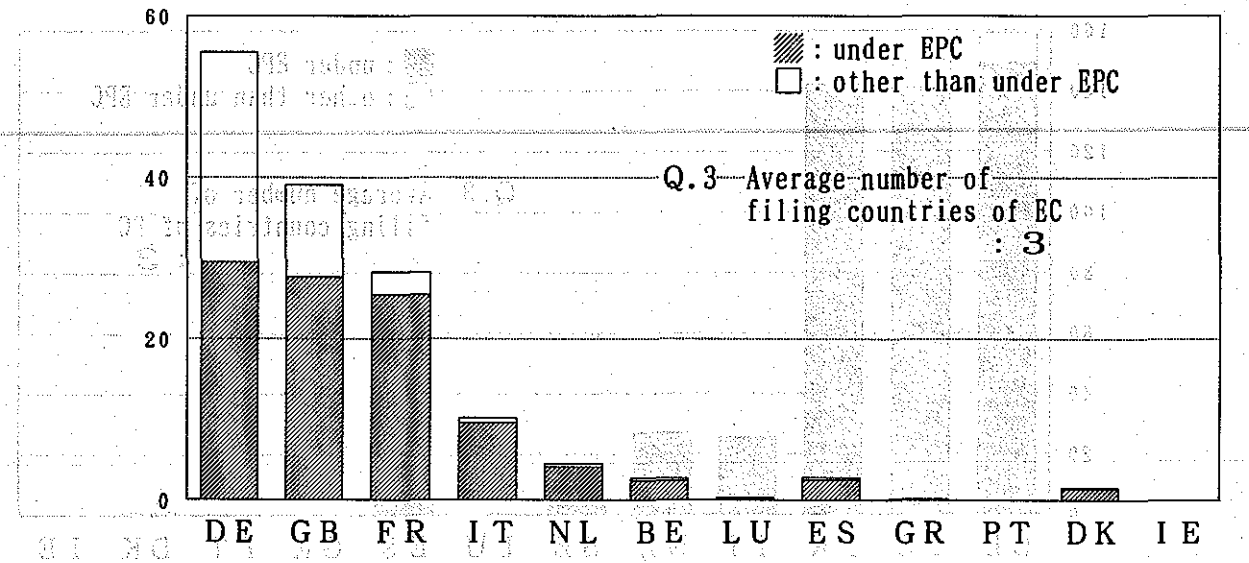
① Any failure in application for or maintenance of a patent or invalidity decision of a patent by the court will end up with loss of the EC patent as a whole.

② Cost of translation will be excessive as compared with when an application is filed in certain selected countries of EC.

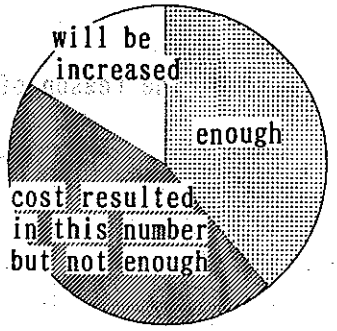
③ Lack of qualified translators for certain languages could make it prohibitive to complete and file translation within the specified period of time.

Q.1 Metals and Machinery (17 companies answered)

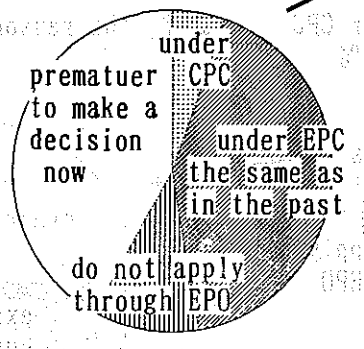
Q.2 Average number of filing applications of the companies during 1991



Q.4 Number of filing countries of EC

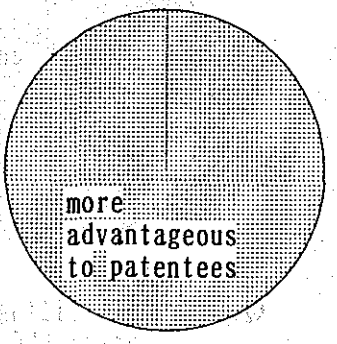


Q.5 Future filing in EC after CPC effective

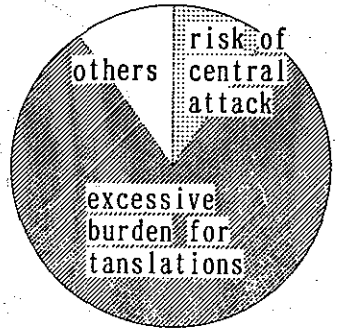


Q.8 no need to file in many countries

Q.6 The reason of "under CPC"

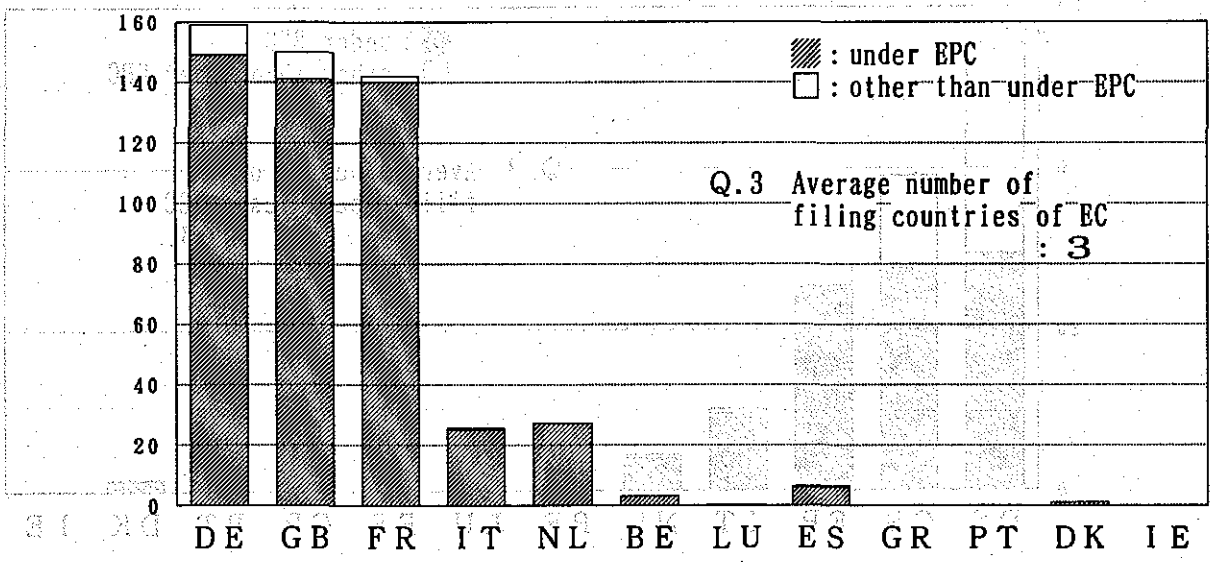


Q.7 The reason of "not under CPC"



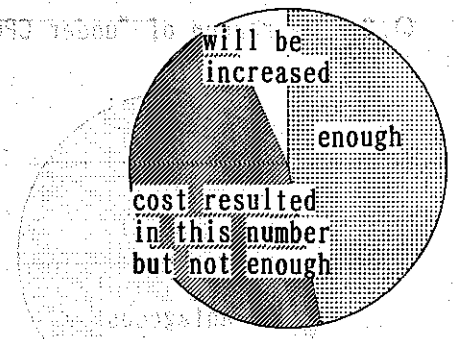
Q.1 Electrical Machinery and Apparatus (15 companies answered)

Q.2 Average number of filing applications of the companies during 1991



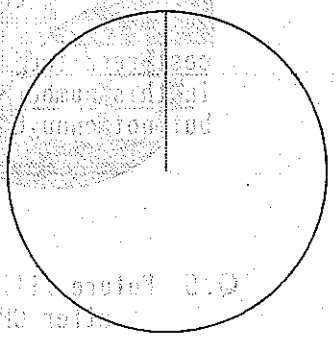
Q.3 Average number of filing countries of EC : 3

Q.4 Number of filing countries of EC



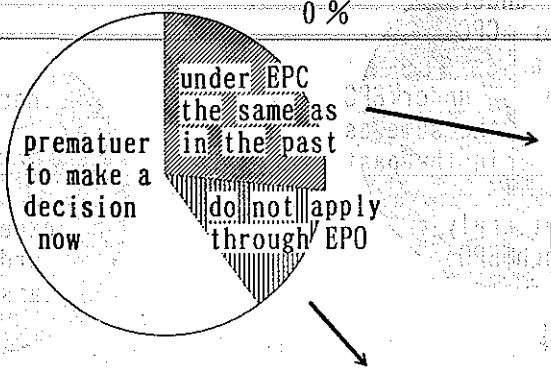
Q.5 Future filing in EC after CPC effective

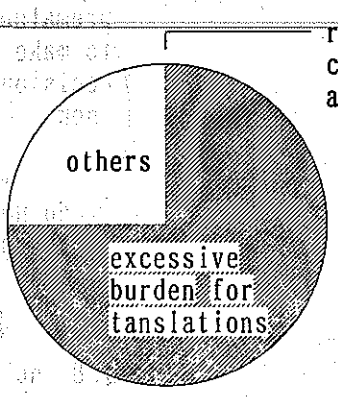
Q.6 The reason of "under CPC"



under CPC 0 %

Q.7 The reason of "not under CPC"

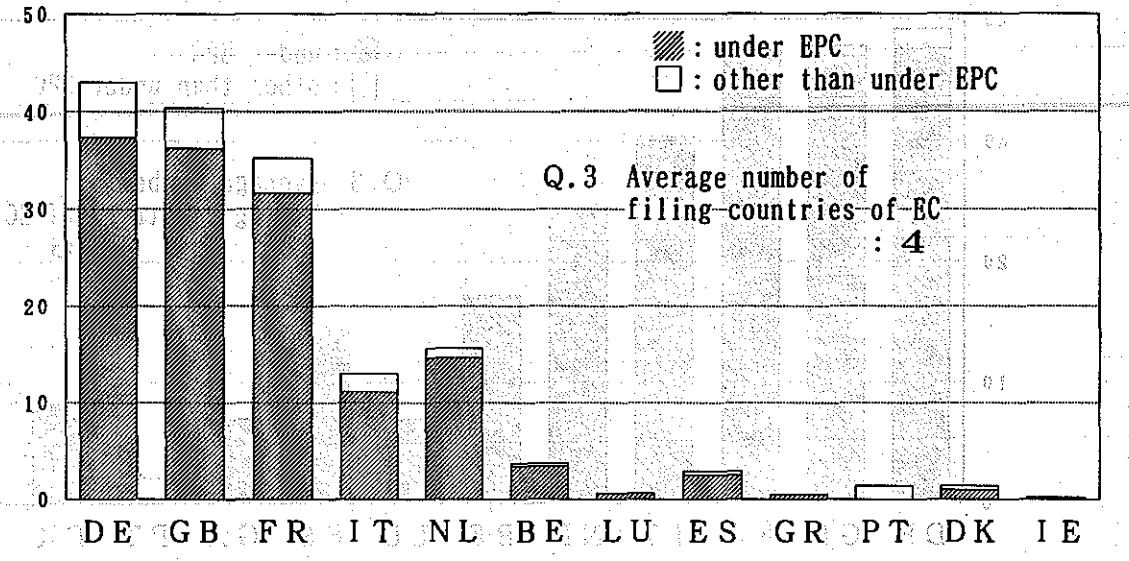




Q.8 no need to file in many countries

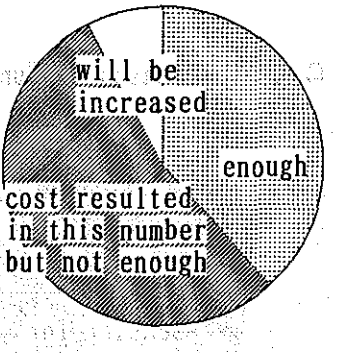
Q.1 Chemical (companies filing in small number of countries other than Pharmaceutical) (13 companies answered)

Q.2 Average number of filing applications of the companies during 1991

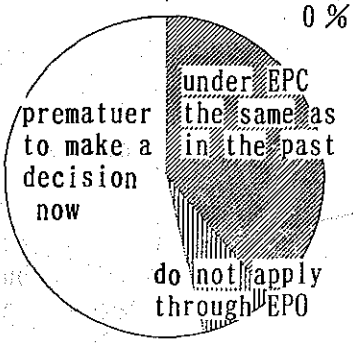


Q.3 Average number of filing countries of EC : 4

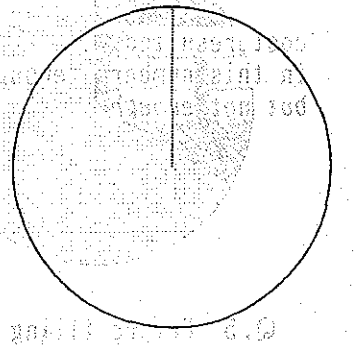
Q.4 Number of filing countries of EC



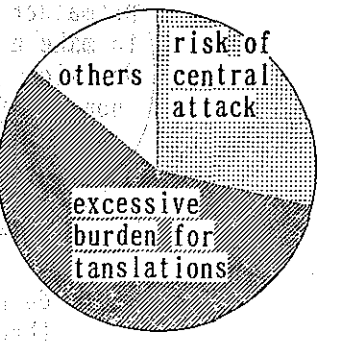
Q.5 Future filing in EC after CPC effective



Q.6 The reason of "under CPC"

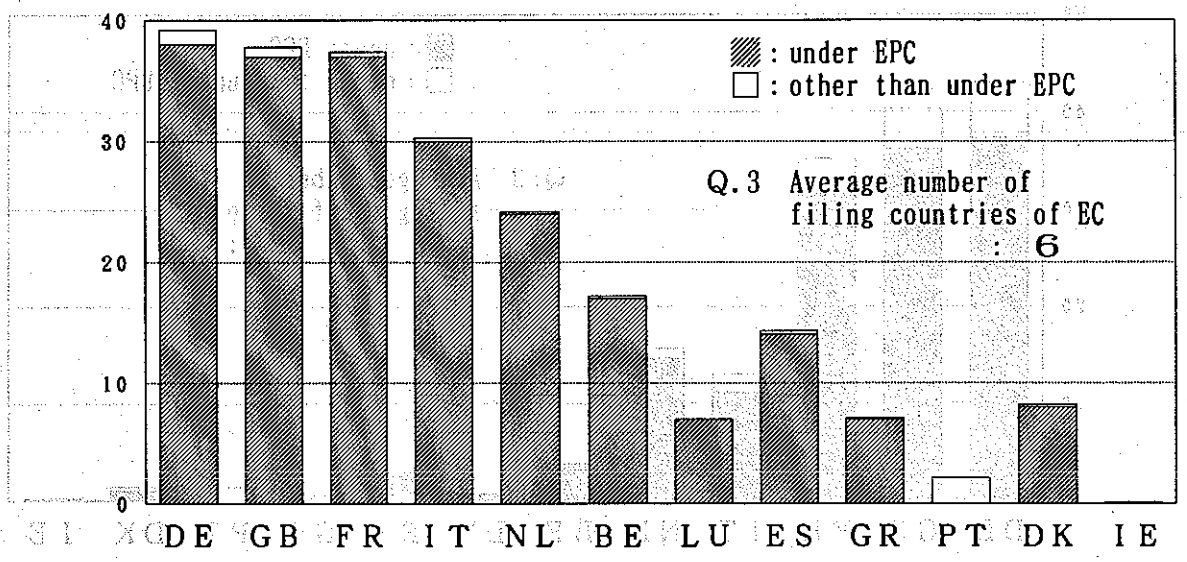


Q.7 The reason of "not under CPC"

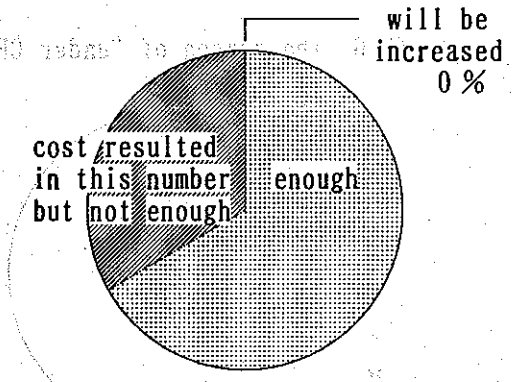


Q.1 Chemical (companies filing in large number of countries other than Pharmaceutical) (12 companies answered)

Q.2 Average number of filing applications of the companies during 1991



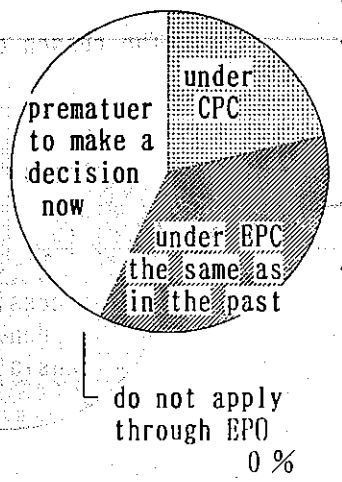
Q.4 Number of filing countries of EC



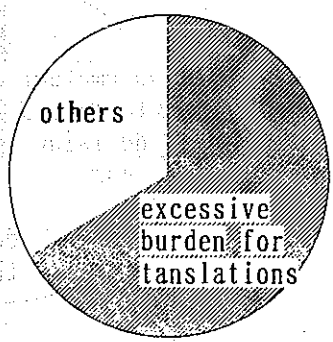
Q.6 The reason of "under CPC"



Q.5 Future filing in EC after CPC effective

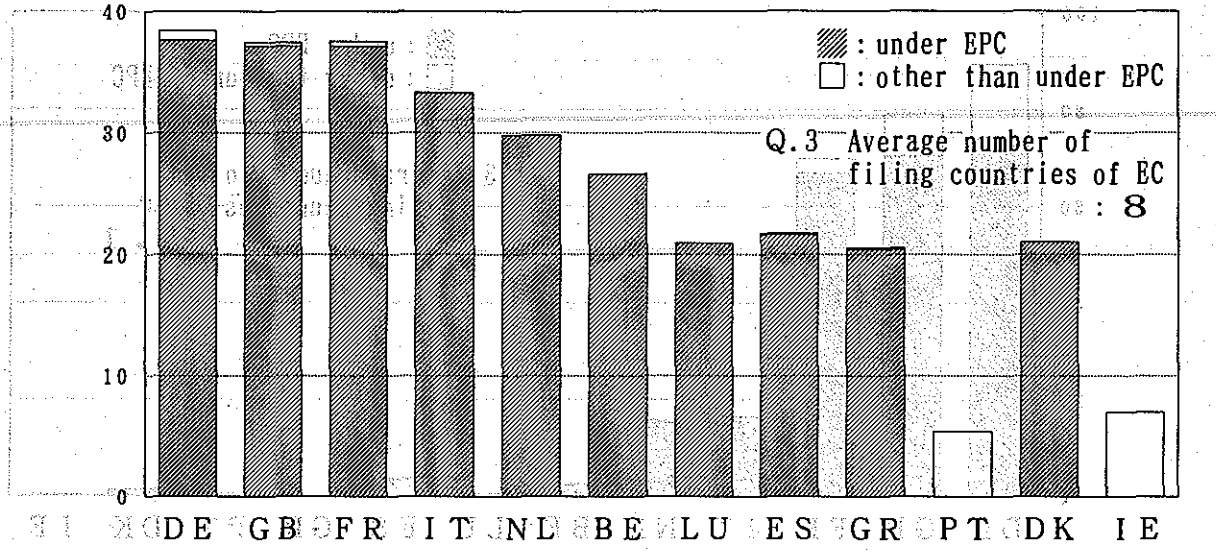


Q.7 The reason of "not under CPC"



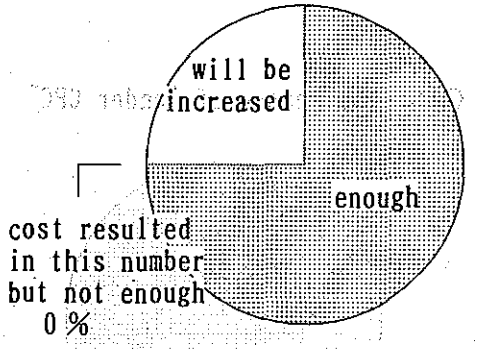
Q.1 Pharmaceutical (9 companies answered)

Q.2 Average number of filing applications of the companies during 1991

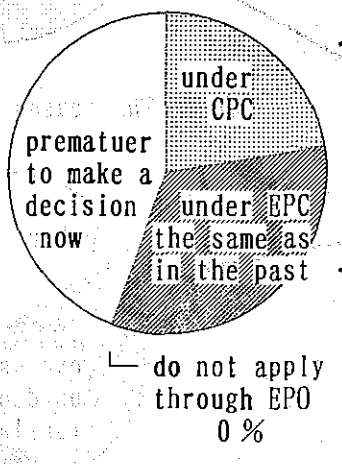


Q.3 Average number of filing countries of EC : 8

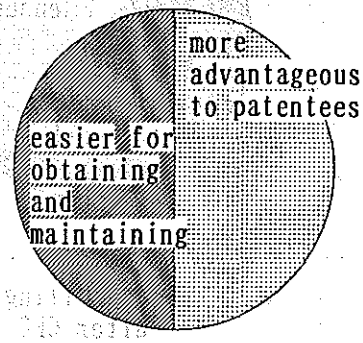
Q.4 Number of filing countries of EC



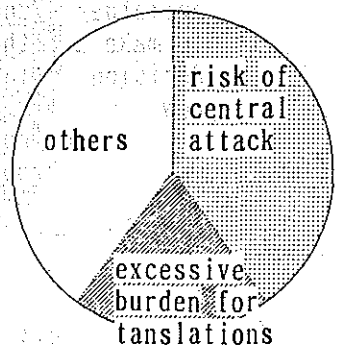
Q.5 Future filing in EC after CPC effective



Q.6 The reason of "under CPC"

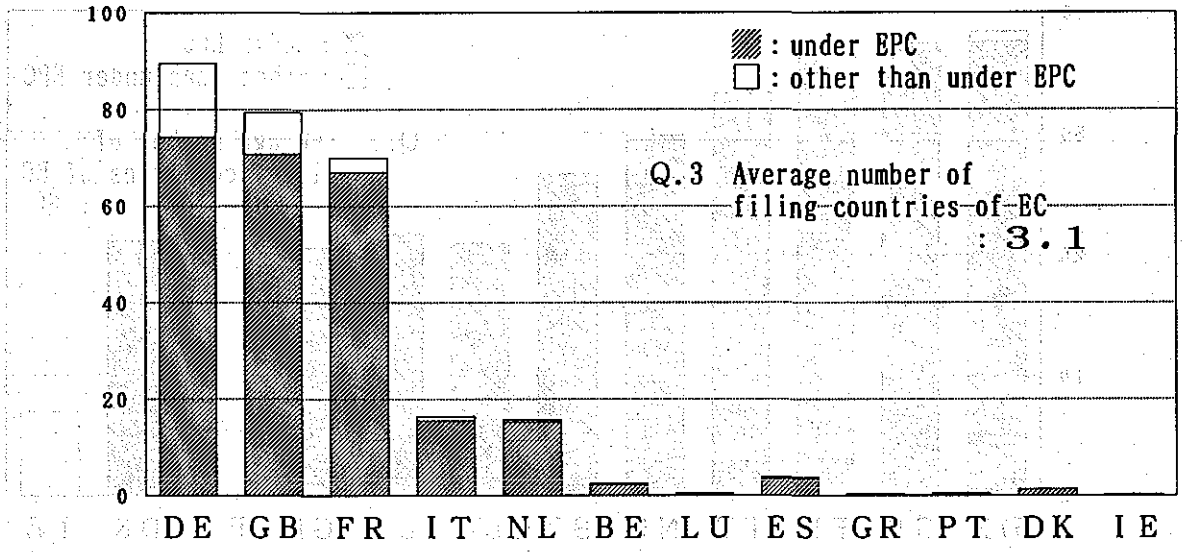


Q.7 The reason of "not under CPC"



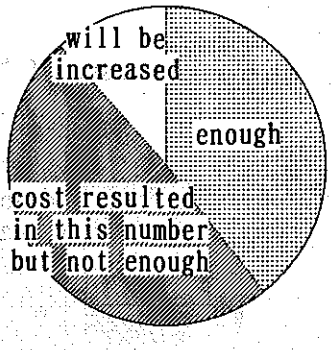
Q.1 Companies filing in small number (≦4) of countries (43 companies)

Q.2 Average number of filing applications of the companies during 1991

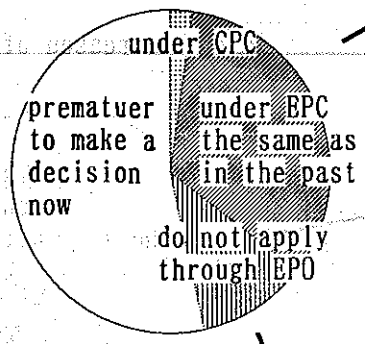


Q.3 Average number of filing countries of EC : 3.1

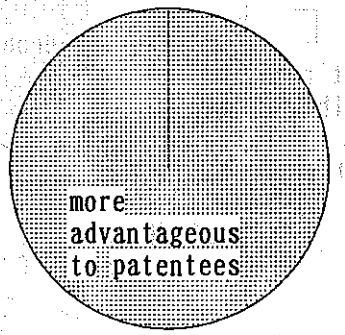
Q.4 Number of filing countries of EC



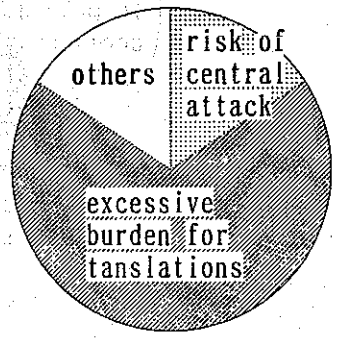
Q.5 Future filing in EC after CPC effective



Q.6 The reason of "under CPC"



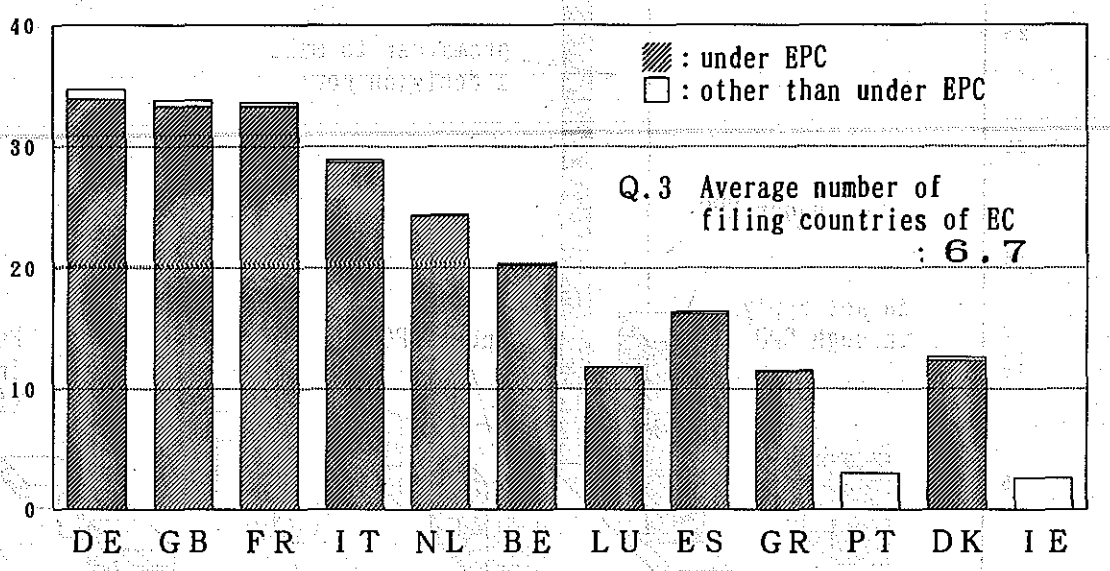
Q.7 The reason of "not under CPC"



Q.8 no need to file in many countries

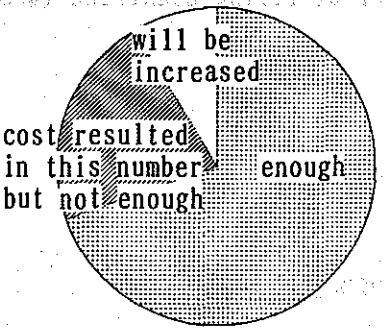
Q.1 Companies filing in large number (≧5) of countries (23 companies)

Q.2 Average number of filing applications of the companies during 1991

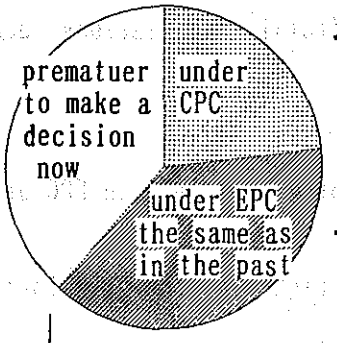


Q.3 Average number of filing countries of EC : 6.7

Q.4 Number of filing countries of EC

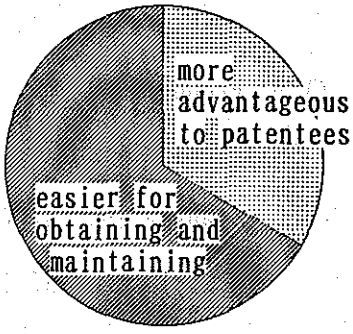


Q.5 Future filing in EC after CPC effective

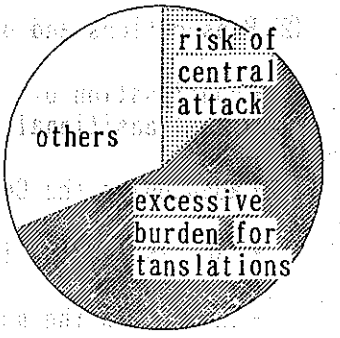


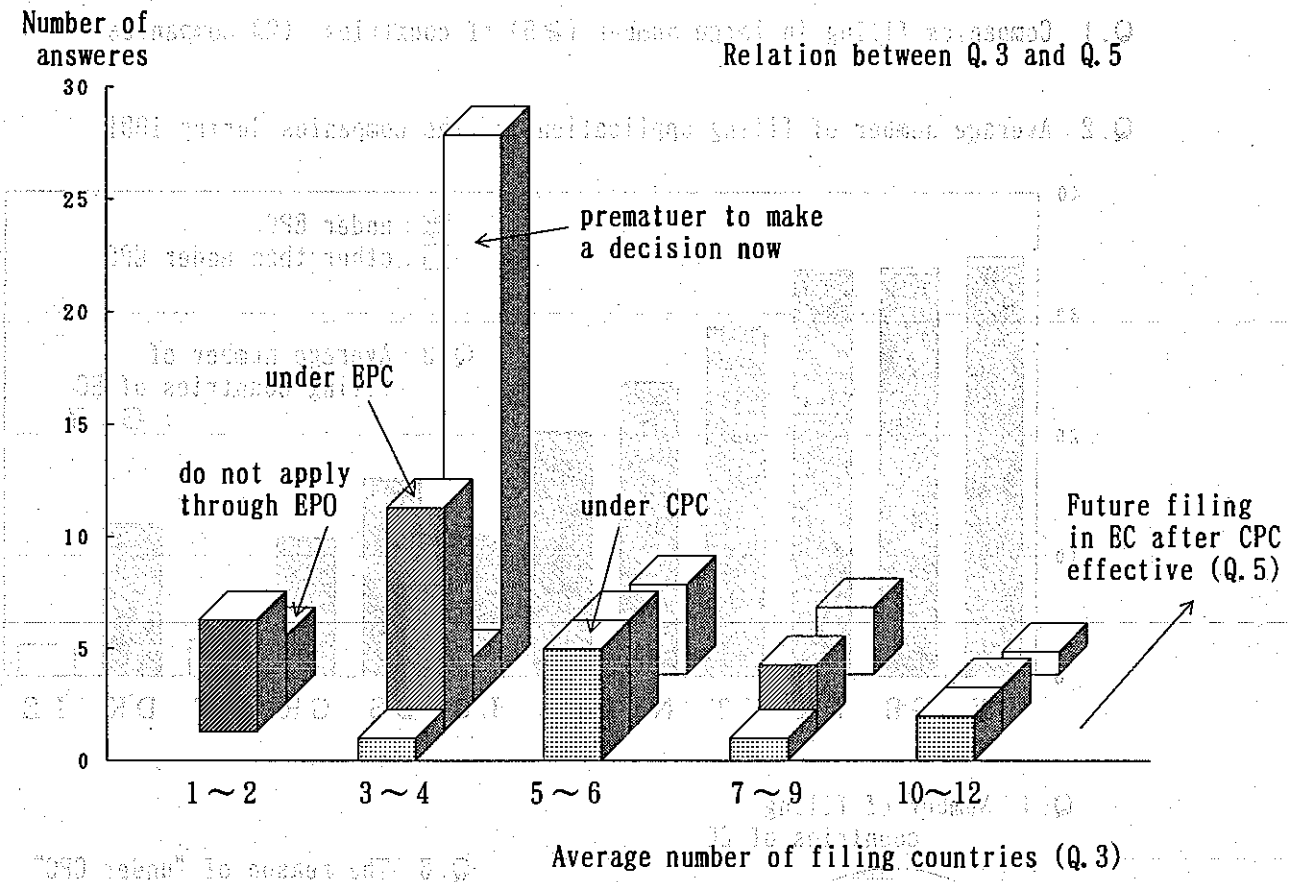
do not apply through EPO 0 %

Q.6 The reason of "under CPC"



Q.7 The reason of "not under CPC"





Q.9 Proposals

(1) Translations

- translations of full text into 3 or 4 languages only
- translations of clames or abstruct only to every official language
- extensible submitting period of translations of full text
- translations of full text by official organizations such as EPO

(2) Prosecutions and others

- continuation of the Article 81 of CPC (celection EPC or CPC) after the transitional period
- abandoning the Community Patent right in some signatories
- CAC examination in the first instance
- incease in the number of CPC signatories
  (for examplc ; Sweden, Austria, Switzerland etc.)

Results of survey by US GROUP

After we performed the survey in Japan asking filing policy of the company to EC signatories, we sent English translation of the questionnaire with summary report to Mr. Megley, Chairman of Third Committee of US group.
In compliance with our request, Mr. Megley kindly sent the said questionnaire to member companies of US group to obtain their answer. The said answer was transferred to us.
It involves response from 19 companies.

Electrical Machinery & Apparatus	6
Chemical	10
Others	3
Total	19

From the response by 6 companies of Electrical Machinery & Apparatus, and 6 companies of Chemical, we summarized the results using the same statistical treatment as we applied to Japanese group.

The results were shown in Page 3 to 5 respectively.

Electrical Machinery & Apparatus

This group has large number of applications. However, they file in relatively small number of countries, 3.7 in average. The said filing countries are concentrated into top 3, i, e, Germany, UK, and France. This result has the same tendency as Japanese counterpart.

Chemical

This group has relatively large number of filing countries, 7.1 in average. In addition to top 3, they file in Italy, Netherlands, Belgium, and Spain with many applications.
This result shows similar tendency with Japanese companies in the same business, but more filing countries.

Others

We would not rather refer to statistical analysis for the companies other than the above two groups because 3 is too small number. Only answer to Q2 is shown in Page 5.

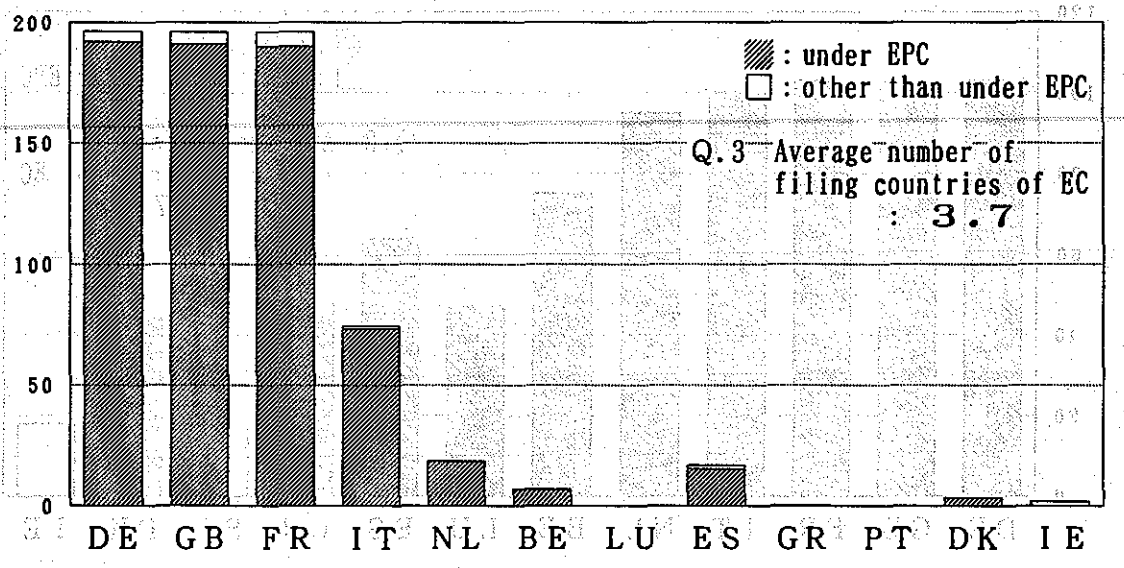
Regardless of business line, we summarize relation between Q3 and Q5 is illustrated in Page 5 too.
Proposals are summarized in Page 6.

We can observe that using rate of EPC route is quite high, higher than Japanese group. Though we expected certain relation between number of filing countries and preference of CPC/EPC, but actually "choosing CPC" is fewer than expected and there is no relation with number of filing countries.
After all, it seems to us that US group takes more cautious attitude to take CPC route.

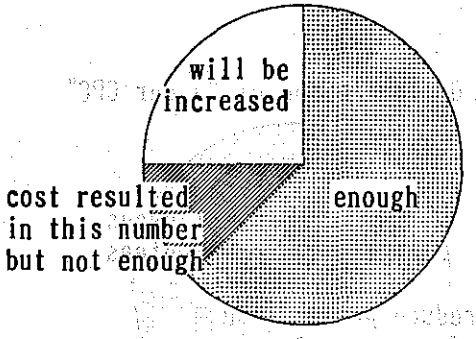
Japanese group appreciate US group's cooperation and approval to have the survey result attaching in our report.

Q.1 Electrical Machinery and Apparatus (6 companies answered) 〔U.S. GROUP〕

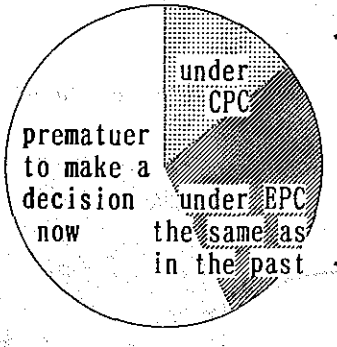
Q.2 Average number of filing applications of the companies during 1991



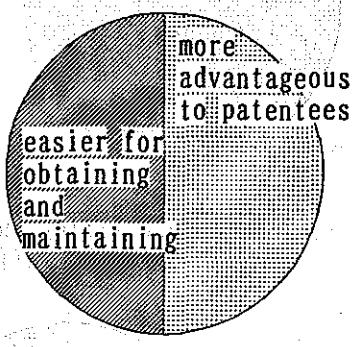
Q.4 Number of filing countries of EC



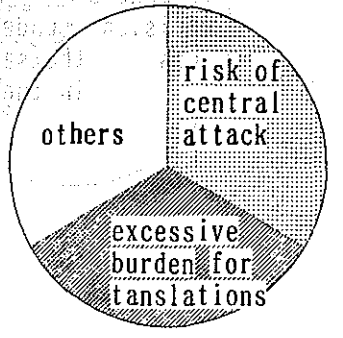
Q.5 Future filing in EC after CPC effective



Q.6 The reason of "under CPC"

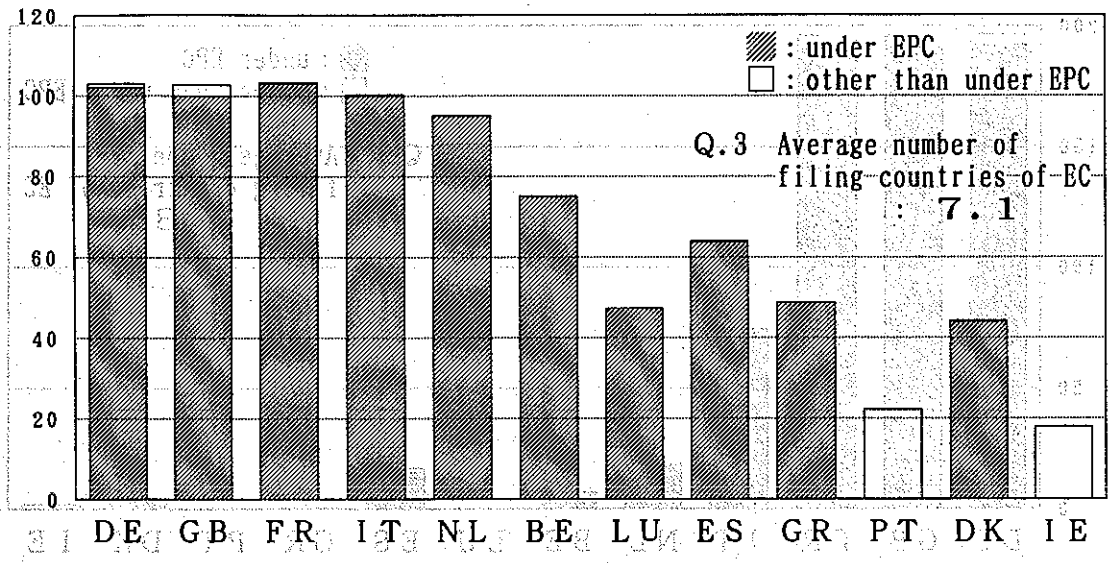


Q.7 The reason of "not under CPC"



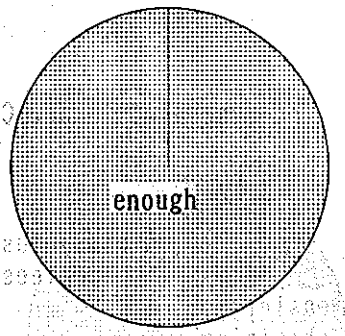
Q.1 Chemical (6 companies answered) 〔U.S. GROUP〕

Q.2 Average number of filing applications of the companies during 1991

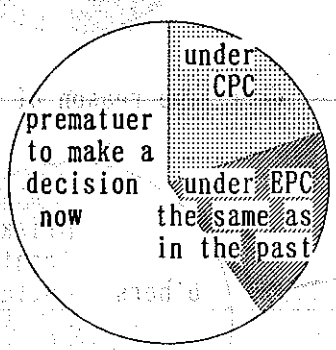


Q.3 Average number of filing countries of EC : 7.1

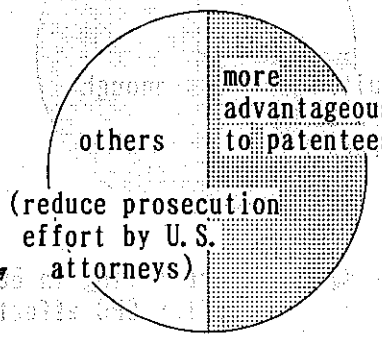
Q.4 Number of filing countries of EC



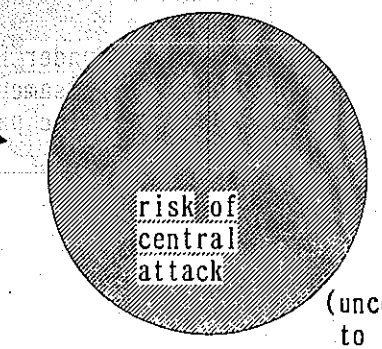
Q.5 Future filing in EC after CPC effective



Q.6 The reason of "under CPC"



Q.7 The reason of "not under CPC"

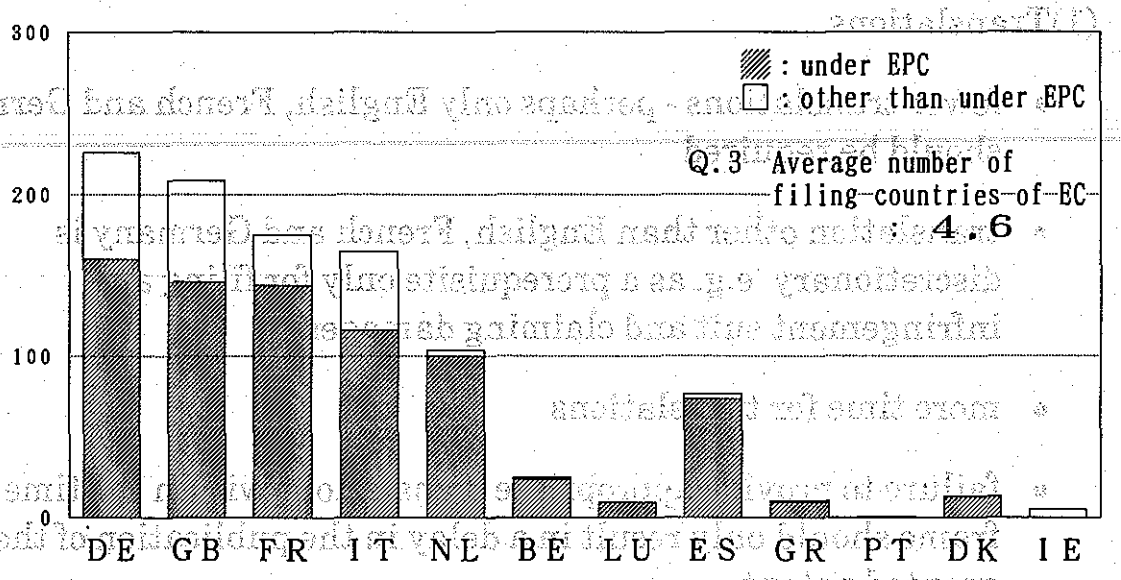


(uncertainty as to infringement matters)

Q.1 Others (3 companies answered)

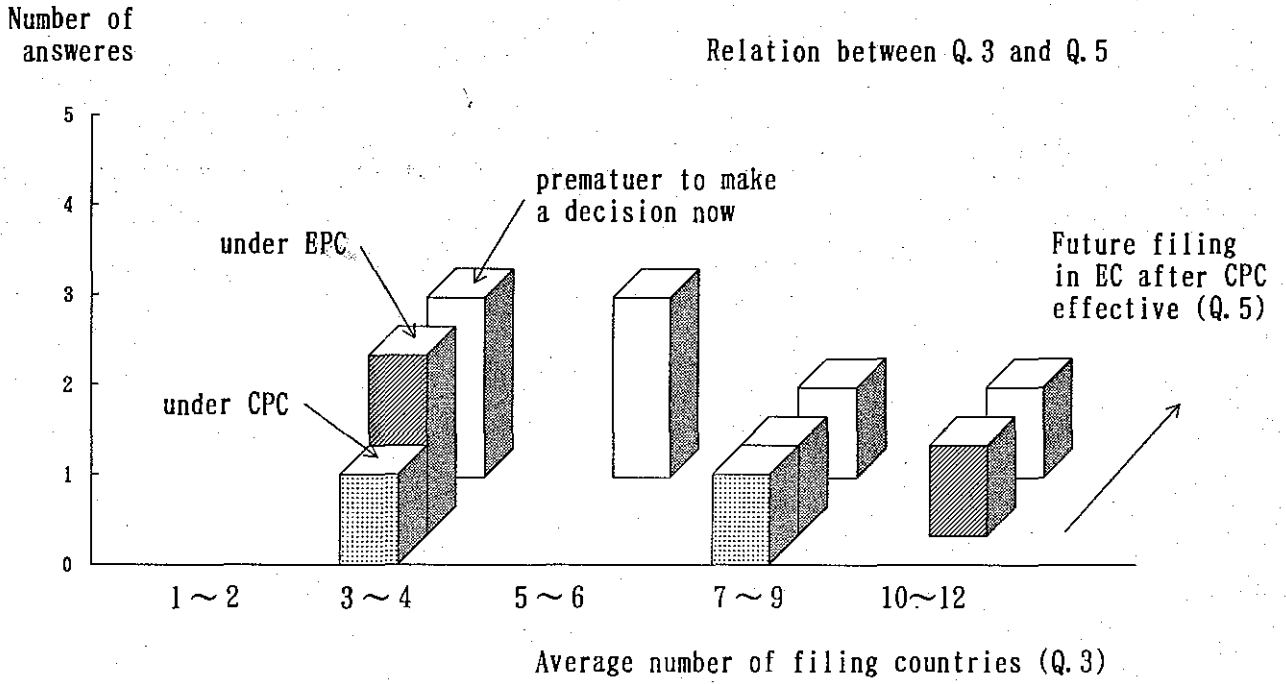
〔U.S. GROUP〕

Q.2 Average number of filing applications of the companies during 1991



Q.3 Average number of filing countries of EC : 4.6

Relation between Q.3 and Q.5



Q.9 Proposals [U.S. GROUP]

(1)Translations

- fewer translations - perhaps only English, French and Germany should be required
- translation other than English, French and Germany is discretionary e.g. as a prerequisite only for filing an infringement suit and claiming damages
- more time for translations
- failure to provide appropriate translations within the time frame should only result in a delay in the publication of the granted patent

(2)Prosecutions and others

- enable the EPC option to continue indefinitely without any "deemed application for CPC"

1. Title:

RECENT TREND OF PATENT SYSTEMS IN THE FORMER USSR AND EASTERN EUROPE

2. Date: October 1992 (23rd, Okayama, Japan)

3. Source: (1) Source; PIPA
(2) Group; Japan
(3) Committee; No. 3

4. Authors:

Shinichi IGUCHI	Sumitomo Electric Industries, Ltd.
Michihiro KAMEISHI	Kanegafuchi Chemical Industry Co.,Ltd.
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Yoshio SAMEZAWA	Otsuka Pharmaceutical Co., Ltd.
Mitsuo TANIGUCHI	Eisai Co., Ltd.

5. Keywords: Patent System, Utility Model System (former USSR, CIS, Russia, Bulgaria, Hungary, Yugoslavia, Rumania, Czechoslovakia, Poland, Germany)

6. Abstract:

During the last couple of years, the world situation has largely changed; e.g. the unification of East and West Germanies, and the dissolution of the USSR. The industrial property system is making substantial changes accordingly.

This report is intended to bring you up-to-date in respect of the recent situation of systems in the former USSR and Eastern European countries on the latest information available.

New Paper

I. Introduction

October 3, 1990 on which the 21st meeting was held in Niigata, Japan, was the memorable day on which the East and West Germanies were unified. Since then, waves of liberalization have brought about such changes in the world as were not even predicted then; dissolution of the USSR followed by corresponding waves of Yugoslavia and possibly of Czechoslovakia. These changes in the world situation directly affect the industrial property systems of respective countries.

At the Niigata meeting, Mr. A. J. Spiegel addressed the members on movements of the industrial property in Eastern Europe.

This report describes subsequent development about the patent systems in the former USSR and Eastern Europe based on as much latest information as possible.

II. Outline of Patent Systems of Respective Countries

This report covers the patent (and utility model) systems in the former USSR, Bulgaria, Hungary, Yugoslavia, Rumania, Czechoslovakia, Poland and unified Germany.

We have tried to obtain information on any specific topic always from two or more different sources to assure accuracy. We must advise you, however, that, because of still fluid political situation of the former USSR and Eastern European countries, we have not always been successful in obtaining sufficient amount of information. Also, we are not fully confident of accuracy as to some of the information. We have shown main sources of the information in the last page.

1. Patent Systems in Former USSR countries

In this section, we will deal with the patent systems in the former USSR countries which include Russia, and the three Baltic countries of Estonia, Latvia and Lithuania, together with trend of the patent system in CIS.

In the former USSR, the revised Patent Law was adopted on May 31, 1991, effective July 1, 1991. As the USSR was disorganized, GOSPATENT (former Soviet Union Patent Office) was closed and taken over by ROSPATENT (Republic of Russia Patent Office) as of February 3, 1992. Thus, the former Soviet Union Patent Law as revised has been made applicable to patent applications filed with ROSPATENT on or after February 3, 1992.

It has been confirmed that those patents and patent applications that were valid in the former USSR will continue to be valid in the Republic of Russia as they were. It has also been recently confirmed that they are valid in the Republic of Ukraina as well. It has not been successfully confirmed as yet as to whether they are valid in other CIS republic countries .

The former Soviet Union Law as revised no longer has the certificate of inventor and the rationalization proposal system and, instead, introduced the product patent, publication and opposition systems, extending the patent duration period to 20 years from the application date, with the overall system made very close to those of advanced countries. In Russia, further patent amendment work is going on. The amendment bill reportedly passed the Supreme Council as of June 18, 1992 and is expected to become effective shortly. We are yet to receive the full text of the amended Patent Law, which is said to contain no significant changes from the current law, however.

A subject aiming at a uniform patent of CIS was discussed in Minsk and agreement was reached for establishment and operation of an organization which grants a single and uniform patent under the principle of equitableness among the respective republic countries. This provisional Minsk agreement has not been ratified yet. It is expected, partly because of pending political issues among CIS republic countries, that it will take some more time before it takes the final shape. We are anxiously waiting for the Minsk agreement to go into effect at an earliest possible opportunity because, reportedly, it includes a provision that patents and patent applications under the former Soviet Union should be valid in the CIS signatories.

With respect to the three Baltic countries, reportedly, an

independent patent office has been open in each of Latvia and Lithuania, with a draft patent law being under examination. Establishment of an independent patent office in Estonia is under way and expected to be completed in the near future. In Latvia and Lithuania, patents previously registered in the former Soviet Union are re-registrable, upon application, with the deadline for the re-registration set for December 31, 1992 and April 30, 1993 respectively.

2. Patent System in Bulgaria

Bulgaria adopted the patent law in 1968, effective January 1969. As the Eastern European countries have recently moved onto the free economy, Bulgaria has developed and now has pending with their national assembly an amended patent bill, which is reportedly to be put in effect in the coming autumn.

The bill adapts itself to patent laws of advanced countries, or European countries, and further to the proposed WIPO Harmonization Treaty now under discussion. Principal features of the bill are as follows:

First, it introduces the product patent, publication and examination systems. With respect to the examination, the patent office will examine all applications, not adopting the system of the request for examination system in use. The patent office will have the board of appeal in it, allowing a further appeal to the Sofia City Court. Advantageous effect of the method patent extends to direct products derived thereunder. For construction of the scope of the patent right, equitableness will be taken into consideration. It will be noteworthy that the bill specifies the so-called "3 Partite Test" (Same way, same function, same result) established in the U.S. precedents as an example of the equitableness.

When the law is revised as proposed, the certificate of inventor will be abolished. Inventors will have the right to convert their certificates of inventor to patents.

U.S. and Bulgaria have a bilateral governmental agreement in effect since November 23, 1991 for protection of the pipeline product from the U.S. The amended law bill incorporates

provisions in this regard, entitling respective countries to its benefits.

3. Patent System in Hungary

Hungary put in effect the patent law in 1969 and revised it in July 1983, bringing it closer to Western European countries'.

There is movement toward an amendment for harmonization with WIPO, GATT, etc. According to some sources, the product patent system would be adopted by the end of 1992.

The current patent law does not adopt the product patent system, but may issue patent on new animal breeds and plant varieties, and their breeding methods. In addition, it has the publication of application and request for examination systems in use. There are two examination systems. One is a deferred examination system and the other is a complete examination system. In the deferred examination system, the examination is conducted first with respect to, among other things, the formality and the unity of invention and subsequently, upon request of the applicant, to novelty and non-obviousness. In the complete examination system, the examination is automatically conducted with respect to all requirements above. Most of the applications, including those on chemicals and pharmaceuticals, are prosecuted on the latter basis.

There is a possibility for a third party to lodge so-called "Observations" concerning the patentability of a laid-open patent application. The opposition system is no longer in effect.

The patent duration is 20 years from the date of application, except for the plant patent on grape and trees, the duration of which is 18 years from the date of grant thereof and other plants on a 15 year basis.

Reportedly, the utility model has been in effect from January 1, 1992.

As far as we can ascertain, there is no affirmative information as to possibility of protection of the pipeline product.

4. Patent System in Yugoslavia

The situation in Yugoslavia is fluid and unclear with respect to not a few aspects. Based on recent information available, including the data distributed at the Tokyo meeting of AIPPI held in April 1992, the present situation may be summarized as follows:

The Republic of Slovenia put in effect its own patent and trademark law on April 2, 1992, with the patent office opened. The Republic of Croatia is also arranging for establishment of its own patent law and patent office. Bosnia and Macedonija both of which are desirous of becoming independent of the Federal Republic of Yugoslavia, reportedly, will avail themselves of the Yugoslavian patent law pending establishment of their own patent laws and patent offices. The Republics of Serbia and Montenegro are expected to continue using the Federal Republic of Yugoslavia as their own country names, taking over the Yugoslavian patent law.

According to information on hand, Slovenia and Croatia regard those applications previously filed under the Yugoslavian administration as being valid in their respective countries.

The following will relate to the Yugoslavian patent law:

The Yugoslavian patent law was published in June 1989 and, after amended on January 17 and April 11, 1990, put in effect on July 27, 1990.

Principal items of the amendments include the introduction of product patent (covering pharmaceuticals as patentable subject), expansion of effect of the process patent right, and shortening of the request period for complete examination. As transitional measures, patents obtained prior to December 31, 1992, on pharmaceuticals may not exclude commercial use by others, and pharmaceutical substances for treatment of humans or animals will be unpatentable until December 31, 1992.

5. Patent System in Rumania

In Rumania, the revised patent law was enforced as from January 21, 1992.

Principal features of the amendment include adoption of the product patent and introduction of the publication of applications. A request for examination must be filed within 30 months from the publication of the application, in which event the applicant is obligated to submit prior arts. Oppositions may be filed within 6 months from the publication of the registration, and any appeal with respect to examination or any request for reexamination may be filed with the board of appeal. Claim for invalidation of patent is filed with the Bucharest District Court.

As the result of this revision, the certificate of inventor and the rationalization proposal system were abolished. The duration of patent was extended from 15 years (from application) to 20 years, with the revision made applicable to all applications pending on or filed on or after January 21, 1992. The revised law does not contain any provision with respect to protection of the pipeline product.

6. Patent System in Czechoslovakia

In Czechoslovakia, the revised patent law was made effective on January 1, 1991.

Principal items of the revision include abolition of the certificate of inventor and protection of inventions solely under the patent, adoption of the product patent, and introduction of the examination principle and publication of patent applications. Request for examination must be filed within 36 months from the application. The duration of patent was extended from 15 years to 20 years. There are provisions on the observation system but none on opposition filing.

Transitional measures include the following:

(1) Prosecution of patent applications pending on December 31, 1990 will be subject to the revised law.

(2) Duration of patent applications pending on December 31, 1990 will be subject to the former law.

(3) Patents registered prior to December 31, 1990 will be subject to the former law with respect to its validity.

(4) Duration of protection of the certificate of inventor will be 15 years, but not to expire prior to January 1, 1992.

In connection with the movement of division of Czechoslovakia into Czecho and Slovakia for independence, it is unknown how the above patent law will be administered.

USA and Czechoslovakia have a bilateral governmental agreement in effect since April 12, 1990, with the protection of the industrial property included in it.

7. Patent System in Poland

The patent law of Poland was amended on April 26, 1984 and put in effect on July 1, 1984. It provides for the publication of patent applications and the request for examination, but none on the product patent.

According to information on hand, a revised law was drafted up and submitted as bill to its national assembly in February, 1992 after approval of the government. Based on the bill, the product patent will be introduced by 1993.

Principal features of the proposed law include the following:

(1) Foods, pharmaceuticals and chemical substances will be patentable.

(2) Duration period of the patent will be extended from 15 years to 20 years from application.

(3) The request period for examination will be changed from "within 6 months from the publication" to "within 3 years from the application."

Since March 21, 1990, USA and Poland have a bilateral governmental agreement which protects the pipeline product from USA. At the time of this writing, it is unknown whether the proposed new law contains provisions for the pipeline product.

8. Patent System in Germany

Although Germany is not grouped into the Eastern Europe, this report refers to this subject since provisions for transitional measures after unification have been submitted.

East and West Germanies were unified on October 3, 1990. As a result, industrial property matters were integrated into those of Western Germany by making patents and utility models applied for on or after that date subject to the patent law, utility model law of the latter, Patent Cooperation Treaty, and European Patent Convention.

To cover transitional steps, the "Extended Law" was made effective on May 1, 1992[2], providing for conflict of interests under patents and patent applications previously applied for on or before October 2, 1990.

Principal features of the Law include the following:

(1) Patents of the former East Germany and those of the former West Germany with the application dated on or before October 2, 1990 will extend to all areas of Germany as unified. If an infringement case is instituted under a former East Germany patent, the defendant may follow procedure for filing of opposition within 3 months after the institution.

(2) In the case of mere conflict of patents, as extended, between different owners thereof, mutual rights must be respected as a rule.

(3) Notwithstanding extension to the other territory of patents of the former East Germany or those of the former West Germany, any person who has reduced an invention into practice or made arrangements therefor since before the priority date of the patent involved will be entitled to a license based on the prior use within the entire territory of Germany.

(4) Any third party who has lawfully commenced use of an invention of either the former East Germany or the former West Germany not later than July 1, 1990 in either territory will be entitled to continuous use thereof within

the entire territory of Germany.

The patent office has a conciliation committee organized in it to deal with disputes arising from operation of the "Extended Law."

It will be worthwhile to note that, effective June 1, 1992, submission of German translation of European Patents has become obligatory.

III. Comparison of Patent System of Respective Countries

Enclosed for reference is a comparison chart of patent laws (including those on a bill or proposed basis) of various countries mentioned above, with respect to coverage of protection, patentability requirements, publication of applications, examination on request, opposition, duration of patent right, and transitional provisions.

IV. Comments

It would be no exaggeration to say that the amended patent systems of the former USSR and the Eastern European countries, including those proposed to be amended, are almost comparable to those of advanced countries. In other words, the patent systems of these countries are so amended as to be in tune with the laws of European countries as well as the European Patent Convention, Patent Cooperation Treaty, and proposed WIPO Harmonization Treaty.

The above would explain for itself that these countries fully realize they would not be able to successfully move onto the free economy market without such appropriate protection under the industrial property rights as will be comparable to those available in advanced countries.

Each of the revised laws has abolished the certificate of inventor and the rationalization proposal system, and instead,

has adopted in the examination system and the publication of application system.

Also, it protects invention of chemical substances and pharmaceuticals and extends the protection period under the patent to 20 years from application.

Thus, these countries now have patent systems as such comparable to those of advanced countries. But it remains to be seen how those systems will be implemented in the future in respect of substantive examination and enforcement of patent owners' rights after the patent is registered.

At any rate, the potential situation of CIS, Yugoslavia and Czechoslovakia, is quite unclear. Unless and until the political situation is stabilized, it would be practically hard for them to give through consideration to the issue of industrial property.

The patent systems of the former USSR and Eastern Europe countries being brought close to those of advanced countries. This move will be further promoted by the early signing of the WIPO Harmonization Treaty.

V. Conclusion

Political situation of the former USSR and Eastern European countries still remains unclear and needs to be kept watched.

Nevertheless, we hope this report will be of any assistance to you as data from which you could find basic movement of the situation in those countries.

Reference Data:

1) Ristic & Ristic "Ristic's Manual of Industrial Property Rights in Eastern Europe including the People's Republic of China" (June 1991, Belgrade, Yugoslavia)

2) von Füner Ebbinghaus Finck "New Developments in Former Eastern Europe Socialist Countries," and others (Munich, Germany, 1991-1992)

3) A.J. Spiegel "Changes in Eastern Europe Intellectual Property Rights" PIPA 21st Congress (Niigata, Japan, 1990)

4) "Tokkyo Kanri" (Patent Management) Vol. 41, No. 10, 1991; Vol. 42, No. 2, 1992

5) "Kaigai Joho Yoyaku" (Resume of Overseas Information), by Asamura Naigai Patent Agency

PATENT SYSTEMS IN THE FORMER USSR AND EASTERN EUROPE AND AMENDMENTS THERETO

Countries	Coverage of protection	Patentability requirements	Publication of application	Request for Examination	Observation; Opposition	Effects of patent right	Duration of patent right	Compulsory license system	Others	Transitional provisions
Russia (As proposed for amend-ment)	* Subject of protection under the current law will continue at least to be protected. [Apparatuses, methods, substances, micro-organisms, cultivated cells of animals and plants, and novel using thereof]	* Absolute novelty * Non-obviousness * Industrial usefullness * 6 months grace period * Prior applications by others will be treated as prior arts for novelty.	* Laid-Open 18 months after the application. * Information to be laid-open will be designated by Patent Office. * Right to provisional protection.	* Formality examination: after 2 months since the application is filed. * Substantive examination: the request for examination system; within 3 years from the application.	* Request system for prior arts. * Invalidation system for patent.	* Exclusive right to "use" of invention. *The exclusive right extends to manufacture, use, import, offer for sale, sale, other form of introduction into business and storage. * Process patent extends to products directly obtained therefrom. * Prior user's right. * Limit of patent right: Scientific studies Experimentations Dispensing, etc.	* 20 years from the date of the application.	* Non-working for 5 years from the date of the patent registration. * Dependent inventions. * Secret patent.	* Secret patent. * Utility model system.	* Unknown
Bulgaria (As proposed for amend-ment)	* Product patent system. * Unpatentable events: * Violation of public policy. * Substance obtained from nuclear reactions for military use. * Breeds of animals and plant varieties, and biological methods for production thereof.	* Absolute novelty. * Non-obviousness * Industrial usefulness. * 12 months grace period.	* Laid-Open 18 months after the application. * Right to provisional protection.	* None (all being subject to examination)	* Unidentifiable	* Process patent extends to products directly obtained therefrom. * Prior user's right. * Limit of patent right: * Uncommercial workig * Experimental use. * Dispensing of pharmaceuticals.	* 20 years from the date of the application.	* Non-working. * Dependent invention. * Secret patent. * Others	* Secret patent. * Licenses of right. * Application in foreign language permissible, provided completed translation is filed within 3 months. * Certificate of inventor no longer in use. * Utility model system.	* Inventor's certificate convertible to patent (within 6 months of effective date of Patent Law). * The pipeline product provisions are contained.
Hungary (Current law, 1983)	* No product patent system. * Unpatentable events: * Violation of public policy * Pharmaceuticals, chemical substance. * The same subject matter of patent in which a priority has previously been asserted.	* Absolute novelty * Non-obviousness * Technicality * Usefulness * 6 months grace period (exhibitions)	* Laid-Open 18 months after the application.	* Delayed examination: on request of applicant, up to 4 years from the publication. (subject to complete examination from the beginning with respect to most applications for pharmaceuticals)	* Observation system. * Opposition system discontinued.	* Patent issues upon publication of application therefor, effective retroactively from the date of application. * Process patent extends to products directly obtained therefrom. * Prior user's right.	* 20 years from the date of the application. * 18 years from the date of the grant therefor for plant patents on grape or trees, and 15 years for other plants.	* Non-working * Dependent invention. * Secret patent.	* Secret patent * Application in foreign languages acceptable provided translation is filed on request of Patent Office. * Rejections by Patent Office, if dissatisfied with, may be appealed to the Budapest City Court, and to the Supreme Court. * Utility model system.	

PATENT SYSTEMS IN THE FORMER USSR AND EASTERN EUROPE AND AMENDMENTS THERETO

Countries	Coverage of protection	Patentability requirements	Publication of application	Request for Examination	Observation; Opposition	Effects of patent right	Duration of patent right	Compulsory license system	Others	Transitional provisions
Yugoslavia (Current law, 1990)	* Product patent system, with transitional provisions applicable to pharmaceuticals * Unpatentable events; * Violation of public policy * Diagnostic and treatment methods on human body and animals * New breeds of animals and plant varieties * Discoveries, mathematical theories	* Absolute novelty. * Non-obviousness * Industrial usefulness. * Grace period * 3 months for public exhibitions. * 6 months against own intention.	* Laid-Open 18 months after the application	* Within 6 months after the publication of the application	* Observation system not in effect. * Opposition permissible within 3 months from the decision of grant of the patent	* Process patent extends to its direct product. * Prior user's right	* 20 years from the date of the application.	* Non-working * Dependent invention * Public interests	* Seacret Patent * Addition of patnet * Utility models	* Patent granted on pharmaceutical substances on or before Dec. 31, 1992 does not exclude commercial use by others. * No patent shall be granted on use of pharmaceutical substances for treatment of human body or animals until Dec. 31, 1992.
Rumania (Current law, 1992)	* Product patent system (chemical substances, pharmaceuticals and use thereof). * New plant varieties, new species of animals * Unpatentable events: * Computer programs * Cooking menus	* Novelty * Non-obviousness * Industrial usefulness	* Laid-Open 18 months after the application	* Within 30 months after the publication	* Opposition: within 6 months from the announcement of the registration. * Claim for invalidation: to be filed with the Bucharest District Court.	* Limit of patent right: *Prior user's right * Experimental use * Parallel import	* 20 years from the date of the application (attention drawn to transitional measures provided).	* Non-working (it is unclear whether or not "import" falls under the "working.") * Public interests	* Secret patent * Application in foreign languages permissible, provided completed translation should be filed within 2 months. * Deposit of unavailable substances: Before application * Certificate of inventor and rationalization proposal have been discontinued. * Utility models	* Patent term: Applications pending as of Jan. 21, 1992 are subject to the new law.

PATENT SYSTEMS IN THE FORMER USSR AND EASTERN EUROPE AND AMENDMENTS THERETO

Countries	Coverage of protection	Patentability requirements	Publication of application	Request for Examination	Observation; Opposition	Effects of patent right	Duration of patent right	Compulsory license system	Others	Transitional provisions
Czecho-slovakia (Current law, 1991)	* Product patent system * Unpatentable events: * Violation of public policy * Method of prevention, treatment or diagnosing diseases * Breeds of animals and plant varieties, and biological methods of production thereof (exclusive of micro-organic methods and products obtainable therefrom)	* Absolute novelty * Non-obviousness * Industrial usefulness * 12 months grace period	* Laid-Open 18 months after the application * Right to provisional protection	* Within 36 months after the publication.	* Observation system available. * Opposition system not in effect.	* Process patent extends to products directly obtained therefrom. * Prior user's right. * Limit of plant right: Dispensing of pharmaceuticals.	* 20 years from the date of the application.	* Non-working. * Public interests	* Applications in foreign languages acceptable provided translation should be filed. * Licenses of right	* Certificate of inventor, may be converted to a patent if requirements are met. * Patent applications pending as of Dec. 31, 1990 will be prosecuted subject to the new law. * Patent applications pending as of Dec. 31, 1990 will be subject to the old law with respect to patent duration thereof. * Validity of patents registered prior to Dec. 31, 1990 will be subject to the old law. * The pipeline product provisions are contained.
Poland (Current law, 1984)	* Product patent not in use. * Unpatentable events: * Scientific rules, discoveries. * New plant varieties, breeds of animals. * Methods of treatment of human body and animals. * Computer programs * Foods, pharmaceuticals, chemical substances and substances obtainable through nuclear transformation * Violation of public policy. [According to the proposed amendment, foods, pharmaceuticals, chemical substances are patentable].	* Absolute novelty * Non-obviousness * Usefulness	* Laid-Open 18 months after the application * Right to provisional protection	* Complete examination: within 6 months after publication [according to the proposed amendment, within 3 years after the application, instead].	* Observation system (within 6 months from the publication)	* Process patent extends to products directly obtained therefrom. * Prior user's right.	* 15 years from the date of application [according to the proposed amendment, 20 years from the application, instead]	* Non-working (4 years from the application or 3 years from the registration) * Dependent invention * Public interests	* Secret patent * Provisional patent * Additional patent * Certificate of inventor * Utility model	* The proposed amendment provides for discontinuance of the provisional patent, etc.

Title of the Presentation

Evaluation and Maintenance of Intellectual Property Rights

DATE: October 14 ~ 16, 1992 (The 23th Okayama General Meeting)

Japanese Group, Committee No. 4

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Keywords:

Maintenance of Intellectual Property Rights, Evaluation, Management, Annual Fee, and Abandonment.

Abstract:

In both Japan and U.S., the number of registered rights exceed 90,000 every year, and annual fees for maintaining these rights tend to be drastically put up. Consequently, it is very important for companies to adequately maintain and manage such registered rights in a rational way. In view of such circumstances, this committee sent out a questionnaire. We, based on the result of the thus filled-out questionnaire, have proposed: an organization structure for maintenance and management; evaluation times; evaluation standards; and a system for maintaining, managing and evaluating the registered rights as to differences between countries.

I. PREFACE

In Japan, approximately 500,000 pieces of Patent applications and Utility Model applications are filed with the Patent Office every year. Of these applications, approximately 100,000 applications are registered as patents and Utility Models every year. Also in the U.S., more than 90,000 applications are allowed to be Patents every year. Furthermore, in the past two years, annual fees for maintaining the Patents in U.S. have been drastically put up. As described above, in a condition in which the number of the applications having been allowed to be Patents remains at a high level every year and the annual fees for maintaining the Patents have been drastically put up, it is recognized that it becomes more important for the companies how to evaluate such Patents and how to maintain and manage the same.

Consequently, in each of the Japanese and the U.S. companies, differences in evaluation and management between Japan and the U.S. are clarified by obtaining information as to the realities of evaluation in maintenance of rights and the reality of management of the rights through a questionnaire. Based on the above information, Japan and the U.S. have a debate on a desirable system of the evaluation and the management to clarify such desirable system.

II. CHANGES IN THE NUMBER OF REGISTERED PATENTS AND IN THE ANNUAL FEES FOR MAINTAINING THE PATENTS IN JAPAN AND THE U.S.

(1) Comparison of the number of registered Patents in Japan and U.S. (See Fig. 1):

In Japan, the total number of applications for Patent and Utility Model still remains at a high level though it decreases last year. However, the total number of registered Patents and registered Utility Models is below one fifths of the total number of the applications, and substantially equal to the number of Patents allowed in the U.S.

In Fig. 1, there are illustrated in different years: a closeout cumulative value of annual fees for maintaining a

Japanese Patent for fifteen years; and a closeout cumulative value of annual fees for maintaining the U.S. Patent for seventeen years.

(2) Comparison of annual fees for maintaining the Patents in Japan and the U.S. (See Figs. 2 to 4):

Fig. 2 shows changes of the cumulative values of annual fees for maintaining the Patents in both Japan and the U.S. under the current systems of charges. The annual fee of the Japanese Patent is in case of one claim. The annual fee of the U.S. Patent is calculated at an exchange rage of - 130 ¥/$. In this comparison of the cumulative values of the annual fees for maintaining the Patents, the U.S. Patent is higher in the cumulative value than the Japanese Patent.

Figs. 3 and 4 show changes in cumulative values of the annual fees for maintaining the Patents, which fees have been put up during the past 10 years in both Japan and U.S.. Although the annual fee for maintaining the Patent in Japan was revised in system on January 1, 1988, a current annual fee for maintaining a Patent with one claim is the same in amount as that for maintaining a Patent with one invention calculated under the charge system revised on June 1, 1987. As is clear from Fig. 4, the annual fee for maintaining the Patent in the U.S. has been put up by an amount of at least 80 % during the last two years.

Consequently, it is recognized that it becomes more important in the U.S. than in Japan how to evaluate the maintenance of rights and how to manage the same.

III. INVESTIGATION THROUGH A QUESTIONNAIRE

(1) Outline of the Investigation:

In an investigation made in Japan, we issued a questionnaire to all 86 companies (as of July, 1992) of the Japanese members of PIPA, and received 54 answers in the following different fields in total:

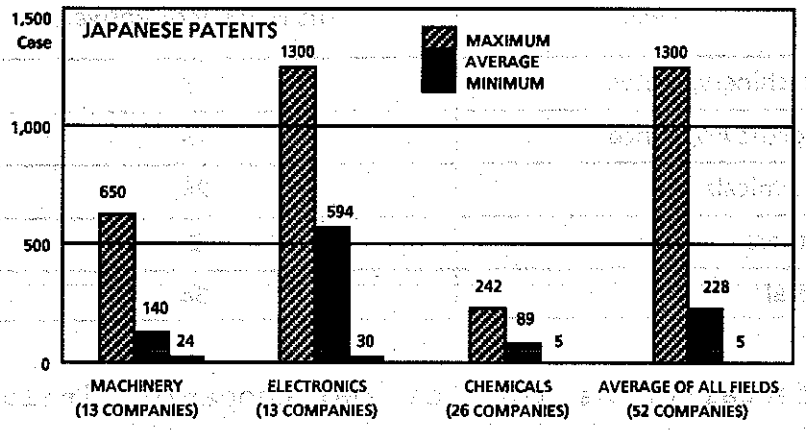
Field	The Number of Answers
Machinery, Metals	13
Electric Appliance	13
Chemicals	26
Others	2
Total	54

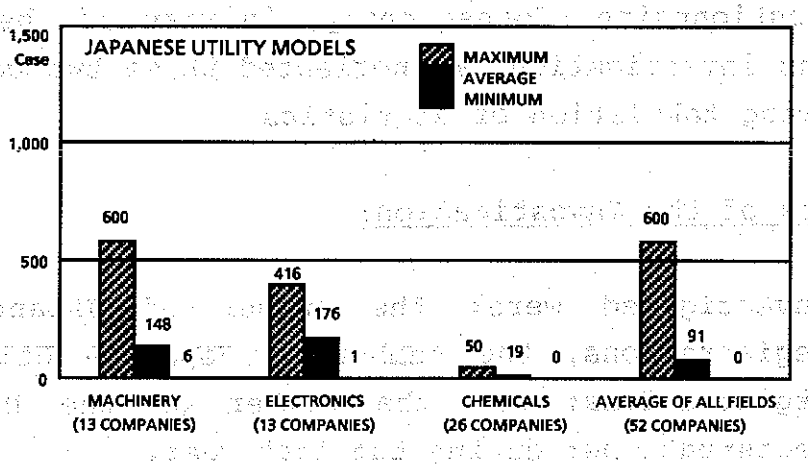
Incidentally, as for the two companies included in the above other fields, only one of them answered a numerical part of the questionnaire. Consequently, in view of the nature of the present investigation, we neglected these two companies in the following tabulation of statistics.

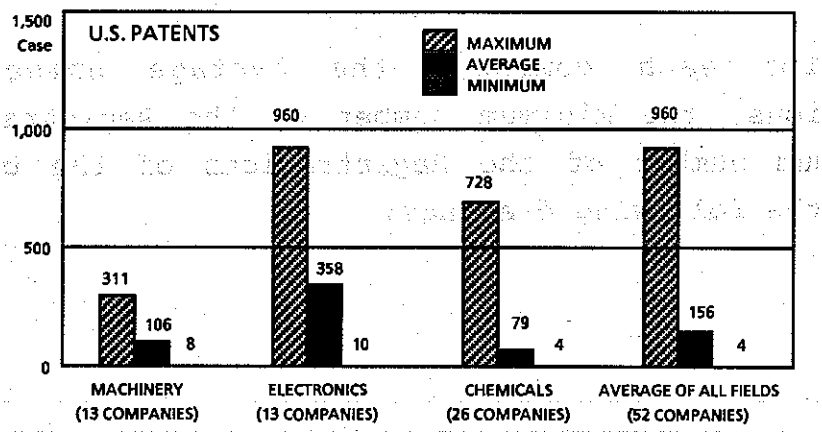
(2) Results of the Investigation:

Q2 ~ Q3: Investigated were: the number of Japanese Patent Registrations; the number of Japanese Utility Model Registrations; and the number of the U.S. Patent Registrations; during the last year.

As for each company, the average number of the Registrations, the minimum number of the Registrations, and the maximum number of the Registrations of the company are shown in the following drawings:


JAPANESE PATENTS
MAXIMUM
AVERAGE
MINIMUM
1,500
Case
1,000
500
0
650
140
24
1300
594
30
242
89
5
1300
228
5
MACHINERY
(13 COMPANIES)
ELECTRONICS
(13 COMPANIES)
CHEMICALS
(26 COMPANIES)
AVERAGE OF ALL FIELDS
(52 COMPANIES)


JAPANESE UTILITY MODELS
MAXIMUM
AVERAGE
MINIMUM
1,500
Case
1,000
500
0
600
148
6
416
176
1
50
19
0
600
91
0
MACHINERY
(13 COMPANIES)
ELECTRONICS
(13 COMPANIES)
CHEMICALS
(26 COMPANIES)
AVERAGE OF ALL FIELDS
(52 COMPANIES)


U.S. PATENTS
MAXIMUM
AVERAGE
MINIMUM
1,500
Case
1,000
500
0
311
106
8
960
358
10
728
79
4
960
156
4
MACHINERY
(13 COMPANIES)
ELECTRONICS
(13 COMPANIES)
CHEMICALS
(26 COMPANIES)
AVERAGE OF ALL FIELDS
(52 COMPANIES)

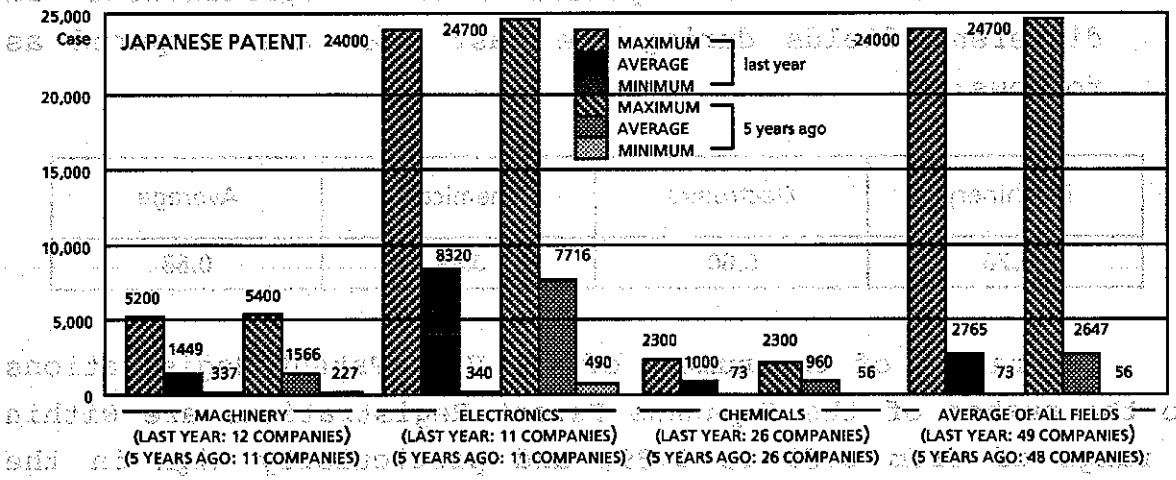
① Ratios of the number of the U.S. Patent Registrations to the number of the Japanese Patent Registrations in different fields during the last year are compared as follows:

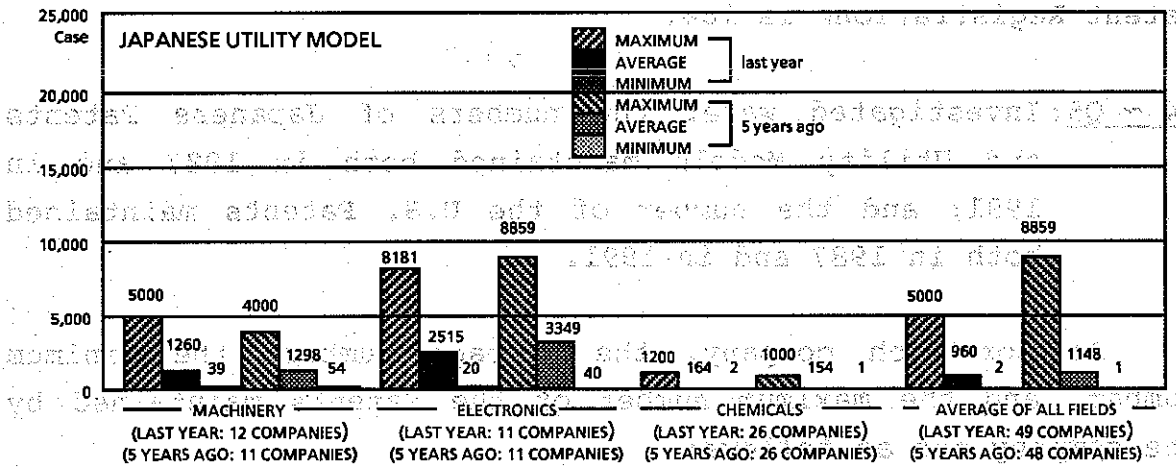
Machinery	Electronics	Chemicals	Average
0.76	0.60	0.89	0.68

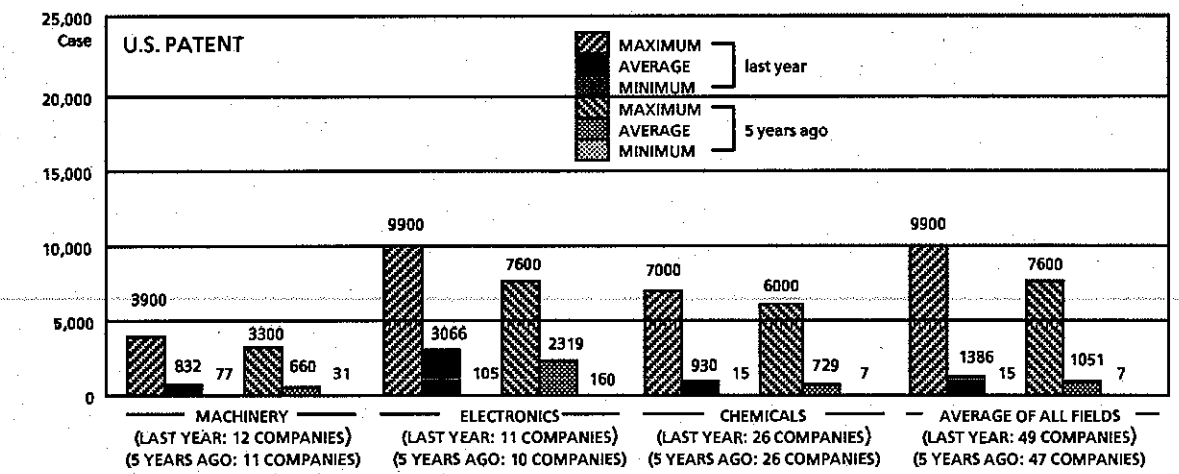
The ratios of the number of the U.S. Patent Registrations to the number of the Japanese Patent Registrations are within a range of from 0.60 to 0.89, and particularly high in the field of the chemical in which the number of the Japanese Patent Registrations is low.

Q4 ~ Q5: Investigated were: the numbers of Japanese Patents and Utility Models maintained both in 1987 and in 1991; and the number of the U.S. Patents maintained both in 1987 and in 1991.

As for each company, the average number, the minimum number, and the maximum number of the Patents maintained by the company are as follows:


JAPANESE PATENT
Case
25,000
20,000
15,000
10,000
5,000
0
MAXIMUM
AVERAGE
MINIMUM
last year
5 years ago
5200
1449
337
5400
1566
227
24000
8320
340
24700
7716
490
2300
1000
73
2300
960
56
24000
2765
73
24700
2647
56
MACHINERY
(LAST YEAR: 12 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
ELECTRONICS
(LAST YEAR: 11 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
CHEMICALS
(LAST YEAR: 26 COMPANIES)
(5 YEARS AGO: 26 COMPANIES)
AVERAGE OF ALL FIELDS
(LAST YEAR: 49 COMPANIES)
(5 YEARS AGO: 48 COMPANIES)


JAPANESE UTILITY MODEL
Case
25,000
20,000
15,000
10,000
5,000
0
MAXIMUM
AVERAGE
MINIMUM
last year
5 years ago
5000
1260
39
4000
1298
54
8181
2515
20
8859
3349
40
1200
164
2
1000
154
1
5000
960
2
8859
1148
1
MACHINERY
(LAST YEAR: 12 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
ELECTRONICS
(LAST YEAR: 11 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
CHEMICALS
(LAST YEAR: 26 COMPANIES)
(5 YEARS AGO: 26 COMPANIES)
AVERAGE OF ALL FIELDS
(LAST YEAR: 49 COMPANIES)
(5 YEARS AGO: 48 COMPANIES)


U.S. PATENT
Case
25,000
20,000
15,000
10,000
5,000
0
MAXIMUM
AVERAGE
MINIMUM
last year
5 years ago
3900
832
77
3300
660
31
9900
3066
105
7600
2319
160
7000
930
15
6000
729
7
9900
1386
15
7600
1051
7
MACHINERY
(LAST YEAR: 12 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
ELECTRONICS
(LAST YEAR: 11 COMPANIES)
(5 YEARS AGO: 10 COMPANIES)
CHEMICALS
(LAST YEAR: 26 COMPANIES)
(5 YEARS AGO: 26 COMPANIES)
AVERAGE OF ALL FIELDS
(LAST YEAR: 49 COMPANIES)
(5 YEARS AGO: 47 COMPANIES)

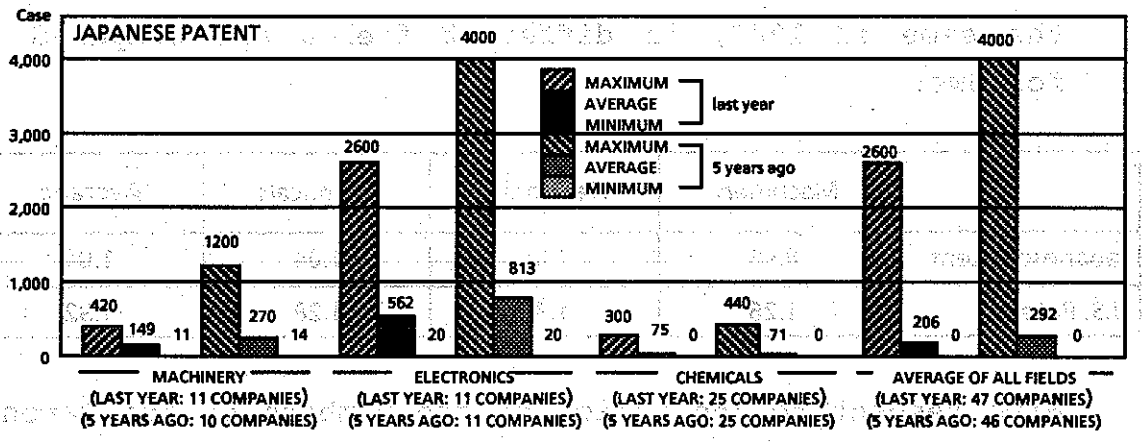
① Ratios of the numbers of both the Japanese Patents in 1991 and the U.S. Patents maintained to the numbers of the same in 1987, in different fields are compared as follows:

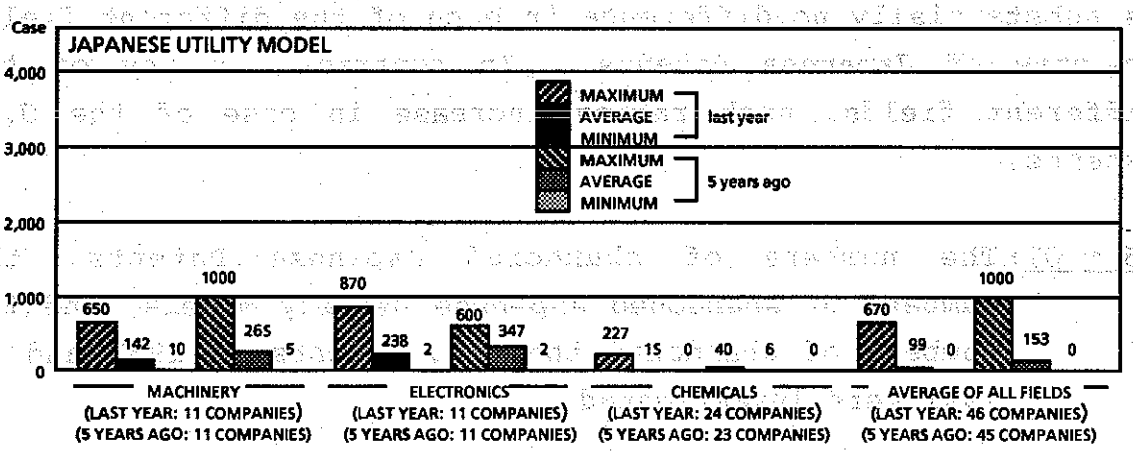
	Machinery	Electronics	Chemicals	Average
Japanese Patent	0.96	1.08	1.04	1.04
U.S. Patent	1.26	1.32	1.28	1.32

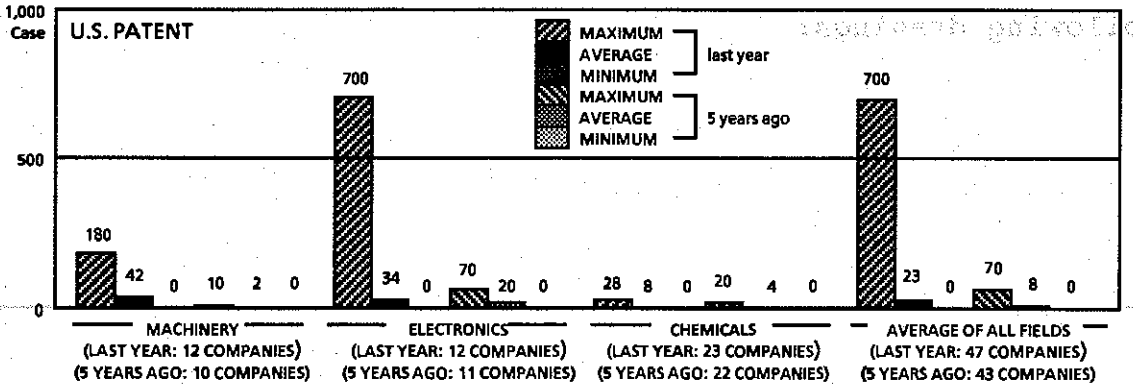
With respect to the ratios of the numbers of the Patents maintained in 1991 to the numbers of the same in 1987, there is substantially no difference in each of the different fields in case of Japanese Patents. In contrast, in any of the different fields, such ratios increase in case of the U.S. Patents.

Q6 ~ Q7: The numbers of abandoned Japanese Patents, the numbers of abandoned Japanese Utility Models, and the numbers of abandoned the U.S. Patents in 1987 and in 1991 were investigated.

The average number, the minimum number, and the maximum number of abandoned cases in each company are shown in the following drawings:


Case
JAPANESE PATENT
4,000
3,000
2,000
1,000
0
MAXIMUM
AVERAGE
MINIMUM
last year
MAXIMUM
AVERAGE
MINIMUM
5 years ago
420
149
11
1200
270
14
2600
562
20
4000
813
20
300
75
0
440
71
0
2600
206
0
4000
292
0
MACHINERY
(LAST YEAR: 11 COMPANIES)
(5 YEARS AGO: 10 COMPANIES)
ELECTRONICS
(LAST YEAR: 11 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
CHEMICALS
(LAST YEAR: 25 COMPANIES)
(5 YEARS AGO: 25 COMPANIES)
AVERAGE OF ALL FIELDS
(LAST YEAR: 47 COMPANIES)
(5 YEARS AGO: 46 COMPANIES)


Case
JAPANESE UTILITY MODEL
4,000
3,000
2,000
1,000
0
MAXIMUM
AVERAGE
MINIMUM
last year
MAXIMUM
AVERAGE
MINIMUM
5 years ago
650
142
10
1000
265
5
870
238
2
600
347
2
227
15
0
40
6
0
670
99
0
1000
153
0
MACHINERY
(LAST YEAR: 11 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
ELECTRONICS
(LAST YEAR: 11 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
CHEMICALS
(LAST YEAR: 24 COMPANIES)
(5 YEARS AGO: 23 COMPANIES)
AVERAGE OF ALL FIELDS
(LAST YEAR: 46 COMPANIES)
(5 YEARS AGO: 45 COMPANIES)


1,000
Case
U.S. PATENT
500
0
MAXIMUM
AVERAGE
MINIMUM
last year
MAXIMUM
AVERAGE
MINIMUM
5 years ago
180
42
0
10
2
0
700
34
0
70
20
0
28
8
0
20
4
0
700
23
0
70
8
0
MACHINERY
(LAST YEAR: 12 COMPANIES)
(5 YEARS AGO: 10 COMPANIES)
ELECTRONICS
(LAST YEAR: 12 COMPANIES)
(5 YEARS AGO: 11 COMPANIES)
CHEMICALS
(LAST YEAR: 23 COMPANIES)
(5 YEARS AGO: 22 COMPANIES)
AVERAGE OF ALL FIELDS
(LAST YEAR: 47 COMPANIES)
(5 YEARS AGO: 43 COMPANIES)

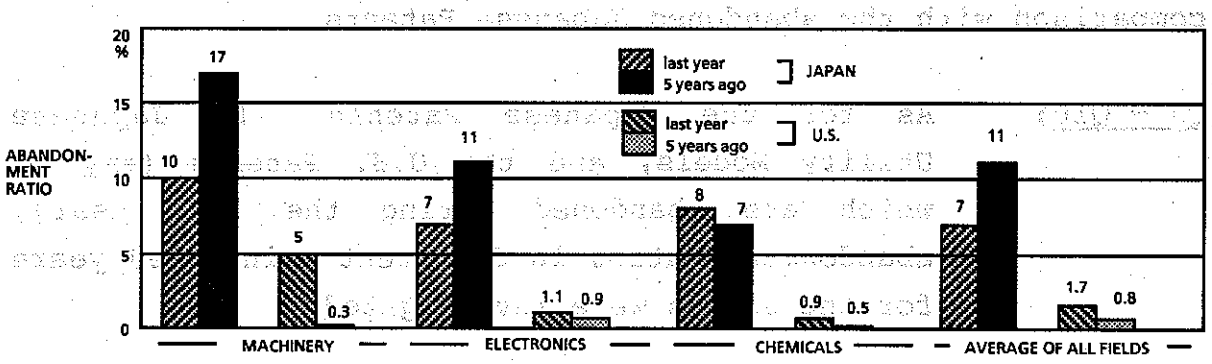
① Ratios of the numbers of both the abandoned Japanese Patents and the abandoned U.S. Patents in 1991 to the numbers of the same in 1987 in different fields are compared as follows:

	Machinery	Electronics	Chemicals	Average
Japanese Patent	0.55	0.69	1.06	0.71
U.S. Patent	21.00	1.70	2.00	2.88

In case of Japanese Patents, there is a decrease or no difference in the number of the abandoned Patents during the last five years. In contrast, in case of the U.S. Patents, there is an increase of the number of the abandoned The U.S. Patents in each of the different fields.

② Abandonment ratios(%): (number of abandoned rights)/(number of all rights of the Japanese Patents and the U.S. Patents) in different fields in 1987 and in 1991 are compared as shown in the following drawing:

CHANGES IN RATIO(%) OF ABANDONED JAPANESE PATENTS AND ABANDONED U.S. PATENTS IN DIFFERENT FIELDS



An abandonment ratio of the Japanese Patents in 1991 is approximately 10%. In contrast, in the U.S. Patents, the ratio is 5% in Machinery, and 1% in each of Electronics and Chemicals, which shows that: in any of the different fields, such ratio is lower in the U.S. Patents than in Japanese Patents.

Comparing the abandonment ratios in 1991 with that in 1987: as for the abandoned Japanese Patents, each of Machine and Electric shows a decrease thereof. In contrast, as for the abandoned U.S. Patents, Machine shows an increase thereof, whereas each of Electric and Chemical shows substantially no difference thereof.

③ Ratios of the number of the Patents abandoned in 1991 to the Patents registered in the same year in different fields as to both the Japanese Patents and the U.S. Patents are compared as follows:

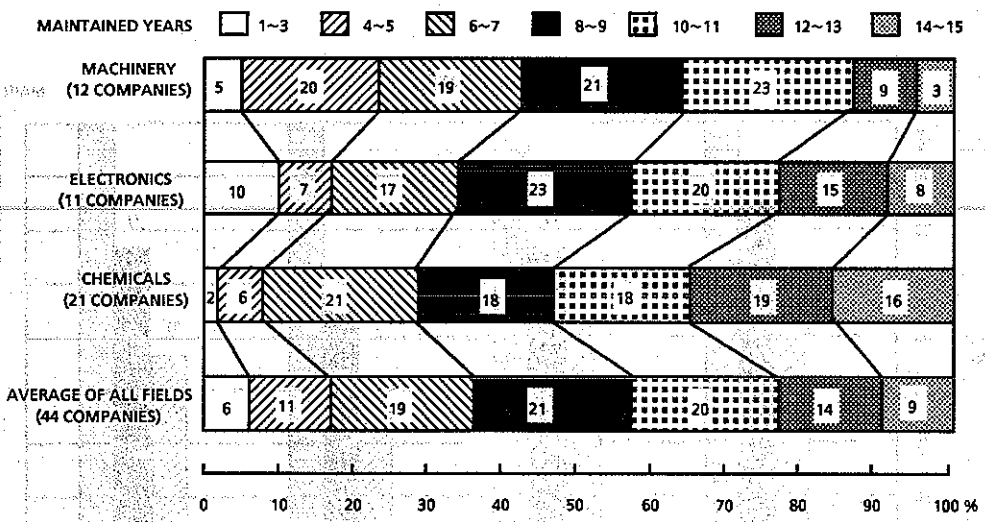
	Machinery	Electronics	Chemicals	Average
Japanese Patents	1.06	0.95	0.84	0.90
U.S. Patents	0.40	0.09	0.10	0.15

As for the Japanese Patents, the number of the abandoned Patents is substantially the same as that of the Patents being registered. In contrast, as for the U.S. Patents, the abandonment ratio is 40% in Machinery, and about 10% in each of Electronics and Chemicals, any of which is lower in comparison with the abandoned Japanese Patents.

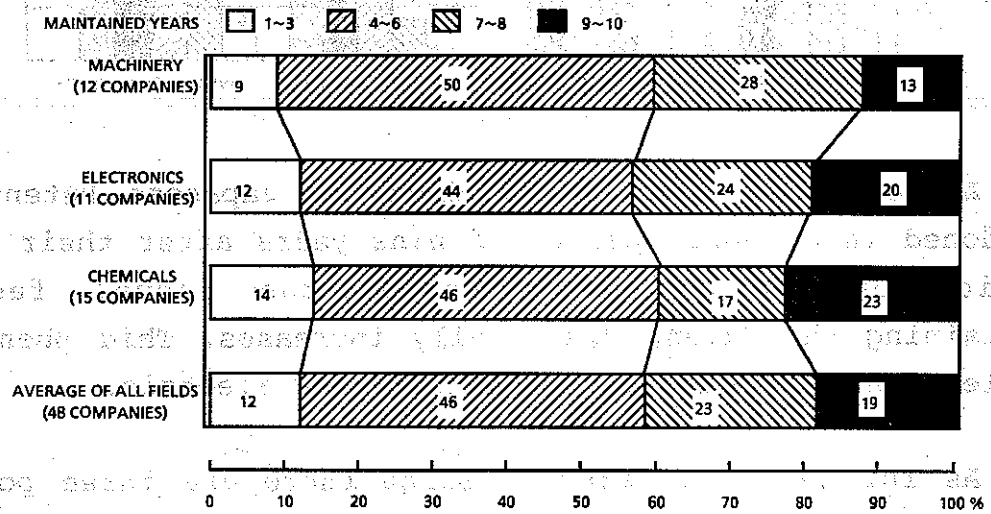
Q8 ~ Q10: As for the Japanese Patents, the Japanese Utility Models, and the U.S. Patents (any of which are abandoned during the last year), abandonment ratios in different maintained years for the rights were investigated.

Such ratios in different maintained years for the rights are shown in the following drawings:

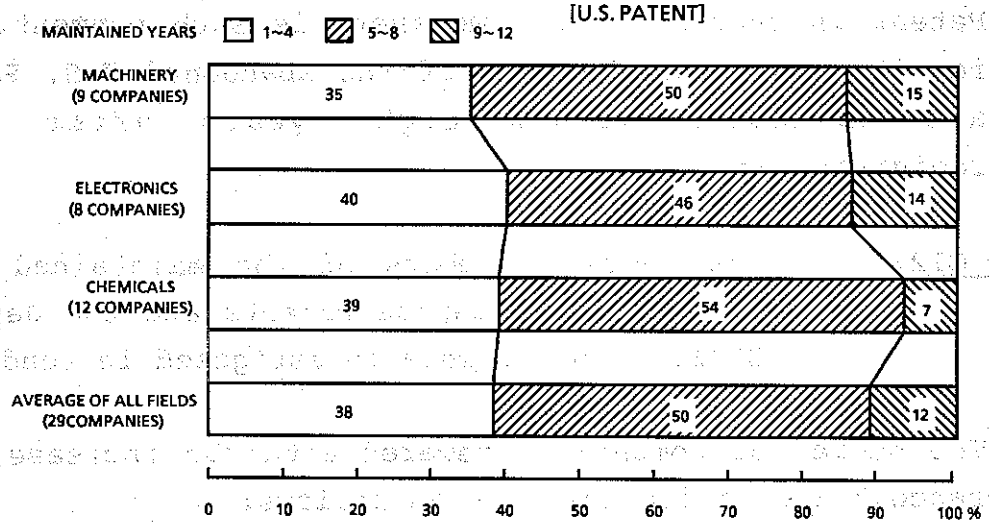
[JAPANESE PATENT]



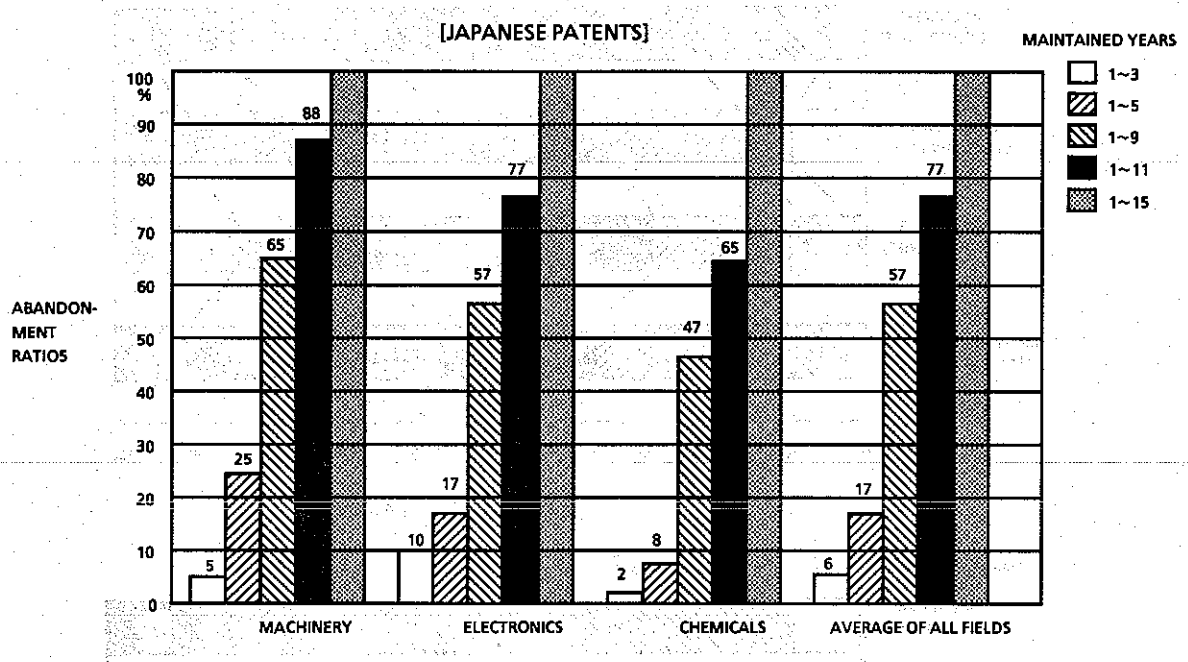
[JAPANESE UTILITY MODEL]



[U.S. PATENT]



① Abandonment ratios(%) of the Japanese Patents after different maintained years during the last year are accumulated as shown in the following drawing:



Approximately 50% of the abandoned Japanese Patents are abandoned in an early period of nine years after their Kokoku Publications, after which period the annual fee for maintaining the Patent drastically increases. This phenomenon is clear particularly in both Machine and Electric.

② As for the U.S. Patents, since there are three possible times in payment of the Patent fee for each Patent, the Patent is checked each time there is such payment. As a result, approximately 90 % of the abandoned U.S. Patents are abandoned within eight years after their registrations.

Q11 ~ Q12: The average numbers of the maintained years of both the Japanese Patents and the Japanese Utility Models were investigated in tendency.

The number of companies answered with "an increase," "no difference," and "a decrease" is as follows:

	Machinery	Electronics	Chemicals	Total
Japanese Patents Increase	0	0	3	3
No difference	7	4	13	24
Decrease	5	8	9	22
Total	(12)	(12)	(25)	(49)

	Machinery	Electronics	Chemicals	Total
Japanese Utility Models Increase	0	0	1	1
No difference	7	4	16	27
Decrease	5	8	8	21
Total	(12)	(12)	(25)	(49)

① The average number of the maintained years of both the Japanese Patents and the Japanese Utility Models show no difference or a tendency to decrease.

Q13 ~ Q 14: Abandonment ratios of the Japanese Patents, the Japanese Utility Models, and the U.S. Patents were investigated in tendency.

The number of the companies answered with "an increase," "no difference," and "a decrease" is as follows:

	Machinery	Electronics	Chemicals	Total
Japanese Patents & Utility Models Increase	5	9	11	25
No difference	5	0	11	26
Decrease	2	3	4	9
Total	(12)	(12)	(26)	(50)

	Machinery	Electronics	Chemicals	Total
U.S. Patents Increase	7	6	11	24
No difference	5	6	13	24
Decrease	0	0	2	2
Total	(12)	(12)	(26)	(50)

① The abandonment ratio of the Japanese Patents shows no difference or a tendency to increase.

② The abandonment ratio of the U.S. Patents shows no difference or a tendency to increase.

Q15: Departments in charge of the annual fees for maintaining the rights in the companies were investigated.

The number of the companies are compared in different departments in charge of the annual fees, as follows:

	Machinery	Electronics	Chemicals	Total
All fees upon Patent department	10	9	20	39
All fees upon Operative departments	3	3	5	11
All fees shared among Patent & Operative departments	0	1	0	1
Others	0	0	1	1

① As for the number of the departments in charge of the annual fees for maintaining the rights, the Patent department occupies about 3/4 thereof; and the operative departments occupy about 1/4 thereof.

Q16 ~ Q17: Conditions of periodic checking of maintenance of the rights were investigated.

The number of the companies, which perform or do not perform such checking, is as follows:

	Machinery	Electronics	Chemicals	Total
Performed	13	13	25	51
Not performed	0	0	1	1

① Such periodic checking of maintenance of the rights is performed by all the companies except one.

Q18 ~ Q20: We investigated: departments for checking the rights as to maintenance and abandonments thereof; departments for showing substantial evaluations; and departments for making the final decisions.

The number of the companies in such different departments is as follows:

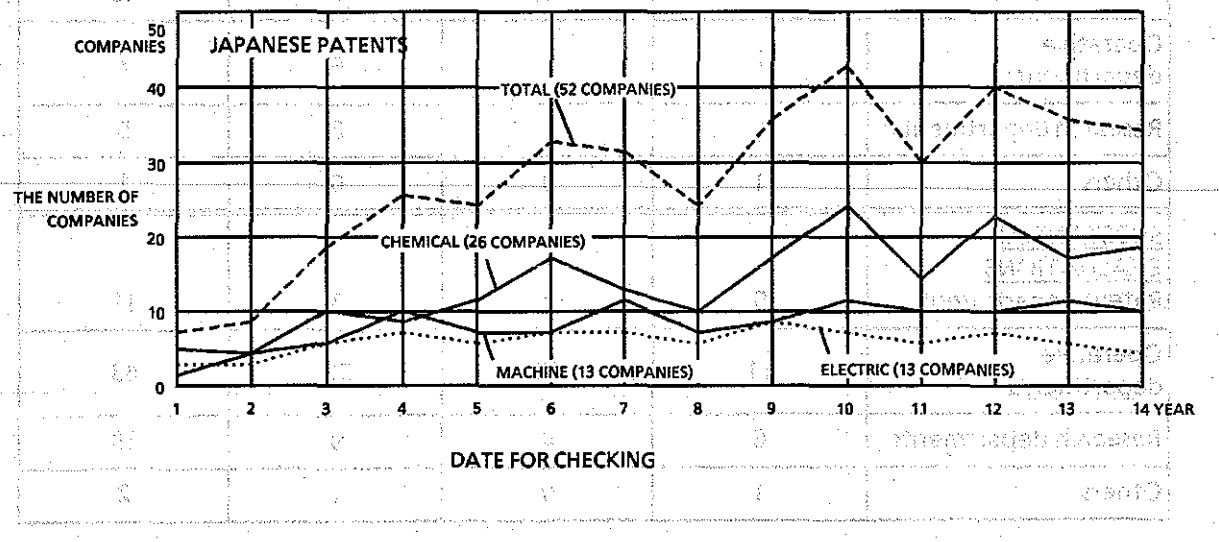
	Machinery	Electronics	Chemicals	Total
CHECKING Patent department	12	12	21	45
Operative departments	2	1	4	7
Research departments	1	1	3	5
Others	1	0	0	1
SUBSTANTIAL EVALUATIONS Patent departmtent	0	3	8	11
Operative departments	11	12	20	43
Research departments	6	4	9	19
Others	1	0	1	2

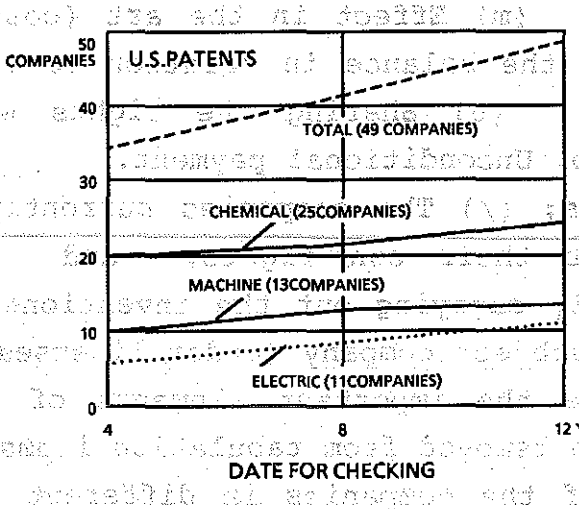
	Machinery	Electronics	Chemicals	Total
FINAL DECISION Patent departmtent	8	9	18	35
Operative departments	5	4	6	15
Research departments	1	2	0	3
Others	0	0	1	1

① It is said that in general organizations for managing the rights in maintenance and abandonment:
the Patent department proposes the checking;
the operative and the research departments show the substantial evaluations; and
the Patent department makes the final decisions.

Q21 ~ Q22: Conditions of checking dates for the maintenance of the rights as to both the Japanese Patents and the U.S. Patents were investigated.

The number of the companies checking the maintenance of the rights at the checking dates is shown in the following drawing:





① As for the checking dates, in the Japanese Patents, frequency of such checking increases from fourth year in both Machinery and Electronics and from ninth year in Chemicals. On the other hand, in the U.S. Patents, there is substantially no difference in frequency of checking in any of the different fields.

Q23 ~ Q24: As for the criterion of judgment for determining on maintenance of the rights, the best five of the important elements of judgment were investigated in different maintained years.

The elements of judgment are the following (a) - (p): (a) A possibility that the companies carry out the inventions of their own rights; (b) A possibility that other companies carry out the inventions of the rights belonging to the subject company; (c) A scale upon which the companies carry out the inventions of the rights; (d) Diversionary tactics against the other companies; (e) The stabilities of the rights; (f) A possibility of licensing the other companies to carry out the inventions of the rights which belong to the subject company not carrying out the inventions of the rights; (g) Ease in finding infringement; (h) The lives of the

rights; (i) Ease in industrializing the rights; (j) Advancement in the art (not old-fashioned art); (k) No alternative art; (m) Effect in the art (cost reduction); (n) Adjustment of the balance in relation to the increase of the annual fee; (0) Sharing the rights with the other companies; and (p) Unconditional payment.

Items such as: (/) The companies currently carrying out the inventions of their own rights; and (/) The other companies currently carrying out the inventions of the rights belonging to the subject company (under licenses or in case of infringement), are the important elements of judgment, and, therefore they are removed from tabulation items.

The number of the companies in different ranks is shown in Tables 1 and 2:

① As for the results of the tabulation in the Tables 1 and 2, points from 1 to 5 are arranged in order of importance in different ranks of the elements of judgment. And the products of the numbers of the companies (in different ranks) and the above-mentioned points are summed up and re-tabulated as follows: One in parentheses is the order of the elements of judgment.

Japanese Patents	Machinery	Electronics	Chemicals	Total
a) up to 5 years	(1) 48	(1) 37	(1) 90	(1) 175
6 ~ 10 years	(1) 59	(1) 47	(1) 107	(1) 213
11 ~ 14 years	(1) 47	(1) 44	(1) 63	(1) 154
b) up to 5 years	(2) 31	(2) 35	(2) 56	(2) 122
6 ~ 10 years	(2) 34	(2) 42	(2) 61	(2) 137
11 ~ 14 years	(2) 33	(2) 40	(2) 52	(2) 125
c) up to 5 years	0	(5) 9	(6) 18	(6) 27
6 ~ 10 years	5	(4) 17	(6) 19	(6) 41
11 ~ 14 years	5	(4) 20	(7) 24	(6) 49
d) up to 5 years	(3) 18	(3) 12	(5) 29	(4) 59
6 ~ 10 years	(3) 21	(5) 12	(4) 44	(4) 77
11 ~ 14 years	(3) 20	(5) 10	(3) 37	(3) 67
e) up to 5 years	0	2	2	4
6 ~ 10 years	0	1	8	9
11 ~ 14 years	0	1	10	11
f) up to 5 years	(4) 11	(3) 12	(3) 39	(3) 62
6 ~ 10 years	(4) 15	(3) 22	(3) 47	(3) 84
11 ~ 14 years	(4) 12	(3) 20	(5) 32	(4) 64
g) up to 5 years	(6) 7	2	(7) 11	20
6 ~ 10 years	2	2	(7) 10	14
11 ~ 14 years	2	1	13	16
h) up to 5 years	0	0	0	0
6 ~ 10 years	1	0	4	5
11 ~ 14 years	3	0	8	11

Japanese Patents	Machinery	Electronics	Chemicals	Total
i) up to 5 years	0	0	5	5
6 ~ 10 years	0	0	5	5
11 ~ 14 years	0	0	5	5
j) up to 5 years	1	(7) 4	(4) 29	(5) 34
6 ~ 10 years	(5) 12	(7) 6	(5) 29	(5) 47
11 ~ 14 years	(7) 8	4	(6) 26	(7) 38
k) up to 5 years	(7) 4	1	8	13
6 ~ 10 years	(7) 7	4	5	16
11 ~ 14 years	3	(7) 6	11	20
m) up to 5 years	(5) 10	(6) 5	8	(7) 23
6 ~ 10 years	(6) 11	(6) 7	5	(7) 23
11 ~ 14 years	9	(6) 7	11	27
n) up to 5 years	1	1	0	2
6 ~ 10 years	5	2	3	10
11 ~ 14 years	(4) 12	(7) 6	(4) 33	(5) 51
o) up to 5 years	0	0	1	1
6 ~ 10 years	0	0	1	1
11 ~ 14 years	0	0	1	1
p) up to 5 years	0	0	5	5
6 ~ 10 years	0	0	5	5
11 ~ 14 years	0	0	5	5

U.S.Patents	Machinery	Electronics	Chemicals	Total
a) up to 4 years	(1) 47	(1) 37	(1) 91	(1) 175
5 ~ 8 years	(1) 55	(1) 45	(1) 103	(1) 203
9 ~ 12 years	(1) 48	(2) 31	(1) 87	(1) 166
b) up to 4 years	(2) 31	(2) 36	(2) 51	(2) 118
5 ~ 8 years	(2) 32	(2) 45	(2) 55	(2) 132
9 ~ 12 years	(2) 35	(1) 44	(2) 42	(2) 121
c) up to 4 years	0	(4) 11	(6) 17	(6) 28
5 ~ 8years	5	(4) 19	(7) 16	(6) 40
9 ~ 12 years	(7) 5	(4) 19	(7) 18	(6) 42
d) up to 4 years	(4) 14	(3) 13	(4) 36	(4) 63
5 ~ 8years	(4) 14	(5) 14	(4) 39	(4) 67
9 ~ 12 years	(4) 13	(5) 14	(3) 33	(4) 60
e) up to 4 years	0	2	3	5
5 ~ 8 years	0	1	3	4
9 ~ 12 years	0	1	8	9
f) up to 4 years	(3) 18	(4) 11	(3) 37	(3) 66
5 ~ 8 years	(3) 18	(3) 24	(3) 49	(3) 91
9 ~ 12 years	(3) 16	(3) 21	(5) 28	(3) 65
g) up to 4 years	(7) 7	(7) 3	7	17
5 ~ 8years	2	(7) 7	10	19
9 ~ 12 years	2	(7) 7	16	25
h) up to 4 years	0	0	0	0
5 ~ 8years	1	0	5	6
9 ~ 12 years	3	0	7	10

U.S.Patents	Machinery	Electronics	Chemicals	Total
i) up to 4 years	0	0	8	8
5 ~ 8 years	0	0	8	8
9 ~ 12 years	0	0	12	12
j) up to 4 years	(6) 8	(7) 3	(5) 30	(5) 41
5 ~ 8years	(6) 7	1	(5) 33	(5) 41
9 ~ 12 years	3	3	(6) 25	(7) 31
k) up to 4 years	4	2	(7) 14	20
5 ~ 8 years	3	(6) 8	(6) 20	(7) 31
9 ~ 12 years	3	(6) 8	15	26
m) up to 4 years	(5) 10	(6) 5	8	(7) 23
5 ~ 8 years	(5) 11	2	5	18
9 ~ 12 years	(6) 9	2	3	14
n) up to 4 years	1	0	0	1
5 ~ 8years	5	0	3	8
9 ~ 12 years	(5) 11	4	(4) 33	(5) 48
o) up to 4 years			1	1
5 ~ 8years			1	1
9 ~ 12 years			1	1
p) up to 4 years				
5 ~ 8years				
9 ~ 12 years				

② As for both the Japanese Patents and the U.S. Patents, high-ranking ones of the elements (a) ~ (p) of the criteria of judgment were compared in different fields in accordance with the maintained years of the Patents, as follows:

	Machinery	Electronics	Chemicals	Total
Japanese Patents up to 5 years	abdfm	abdfc	abfjd	abfdj
6 ~ 10 years	abdfj	abfcd	abfdj	abfdj
11 ~ 14 years	abdfn	abfcd	abdnf	abdfn
U.S. Patents up to 4 years	abfdm	abdfc	abfdj	abfdj
5 ~ 8 years	abfdm	abfcd	abfdj	abfdj
9 ~ 12 years	abfdn	bafcd	abdnf	abdfn

Of the elements of judgment as to the maintenance of the rights, two items, i.e., the item (a): A possibility that the companies carry out the inventions of their own rights, and the item (b): A possibility that the other companies carry out the inventions of the rights belonging to the subject companies, are the important elements of judgment, common to both the Japanese Patents and the U.S. Patents. Consequently, there is no substantial difference in the number of the maintained years and in different fields.

As for the other elements of judgment except the above two items, there are some differences between the fields in both the Japanese Patents and the U.S. Patents.

Machinery: In the Japanese Patents, the order of importance (which is determined according to the maintained years of the rights) is as follows: the item (d) Diversionary tactics against the other companies; the item (f) A possibility of licensing the other companies to carry out the inventions of the rights which belong to the subject company not carrying out the inventions of its own rights; the item (m) Effect in the art; item (j) Advancement in the art; and the item (n) The annual fees.

In contrast with this, in the U.S. Patents, in the order of importance, the item (d) is replaced with the item (f) in ranking, and the rank of the item (j) downs.

Electronics: In both the Japanese Patents and the U.S. Patents, the order of importance is as follows: the item (d) Diversionary tactics against the other companies; the item (f) A possibility of licensing the other companies to carry out the inventions of the rights which belong to the subject company not carrying out the inventions of its own rights; and the item (c) A scale upon which the companies carry out the inventions of the rights.

Chemicals: In the Japanese Patent, the order of importance (which is determined according to the maintained years of the rights) is as follows: the item (f) A possibility of licensing the other companies to carry out the inventions of the the rights which belong to the subject company not carrying out the inventions of its own rights; the item (d) Diversionary tactics against the other companies; the item (j) Advancement in the art; and the item (n) The annual fees. In this respect, there is substantially no difference between the Japanese Patents and the U.S. Patents.

The other elements of judgment except the items (a), (b) are selected as criteria which are supplementary to these two items in judgment with respect to the maintained years and the fields.

Q25 ~ Q27: We have investigated: the condition in investigation as to whether or not the inventions of the subject company's rights are carried out by the other companies; the presence or absence of the investigation department; and the necessity of such investigation department.

The number of the companies answering in different items is as follows (a plurality of answers are so counted as to be made by a plurality of companies):

	Machinery	Electronics	Chemicals	Total
CONDITION IN INVESTIGATION				
All Patents' Working	6	9	3	18
Partial Working	0	3	5	8
No Working	7	1	18	26
INVESTIGATION DEPARTMENT				
Main department: existing	1	3	1	5
Sub-department: existing	5	6	4	15
No department in charge	7	4	21	32
NECESSITY OF INVESTIGATION DEPARTMENT				
To be expanded	7	10	5	22
To be as it is	1	2	5	8
To be reduced	0	0	0	0
To be provided	5	1	15	21

① In all the fields, a rate of the companies (each of which has the investigation department as a main department for investigating the conditions of the other companies as to whether or not the invention of the subject company's rights are carried out by the other companies) is small, i.e., 10 %. However, in both Electric and Machine, a rate of the companies (each of which has such investigation department as a supplementary department) substantially reaches 50%.

② Although a rate of the companies having the investigation departments is small, a rate of the companies which are satisfied with the present state of the investigation departments is small, i.e., 16% in different fields. Further, rates of the companies which want "to expand" the investigation departments and "to provide" the same, are 43 % and 41 %, respectively, which exceed 80 % in total.

IV. OUR PROPOSAL OF A SYSTEM FOR MAINTAINING, MANAGING AND EVALUATING THE RIGHTS

(1) General Remarks:

Today's companies are in a severe condition in which they must maintain and manage a large number of their own Patents and Utility Model rights with payments of the annual fees increasing every year. Under such circumstances, the way in which the companies maintain and manage the rights after their registrations without any loss becomes very important.

An essential requirement of the most rational management of the company's own registered Patent and Utility Model rights is to have a company's benefit of owning such rights well balance with the cost of maintenance of the rights. This will be hereinafter referred to as the "cost-benefit ratio" in the maintenance of the rights. Consequently, it is an object of an ideal system for maintaining and managing the rights to make such cost-benefit ratio as high as possible.

There are two possible ways in which we increase the cost-benefit ratio in the maintenance of the rights, as follows:

The first one thereof is to make the cost of the maintenance as low as possible. In other words, this suggests that the number of the rights belonging to the company is reduced to a possible minimum. However, such suggestion eventually leads to a serious situation in which the company has no right and does not file any application. It is clear that this mistakes the means for the end. Consequently, on the premise that both the Patent and the Utility Model rights are filed and registered so as to bring the benefits to the

companies, we must select useful ones of the rights to keep them alive after their registrations by repeatedly evaluating these rights under varying conditions.

The second one of the ways is to increase the company's benefit of owning theses rights. Such company's benefit may be of various types, for example such as a direct type, an indirect type and the like, and, therefore it can not be simply estimated. However, for example, a positive use of these rights by licensing of the same may be one of the most effective and definite measures to increase the company's benefit.

It is necessary to continue a further discussion from the above two points of view in realization of an ideal system for maintaining the rights.

(2) Organization:

In Fig. 5, there is shown an example of the organization of the above system.

In order to perform an effective maintenance and evaluation of the rights, we need a reliable organization for periodically checking the rights.

Such organization must be provided with: (A) a department for preparing a proposal of checking of the maintenance; (B) a department for making a substantial evaluation; (C) a department for making an overall judgment to make a final decision; and (D) a department for carrying out further procedure such as abandonment and maintenance of the rights.

The department (A) for preparing the proposal of checking of the maintenance prepares a list of the rights being periodically checked, and proposes that such rights are examined in related departments. It seems to us that a department adequate for the preparation of the proposal is an intellectual property department performing the company's entire management of the patent applications.

The department (B) for making the substantial evaluation in checking of the rights plays a most important role when the rights are actually evaluated in value by an evaluation criterion described later. This evaluation requires knowledge

and information as to the present state and the future of the subject art, acquired both inside and outside the company. Such evaluation must be made primarily in technical sections in charge of both the laboratories and the operative departments. At the same time, the presence or absence of contracts made with the other companies must be considered in evaluation of the rights, which makes it necessary to have technical management sections in charge or intellectual property sections in charge of both the laboratories and the operative departments check the rights.

Further, at this time, we would like to propose that a company be provided with a certain department specializing in more positive investigation on a possibility of licensing the other companies to use its own rights. As described in the preceding item, in order to make the cost-benefit ratio in the maintenance of the rights as high as possible, it is desirable to positively use the rights. In realizing this, it seems to us that the primary checking performed by the technical sections in charge is not sufficient in timing and quality. We think it necessary to provide an additional section for performing a secondary checking, which section specializes in investigations on: infringement of the rights, which is difficult to find in ordinary conditions; a possibility of the sales of the rights under the consideration of a possibility of future uses of the rights; and the like, the additional section performing the secondary checking in addition to the investigation made by the technical sections in charge. Such additional section may be provided in each of the laboratories, the operative departments and the intellectual property department of the company. It is desirable that the additional section consists of both: staff having a sufficient knowledge and a rich experience on the background of the art; and staff having a knowledge of intellectual property. When the company's rights are judged in such additional section to have a possibility that the company licenses the other companies to use them, the company actually takes up its routine for utilizing the rights, which routine is different from the routine for managing the rights as to whether the

rights are maintained or abandoned. Consequently, the additional section assumes a role for realizing a concrete action in cooperation with the licensing section in charge of the intellectual property department.

Further, the additional section thus specialized performs a double-check of the evaluation made in the technical sections (which files patent applications) to have the evaluation become more objective. Consequently, we think that the additional section may contribute to improvement of the evaluation in accuracy.

As for (C), the department (C) for making the overall judgment to make the final decision is a department in which the rights are judged from the standpoint of the entire company as to whether the rights are abandoned or maintained, to which department the intellectual property department in the headquarters corresponds. Also, a circular notice may be employed in this connection. Further, as for the rights having been judged to have a possibility that the company licenses the other companies to use these rights, the section in charge of licensing must take up his actual routine.

As for (D), the department (D) for carrying out further procedure such as abandonment and maintenance of the rights is a department in which actual procedures of abandonments of the rights are conducted with the Patent Office. Consequently, it is adequate that a section (which is in charge of filing the patent applications) of the intellectual property department in the headquarters plays a role of the department (D).

(3) Timing of the Evaluation:

It is recognized that the checking at a time of payment of the annual fee is essentially most rational. Namely, with the Japanese Patent Office, the checking must be conducted every year except the first three years after registration of a Patent or Utility Model right. Such checking is often conducted in connection with an investigation on compensation for the inventor in business achievement. Further, in case of a company in which a ratio of working of the rights is very high, it may be suitable for the company to conduct the

checking after a lapse of a certain period of time after registration of the right. In this case, i.e., in case of a Japanese Patent, it may be suitable to conduct the checking before the seventh year after registration of such Patent right, because the annual fee is put up at the seventh year. Further, there is an occasional increase of the annual fee. In such case, the checking must be conducted without fail before the annual fee is put up.

(4) Criteria for the Evaluation:

Essentially, of the company's rights, ones (each of which is now under working in the company or in the other companies, or has a possibility of future uses thereof) must be selected. At the same time, it is necessary for the company to consider the thus selected rights in factors of their background. In this connection, there are following possible evaluation items:

(A) now under working in the company; (B) now under working in the other companies (through licensing or infringement); (C) there is a possibility that the company uses the rights; (D) there is a possibility that the other companies use the rights; (E) working scale; (F) diversionary tactics against the other companies; (G) stability of the rights; (H) there is a possibility that the company licenses the other companies to use the rights which are not carried out in the company; (I) ease in finding of infringement; (J) remaining life of the rights; (K) ease in industrialization; (M) advancement and retardation of the art; (N) no alternative art; and (O) technical effects and cost reduction.

Since the total amount of the annual fees increases as the number of the maintained years increase, it is necessary to consider the following item: namely (P) a rate of increase of the annual fee.

These items are not equal in importance. Of these items, most important ones are the items (A) to (D). Consequently, in case that each of such items (A) to (D) is "yes", the rights must be kept alive in principle. However, though it is easy to confirm the present working condition of the rights in the

company, it is hard to precisely investigate a future state of the company and both the present and future states of the other companies, which makes it uncertain to precisely judge them. For supplementing this point, the items following the item (E) are required as objective indexes of the values of the rights. Consequently, in a condition in which the items (A) to (D) are not clear, the items following the item (E) are used to determine whether or not the rights are abandoned or maintained. The importance of each of the items following the item (E) is determined in each of the companies based on the company's particular experience.

Further, the item (P) "the rate of increase of the annual fee" is not neglected as an important factor. Particularly, as for the Japanese Patent, the annual fee drastically increases after tenth and thirteenth year after registration of the patent. As for the U.S. Patent, the annual fee drastically increases after eighth and twelfth year after its registration. Consequently, each of the above- mentioned years is important in conducting the checking.

Incidentally, an example of a method for evaluating the Patent is shown in a flowchart of Fig. 6, in which flowchart the importance of each factor may be adequately adjusted in the companies based on their particular situations.

(5) Differences in Countries:

Essentially, there is no difference in evaluation criteria between the Japanese Patent and the U.S. Patent. Generally speaking, in case of the Japanese company, its U.S. Patent applications are severely selected to keep their qualities high in comparison with their Japanese Patent applications, which leads to a low ratio of abandonment of their U.S. Patent applications. However, due to increases of the annual fee during the last two years (1990 and 1991), the U.S. Patent becomes much higher in cost than the Japanese Patent. Further, in view of the present condition in which the number of the U.S. Patents belonging to the Japanese companies increases, it is necessary to improve the system for maintaining and evaluating the U.S. Patents.

FIG. 1

CHANGES IN: THE NUMBER OF JAPANESE PATENT·UTILITY MODEL APPLICATIONS AND THAT OF REGISTERED ONES THEREOF; AND THE NUMBER OF U.S. PATENTS

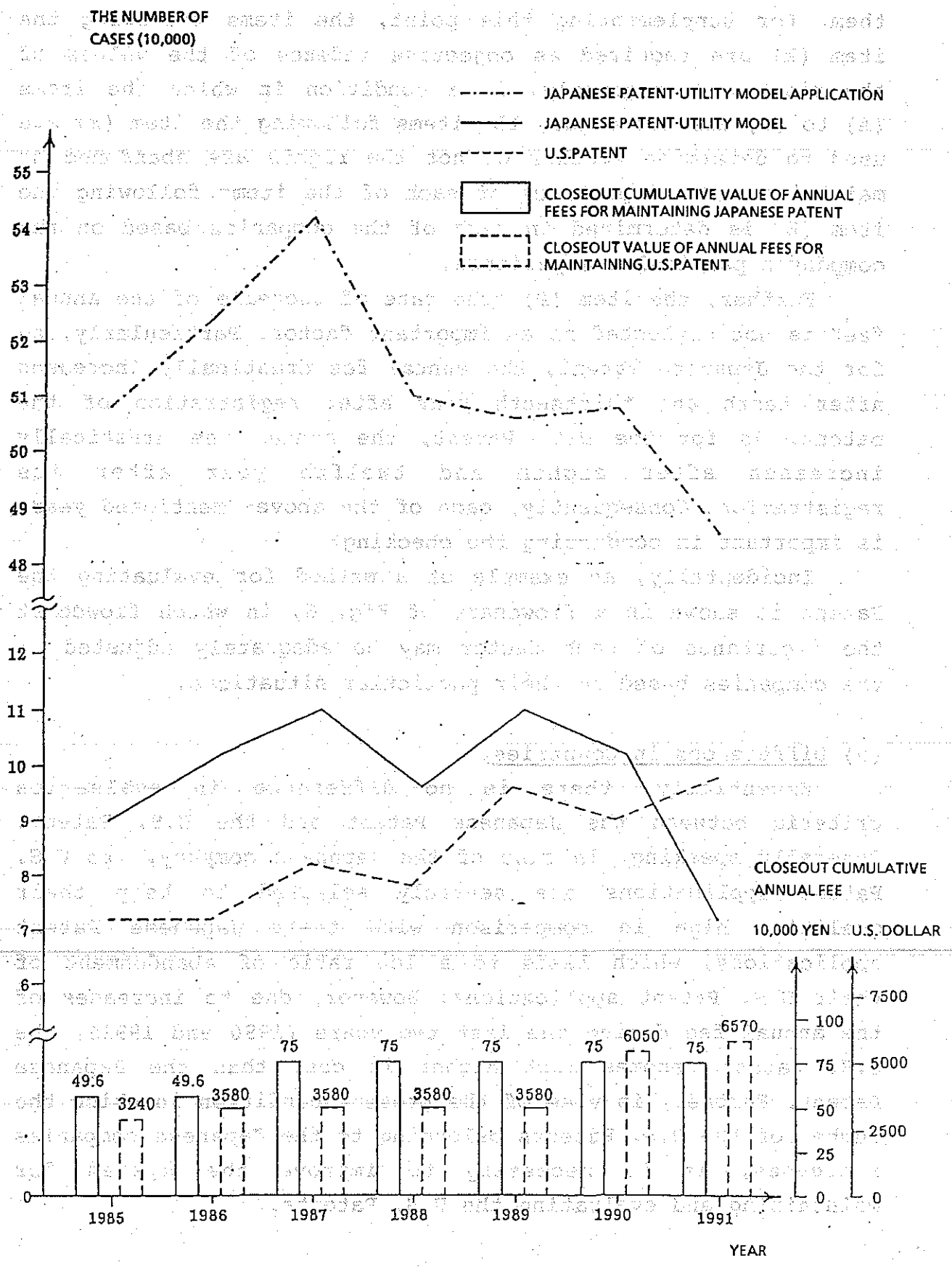


FIG.2

CHANGES IN CUMULATIVE VALUES OF ANNUAL FEES FOR MAINTAINING RIGHTS

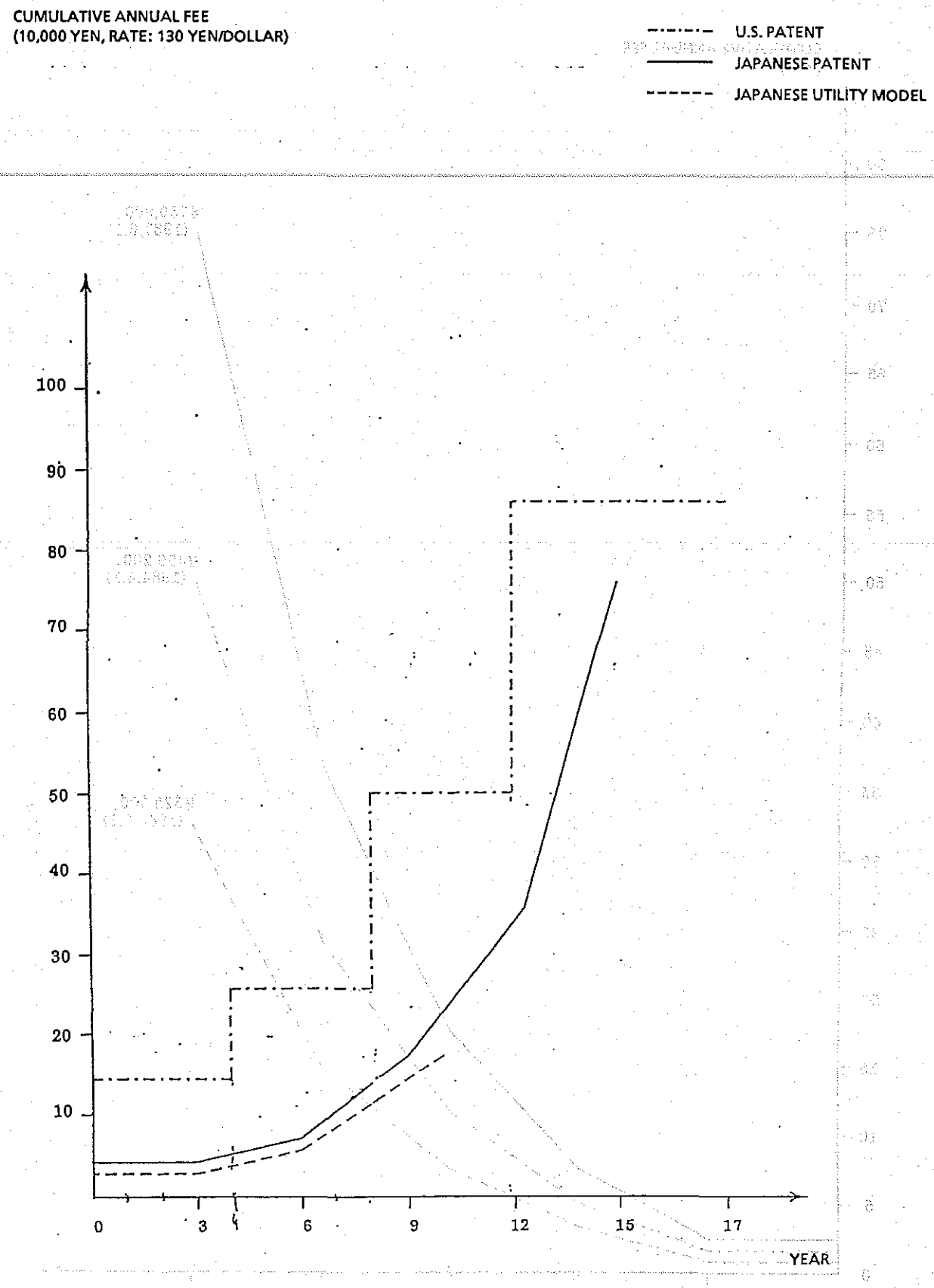


FIG.3

CHANGES IN CUMULATIVE VALUE OF JAPANESE PATENT REGISTRATION FEE AND ANNUAL FEE FOR MAINTAINING THE PATENT

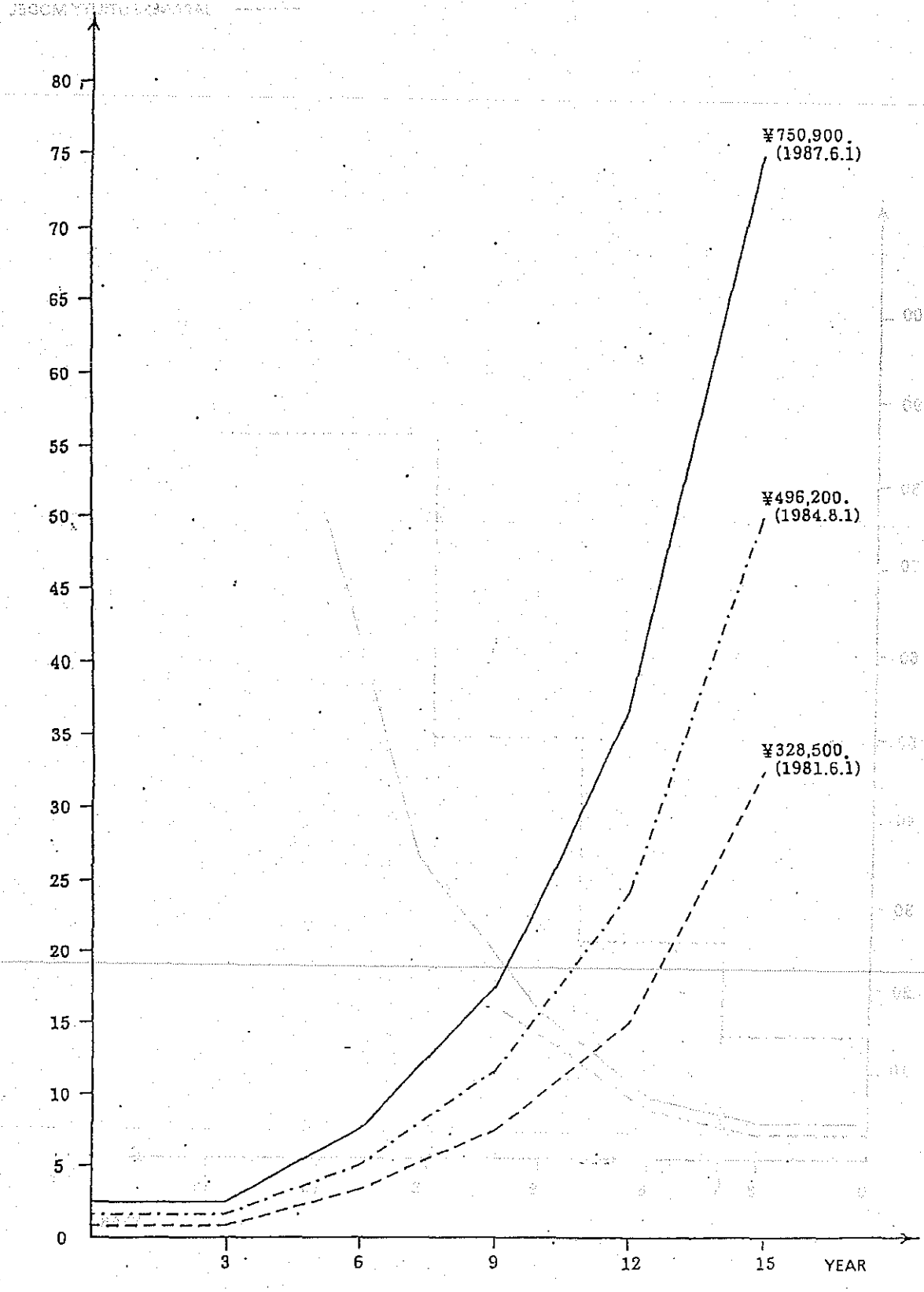


FIG.4

CHANGES IN CUMULATIVE VALUE OF U.S. PATENT REGISTRATION FEE AND ANNUAL FEE FOR MAINTAINING THE PATENT

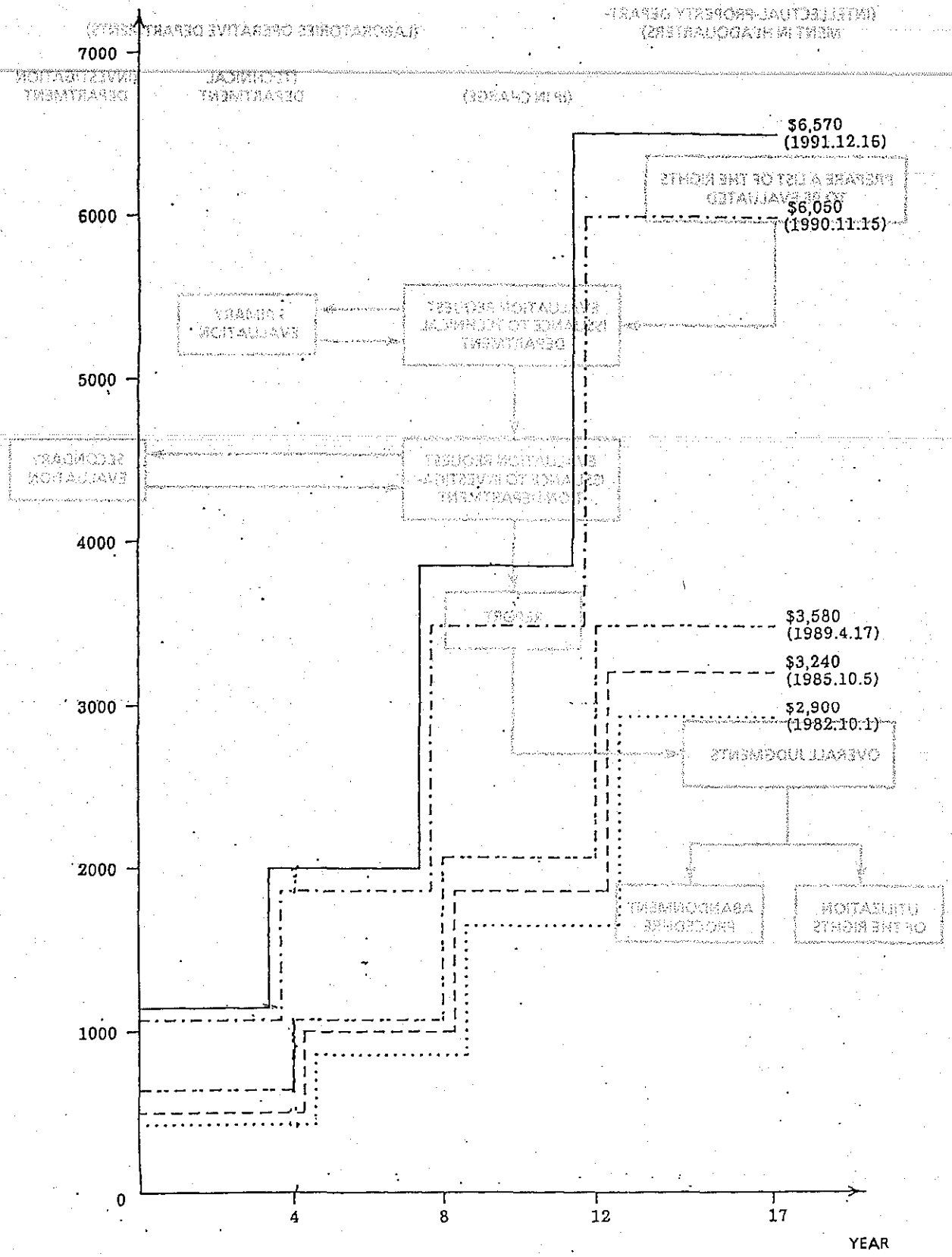


FIG.5

EXAMPLE OF SYSTEM FOR MAINTAINING THE RIGHTS

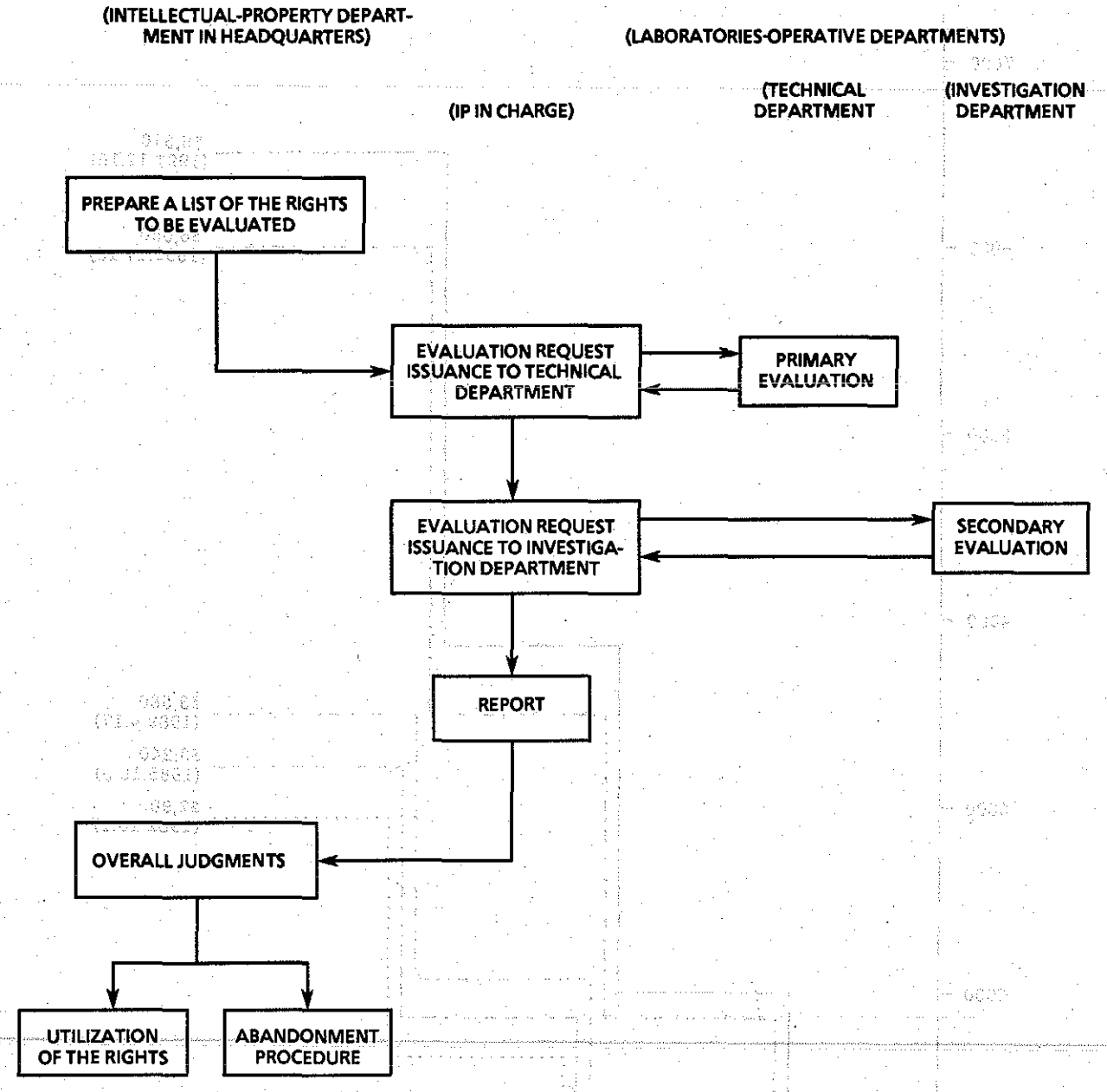


FIG. 6

FLOWCHART FOR JUDGING PATENT AND UTILITY MODEL RIGHTS AS TO WHETHER THEY ARE MAINTAINED OR ABANDONED

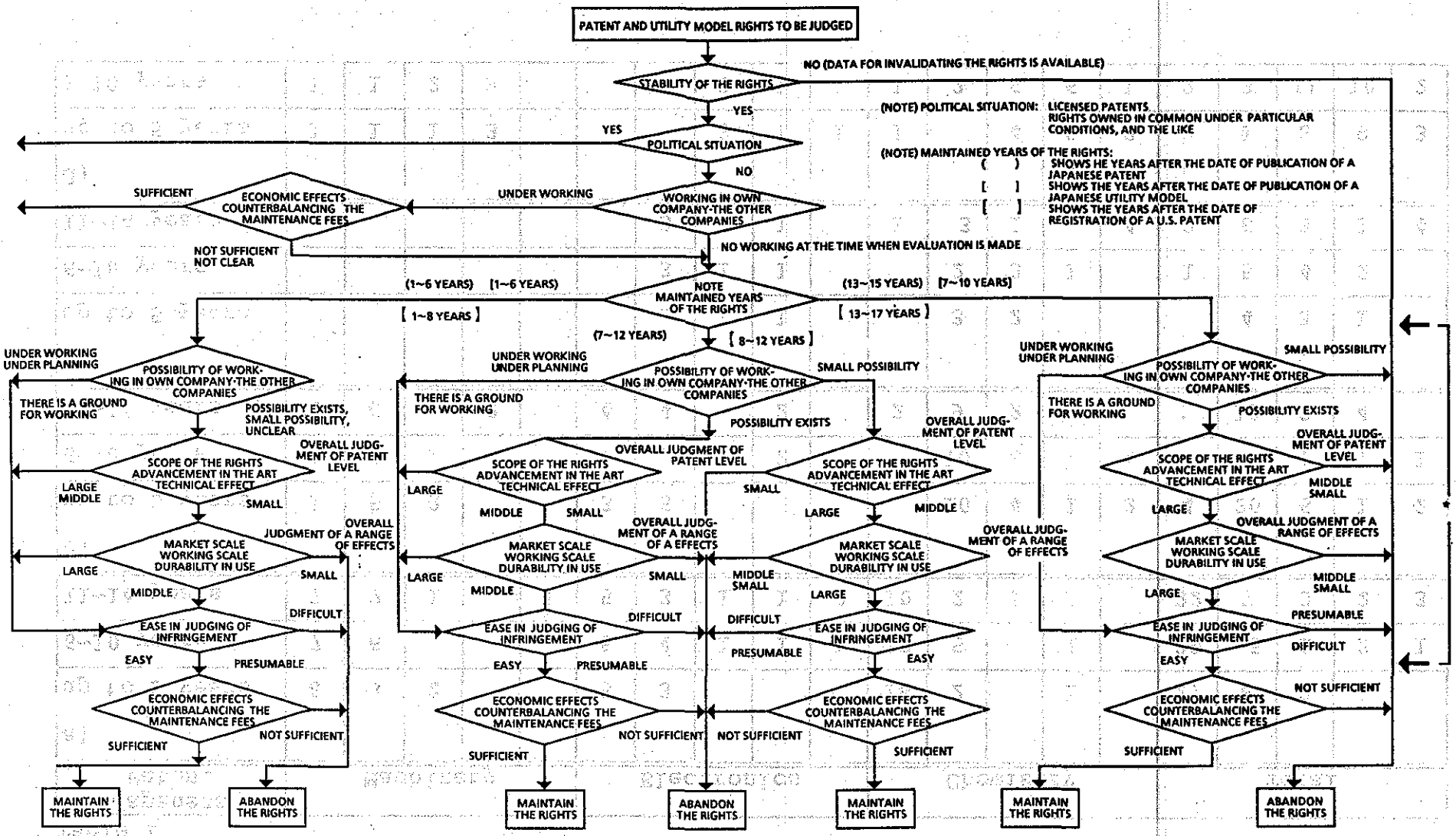


Table 1

Japanese Patent	Machinery					Electronics					Chemistry					Total				
a)																				
up to 5 years	6	3	2			5	3				16	2		1		27	8	2	1	
6~10 years	7	6				5	4	1	1	1	17	5		1		29	15	1	2	1
11~14 years	7	2	1		1	5	3	1	1	2	10	2	1	1		22	7	3	2	3
b)																				
up to 5 years	1	5	2			3	5					10	4	1	2	4	20	6	1	2
6~10 years	1	6	1	1		2	7		2			10	6	1	1	3	23	7	4	1
11~14 years	1	6		2		4	4		2		2	9	2			7	19	2	4	
c)																				
up to 5 years							1	1	1			3	2				4	3	1	
6~10 years							3	1	1			2	3	1		1	5	4	2	
11~14 years							3	2	1		1	3	1		4	2	6	3	1	4
d)																				
up to 5 years	1	1	1	3			3	1	1		1		4	5	2	2	1	8	9	3
6~10 years	1	1	2	3			3	1	1		1	2	6	6	1	2	3	11	10	2

Table 1

Japanese Patent	Machinery					Electronics					Chemistry					Total				
11~14 years	1	1	2	2	1			3		1	1	2	4	5	2	2	3	9	7	4
e)																				
up to 5 years										2					2					4
6~10 years										1			2		2			2		3
11~14 years										1		1	2				1	2		1
f)																				
up to 5 years		1	2		1			2	3		1	5	3	2	6		6	7	5	7
6~10 years		2	2		1			6	2		1	4	4	4	6	1	6	12	6	7
11~14 years		1	2	1			1	4	2		1	4	3	1		1	6	9	4	
g)																				
up to 5 years	1			1						2			2	2	1	1		2	3	3
6~10 years				1						2				3	4				4	6
11~14 years				1						1			1	5				1	6	1
h)																				
up to 5 years																				
6~10 years															1			1		2

Table 1

Japanese Patent	Machinery					Electronics					Chemistry					Total				
11~14 years			1								1			1	1	1		1	1	1
i) up to 5 years										1						1				
6~10 years										1						1				
11~14 years										1						1				
j) up to 5 years					1				2		1	1	2	5	4	1	1	2	7	5
6~10 years		1	2		2				2	2	2	1	1	5	2	2	2	3	7	6
11~14 years		1	1		1				1	2	1	1	2	3	5	1	2	3	4	8
k) up to 5 years			1		1									4			1	1	4	2
6~10 years		1	1						2					2	1		1	1	4	1
11~14 years			1					1	1	1	1	1		1		1	1	2	2	1
m) up to 5 years			1	3	1			1	1					4				2	8	1
6~10 years			1	3	2	1			1					2	1	1		1	6	3

Table 1

Japanese Patent	Machinery					Electronics					Chemistry					Total				
11~14 years			1	2	2	1			1		1	1		1		2	1	1	4	2
n)																				
up to 5 years					1					1										2
6~10 years			1		2					2					3			1		7
11~14 years			3		3				1	4	2	1	3	1	8	2	1	6	2	15
o)																				
up to 5 years															1					1
6~10 years															1					1
11~14 years															1					1
p)																				
up to 5 years											1					1				
6~10 years																				
11~14 years																				

Table 2

Japanese Patent	Machinery					Electronics					Chemistry					Total				
a)																				
up to 4 years	7	3				5	3				16	2		1	1	28	8		1	1
5~8 years	8	3	1			6	2	1	1	2	19	2				33	7	2	1	2
9~12 years	7	3				3	3	1		1	14	3	1	1		24	9	2	1	1
b)																				
up to 4 years	1	5	2		1	4	4				1	7	5	1	1	6	16	7	1	1
5~8years	1	6	1			5	4		2			9	6		1	6	19	7	2	1
9~12 years	1	7		1		5	3	1	2		1	8	1	1		7	18	2	4	
c)																				
up to 4 years							1	1	2			2	3				3	4	2	
5~8 years	1						3	1	2			1	3	1	1	1	4	4	3	1
9~12 years	1						3	1	2			2	2	1	2	1	5	3	3	2
d)																				
up to 4 years	1		1	3				3	1	2	1	2	4	4	3	2	2	8	8	5
5~8 years	1		1	3			1	3		1	1	2	5	4	3	2	3	8	7	4

Table 2

Japanese Patent	Machinery					Electronics					Chemistry					Total				
9~12 years	1		1	2	1		1	3		1	2	1	3	4	2	3	2	7	6	4
e) up to 4 years										2					3					5
5~8 years										1				1	1				1	2
9~12 years										1	1		1			1		1		1
f) up to 4 years		1	4		2			3	1			5	3	3	2		6	10	4	4
5~8 years		2	2	1	2			6	3		1	5	3	6	3	1	7	11	10	5
9~12 years		1	2	2	2		1	5	1	1		5	2	1			7	9	4	2
g) up to 4 years	1			1					1	2			1	2		1		1	4	1
5~8 years				1				1	1	2			1	3	1			2	5	3
9~12 years				1			1		1	1			2	5			1	2	7	1
h) up to 4 years																				
5~8 years					1								1	1				1	1	1

Table 2

Japanese Patent	Machinery					Electronics					Chemistry					Total				
9~12 years			1								1			1		1		1	1	
i) up to 4 years											1		1			1		1		
5~8 years											1		1			1		1		
9~12 years											1		1	2		1		1	2	
j) up to 4 years		1		1	2				1	1	1	2	2	3	5	1	3	2	5	8
5~8 years			2		1					1	2	2	2	3	3	2	2	4	3	5
9~12 years			1						1	1	1	2	1	2	5	1	2	2	3	6
k) up to 4 years				1		1				2	1		2		3	1		3		6
5~8 years				1				1	2	1		2	2	1	4		2	4	3	5
9~12 years				1				1	2	1	1		2		4	1		4	2	5
m) up to 4 years			1	3	1			1	1					4				2	8	1
5~8 years			1	3	2				1					2	1			1	6	3

Table 2

Japanese Patent	Machinery					Electronics					Chemistry					Total				
9~12 years			1	2	2				1					1	1			1	4	3
n) up to 4years					1															1
5~8 years			1		2										3			1		5
9~12 years			3		2					4	2	2	2	1	7	2	2	5	1	13
o) up to 4 years															1					1
5~8 years															1					1
9~12 years															1					1
p) up to 4 years																				
5~8 years																				
9~12 years																				

QUESTIONAIRE CONCERNING "EVALUATION AND MAINTENANCE OF INTELLECTUAL PROPERTY RIGHTS"

Panel Discussion Group of PIPA Committee No. 4

The purpose of this questionaire lies in investigating how the companies in Japan and US evaluate their intellectual property rights when they determine whether to maintain or abandon the rights, and after finding out whether there exists unvague difference in attitudes between the companies in Japan and US, and also difference among the industries, we will try to propose a model manner of evaluating and maintaining intellectual property rights, for each industry maybe, and subject it to criticism in the panel discussion. Exactly the same questionaire is given to all Japanese member companies. The result of the questionaire is disclosed only in a statistical form, and of course only to the member companies.

We will appreciate your cooperation in answering this questionaire and will look to receive your response. (Please answer by writing figures, etc. or by checking in the boxes of your choice. If you'd rather pass over some questions, please do so.)

Q 1 Which of the following industries is your company most engaged in?

(machinery/metal) ☐iron & steel ☐non-iron metals ☐automobile
☐shipbuilding ☐precision machine ☐power machine
☐metal & machine ☐other (　　)

(electric) ☐general electrics & equipment ☐computer
☐communication ☐domestic electrics ☐acoustics
☐instruments ☐cable ☐electronic parts
☐other (　　)

(chemical) ☐general chemistry ☐organic chemistry ☐rubber
☐plastics ☐paints & coating ☐petroleum
☐petrochemical ☐fiber ☐pharmaceutical ☐foods
☐cosmetic ☐other (　　)

(other) ☐ (　　)

Q 2 How many were the Japanese patents and utility model rights you newly obtained during last year?

patent (　　); utility model (　　)

Q 3 How many were the US patents you newly obtained during last year?

patent(　　)

Q 4 How many Japanese patents and utility model rights did you own as of the end of last year and the end of 1987?

end of 1991: patent (　　); utility model (　　)
end of 1987: patent (　　); utility model (　　)

Q 5 How many US patents did you own as of the end of last year and the end of 1987?

end of 1991: patent ( )
end of 1987: patent ( )

Q 6 About how many Japanese patents and utility model rights did you abandon during 1991 and during 1987? (Please do not include the expired patents or expired utility model rights.)

patents abandoned during 1991: ( )
patents abandoned during 1987: ( )

Q 7 About how many US patents did you abandon during 1991 and during 1987? (Please do not include the expired patents.)

patents abandoned during 1991: ( )
patents abandoned during 1987: ( )

Q 8 Please breakdown the Japanese patents you abandoned during 1991 into the following classification.

maintained for 1-3 years before abandonment: ( ) %
maintained for 4-5 years before abandonment: ( ) %
maintained for 6-7 years before abandonment: ( ) %
maintained for 8-9 years before abandonment: ( ) %
maintained for 10-11 years before abandonment: ( ) %
maintained for 12-13 years before abandonment: ( ) %
maintained for 14-15 years before abandonment: ( ) %

Q 9 Please breakdown the Japanese utility model rights you abandoned during 1991 into the following classification.

maintained for 1-3 years before abandonment: ( ) %
maintained for 4-6 years before abandonment: ( ) %
maintained for 7-8 years before abandonment: ( ) %
maintained for 9-10 years before abandonment: ( ) %

Q10 Please breakdown the US patents you abandoned during 1991 into the following classification.

maintained for 4 years before abandonment: ( ) %
maintained for 8 years before abandonment: ( ) %
maintained for 12 years before abandonment: ( ) %

Q11 Do you say, for the past several years, the average number of the years for which your Japanese patents have been maintained has:

☐increased, ☐more or less the same, or ☐decreased.

Q12 Do you say, for the past several years, the average number of the years for which your Japanese utility model rights have been maintained has:

☐increased, ☐more or less the same, or ☐decreased.

Q13 In the past 5 years, do you say your abandonment ratio of Japanese patents and Utility model rights (number of abandoned rights ÷ number of all rights) has:

☐increased, ☐more or less the same, or ☐decreased.

Q14 In the past 5 years, do you say your abandonment ratio of US patents (abandoned patents ÷ all patents) has:

☐increased, ☐more or less the same, or ☐decreased.

Q15 Which section of your company bears the maintenance fee?

☐patent dept. (or headquarters)
☐business dept. (or the dept. to which the inventor(s) belong)
☐both patent dept. and business dept. bear: (pat. dept. about _____%)
☐other ( )

Q16 Do you periodically revisit a registered right and determine whether or not to maintain it?

☐Yes
☐No

If you answered "No", please answer Q17 and proceed to Q23. If you answered "Yes", please proceed to Q18.

Q17 What are reasons that you do not periodically revisit a registered right and determine whether or not to maintain it?

[ ]

Q18 Which section of your company initiates the question of whether or not to maintain a registered right?

☐patent dept. ☐business dept. ☐R & D dept. ☐other ( )

Q19 Which section of your company plays the most significant role in determining whether or not to maintain a right?

☐patent dept. ☐business dept. ☐R & D dept. ☐other ( )

Q20 Which section of your company has the final say as to whether or not to maintain a right?

☐patent dept. ☐business dept. ☐R & D dept. ☐other ( )

Q21 When do you revisit a Japanese patent of yours for determination of whether or not to maintain it? Answer by checking in the boxes which correspond to the nth year from registration when you revisit a patent. (For example if you revisit it every year after the grant, please check in all the boxes.)

nth year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
revisit														

Q22 How about your US patents? Which of the following procedures do you adopt? If the former, please fill in the brackets.

☐We do not revisit patents until ( )th year from registration, and thereafter each time the due date for maintenance fee approaches.

☐We revisit patents each time the due date for maintenance fee approaches.

Q23 When you determine whether or not to maintain a patent, do you take any other circumstances into consideration which are not listed below? If so please write them in (o) through (t).

(/) We practice it. (/) Other(s) practice it. (licensed or otherwise), (a) We may practice it. (b) Other(s) may practice it. (c) large scale business (d) To hold back others. (e) strong validity (f) You don't practice it but there's licensing opportunity. (g)The patent is such that it is easy to determine infringement. (h) long remaining life (i) easiness in industrialization (j) technology is not obsolete (k) no alternative technology (m) technical effect (cost reduction) (n) next maintenance fee is higher.

other circumstances: [(o)_____, (p)_____, (q)_____, (r)_____, (s)_____, (t)_____]

Q24 Selecting five most important circumstances from (a) through (t) in Q23, please write the five in the order of importance from left to right in the following tables. (Note that the first two circumstances are excepted, for their importance is too obvious.) The first table is for Japanese patents. Please answer in three cases: those patents which have been maintained for five years or shorter, those maintained for 6 to 10 years, and those maintained for 11 to 14 years. The second table is for US patents and also please answer in three cases: those US patents which have been maintained for 4 years or shorter, those maintained for 5 to 8 ;years, and those maintained for 9 to 10

years.

	Japanese patents				
5 years or younger					
6 - 10 years old					
11 - 14 years old					

	US patents				
4 years or younger					
5 - 8 years old					
9 - 12 years old					

Q25 Do you conduct investigation to find out whether your patent is infringed as a part of your ordinary operation?

- ☐ Yes. We conduct it for all of our patents.
- ☐ Yes. We conduct it for about ( ) % of our patents.
- ☐ No.

Q26 Is there a section in your company which conducts investigation to find out whether your patent is infringed?

- ☐ Yes, there is a section (person) whose main occupation is to do so.
- ☐ Yes, there is a section (person) who does it as a side line.
- ☐ No.

Q27 Do you think the investigation to find out whether your patent is infringed should be,

if it is conducted by your company,
- ☐ further intensified.
- ☐ maintained as it is.
- ☐ mitigated.

if it is not conducted by your company,
- ☐ started.
- ☐ not started.

N – 2 – U

PIPA Database Coversheet

(1) Title: Corporate Policy Statement-Alternative Dispute Resolution

(2) Date: September 9, 1992

(3) Source:
1) Source: PIPA
2) Group: American
3) Committee: 4

(4) Submitter J. Wesley Blumenshine, Caterpillar Inc.

(5) Author: Center For Public Resources, Inc.

(6) Keywords(s): Alternative Dispute Resolution, Arbitration, Mediation

(7) Abstract: The Center For Public Resources, Inc. has developed a Policy Statement to be signed and submitted by companies wherein that company agrees to explore alternatives to litigation prior to filing suit with other companies who have signed the statement.

Corporate Policy Statement
Alternative Dispute Resolution

2

_____
COMPANY

We recognize that for many business disputes there is a less expensive, more effective method of resolution than the traditional lawsuit. Alternative dispute resolution (ADR) procedures involve collaborative techniques which can often spare businesses the high cost and wear and tear of litigation.

In recognition of the foregoing, we subscribe to the following statement of principle on behalf of our company and its domestic subsidiaries.* In the event of a business dispute between our company and another company which has made or will then make a similar statement, we are prepared to explore with that other party resolution of the dispute through negotiation or ADR techniques before pursuing full-scale litigation. If either party believes that the dispute is not suitable for ADR techniques, or if such techniques do not produce results satisfactory to the disputants, either party may proceed with litigation.

_____
Chief Executive Officer

_____
Chief Legal Officer

_____
Date

*Our major domestic operating subsidiaries are:

_____

_____

_____

Note

The above policy statement was proposed by the Center for Public Resources (CPR). A signed copy of your statement should be sent to CPR at 680 Fifth Avenue, New York, New York 10019. CPR maintains a registry of companies which have subscribed to the ADR policy statement. Members of the CPR Judicial Panel are available to assist corporations and their counsel in the resolution of disputes through ADR techniques.

CPR LEGAL PROGRAM
TO DEVELOP ALTERNATIVES TO LITIGATION

TO: CEOs and GENERAL COUNSEL

FROM: JAMES F. HENRY
PRESIDENT

RE: **WHY A CORPORATE POLICY STATEMENT ON ALTERNATIVES TO LITIGATION?**

"Too much . . . and too expensive."

That is the consensus about litigation in the business community. Even when lawsuits are settled out of court, which happens over 90% of the time, settlement usually occurs only as the trial date approaches and after most of the costs have been incurred. And all too often, the settlement is based strictly on the dispute's perceived monetary value without adequate investigation of mutually advantageous business solutions.

The purpose of the **Corporate Policy Statement on Alternatives to Litigation** is to encourage the early resolution of business disputes with creative, businesslike settlements achieved through negotiation or alternative dispute resolution (ADR) procedures. Once a dispute has erupted, emotions are at a high pitch and parties quickly assume an adversary stance. Each is likely to be concerned that suggesting private resolution will be viewed by the other as a sign of weakness. This danger is minimized when parties have adopted a corporate policy calling for exploration of ADR options before resorting to full-scale litigation in disputes with other companies subscribing to the same policy.

The Policy Statement helps subscribers get over the most important strategic hurdle to quick settlement: it lets them make the first move. Negotiations can begin early, before litigation takes on a life of its own.

That is the essence of the Policy Statement. Those who adopt it can choose from the full spectrum of ADR techniques. These include, but are not limited to, the minitrial, mediation and neutral fact finding—each has proven its value in helping executives and counsel arrive at economical, expeditious, mutually acceptable results.

Both the nonbinding minitrial and mediation have been used successfully to resolve complex multimillion dollar disputes involving, for example, commercial contracts, patents, construction contracts, joint ventures and transnational issues. Most mediations and minitrials have resulted in prompt settlements and dramatic reductions in legal costs and delay. Borden, Control Data, Eaton, Gillette, ITT, Motorola, Shell Oil, Standard Oil of Indiana, Texaco, TRW, Union Carbide and Wisconsin Electric are just some of the companies reporting economical, satisfying results with these ADR procedures.

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CENTER FOR PUBLIC RESOURCES, INC.
366 Madison Avenue New York, NY 10017-3122 Tel (212) 949 6490 Fax (212) 949 8859

It should be noted:

- **The Policy Statement is not a binding commitment to engage in negotiations or ADR,** but is an expression of corporate policy. Subscribers undertake to act in good faith and to genuinely consider ADR. The Policy Statement is not intended, however, to create legally enforceable rights.

- **The Policy Statement does not preclude a subscriber from taking those preliminary actions advisable to protect its access to the courts**—for example, filing a complaint for statute of limitations or venue purposes. Even when such actions have been taken, negotiation or ADR techniques can still be used.

- **Vigorous advocacy** is compatible with negotiation and ADR.

- **Not every dispute is suitable for resolution through ADR techniques.** If either party concludes that ADR would be inappropriate in a particular case—for example, if judicial determination of a critical legal issue is deemed essential—that party is not bound to explore ADR.

- **The Policy Statement raises the consciousness of executives and counsel regarding the use of ADR** and encourages the systematic review of business disputes for their ADR potential.

- **Subscribers may choose to modify the wording of the Policy Statement** in ways which do not change its spirit or intent.

Even if ADR does not lead directly to a resolution, the effort increases chances of later settlement by establishing a channel of communications between parties and by giving each a better understanding of the other's position.

The Policy Statement is actively supported by The Business Roundtable, the National Association of Manufacturers, the American Corporate Counsel Association and leading industrial organizations. It already has been signed on behalf of over 500 companies including most of our largest corporations—a broad cross section of American business that accounts for about one half in the aggregate of the gross national product. Companies are not just signing the Policy Statement; they are using it to resolve significant disputes swiftly, privately, and with dramatic cost savings. Efforts to avoid litigation, such as the ADR Policy Statement, are in the public interest and should reflect favorably on companies making such attempts.

The CPR Legal Program develops alternatives to the high costs of litigation confronting business and public institutions. Its members number over 400 general counsel from major corporations, partners of leading law firms and prominent scholars. With the active involvement of these members, CPR is the leading proponent nationally of alternative dispute resolution—ADR. Members of CPR's distinguished ADR Panels of neutrals are available to help corporations and their counsel resolve disputes through ADR.

CPR LEGAL PROGRAM

TO DEVELOP ALTERNATIVES TO LITIGATION

Registry of Subscribers
CPR Corporate Policy Statement on Alternatives to Litigation

Listed below are companies that have signed the ***CPR Corporate Policy Statement on Alternatives to Litigation.*** The Statement obliges subscribing companies to seriously explore negotiation or alternative dispute resolution (ADR) in cases with other signatories before pursuing full-scale litigation.

June 1992

A. B. DICK COMPANY
Videojet Systems International, Inc.

ABBOTT LABORATORIES

ACE HARDWARE CORPORATION
ACE Insurance Agency, Inc.
AHC Realty Corporation

ACHESON INDUSTRIES, INC.
Acheson Colloids

ACME STEEL COMPANY
Alpha Tube Corporation
Universal Tool & Stamping Company, Inc.

ADOLPH COORS COMPANY
Coors Porcelain Company
Coors BioTech, Inc.
Coors Distributing Company
Coors Energy Company
Coors Transportation Company
Golden Aluminum Company
Graphic Packaging Corporation

ADVANCED MICRO DEVICES, INC.

AETNA LIFE & CASUALTY COMPANY
Aetna Life Insurance Company
The Aetna Casualty and Surety Company
The Standard Fire Insurance Company
The Automobile Insurance Company of Hartford, CT
American Re-Insurance Company
Aetna Life Insurance and Annuity Company
Federated Investors, Inc.

AG PROCESSING, INC.
AGP Grain Company

AG-TRONIC CORPORATION, INC.
Ag-Tronic, Inc.

AGA GAS, INC.

AGRI-MARK, INC.

AGWAY, INC.
Agway Petroleum Corporation
Telemark Inc.
Agway Insurance Company

AID ASSOCIATION FOR LUTHERANS

AIR PRODUCTS & CHEMICALS, INC.

AIRBORNE FREIGHT CORPORATION
Airborne Express
Acme Frame Products

ALBERT M. HIGLEY COMPANY

ALCAN ALUMINUM CORPORATION

ALCOA

ALEXANDER & ALEXANDER SERVICES, INC.

ALEXANDER & BALDWIN, INC.
A&B Hawaii, Inc.
Matson Navigation Company, Inc.
A&B Properties, Inc.
McBryde Sugar Company, Ltd.
WDIC, Inc.

THE ALLEN GROUP, INC.
Allen Group Electronics Puerto Rico, Inc.
The Allen Group Canada Limited
The Allen Group Leasing Corp.

ALLEN-BRADLEY COMPANY

Note on alphabetizing: Generally parent companies with two names are listed by first name (*e.g.* Guy F. Atkinson is alphabetized by G); companies with initials are listed by last name (*e.g.* J.C. Penney is alphabetized by P). Subsidiaries are listed in the order furnished by the parent company.

CENTER FOR PUBLIC RESOURCES, INC.
366 Madison Avenue New York, NY 10017-3122 Tel (212) 949 6490 Fax (212) 949 8859

ALLIED SIGNAL INC.

ALLIED STORES CORPORATION
Jordan Marsh
Maas Brothers
Stern's
The Bon

AMERICAN CYANAMID COMPANY
Brewster Phosphates
CYRO Industries
Glendale Optical Company, Inc.
Jacqueline Cochran, Inc.
Shulton, Inc.

AMERICAN EXPRESS COMPANY

AMERICAN FINANCIAL CORPORATION
Great American Insurance Company and subsidiaries
United Brands Company and subsidiaries
The Charter Company and subsidiaries
Great American Broadcasting Company and subsidiaries

AMERICAN FAMILY MUTUAL INSURANCE COMPAY
American Family Brokerage, Inc.
American Family Financial Services, Inc.
American Family Life Insurance Company

AMERICAN GREETINGS CORPORATION
Those Characters from Cleveland
Carlton Cards, Inc.
AG Industries, Inc.
Plus Mark, Inc.

AMERICAN INTERNATIONAL GROUP, INC.
AICCO
A.I. Global, Inc.
AIG Aviation, Inc.
AIG Capital Corporation
AIG Financial Products Corporation
AIG Funding, Inc.
AIG Global Investors, Inc.
AIG Life Insurance Company
AIG Marketing, Inc.
AIG Overseas Finance, Inc.
AIG Realty, Inc.
American International Realty Corp
Eastgreen, Inc.
AIG Risk Management, Inc.
AIU Insurance Company
American International Healthcare, Inc.
American International Underwriters Corporation
American Home Assurance Company
AIG Hawaii Insurance Company, Inc.
American International Insurance Company
American International Adjustment Company, Inc.
American International Group Data Center, Inc.
American International Life Assurance Co. of NY
American International Reinsurance Company Ltd.
AIA (American International Assurance Co. Ltd.)
Australian American Assurance Company Ltd.
American International Assurance Company Bermuda
Nan Shan Life Insurance Company, Ltd.
American International Life Insurance Co. Puerto Rico
AIUO (American International Underwriters Overseas)
American International Insurance Co. of Ireland
Universal Insurance Co., Ltd.
Interamericana Compania de Seguros Gerais (Brazil)
La Seguridad de Centroamerica
Compania de Seguros, Sociedad Anonima
American International Insurance Co. of Puerto Rico
La Interamerica Compania de seguros Generales S.A.
America International Underwriters G.m.b.H.
Underwriters Adjustment Company, Inc.
American Life Insurance Company
Kenya American Insurance Company Ltd.
ALICO
Delaware American Life Insurance Company
Le Metropolitana de Seguros, C.por A.
National Union Lebensversicherungs
Birmingham Fire Insurance Compnay of Pennsylvania
China American Insurance Company, Ltd.
China American International Insurance Co., Ltd.
Commerce and Industry Insurance Company
Commerce and Industry Insurance Company of Canada
Hawaii Insurance Consultants, Ltd.
Insurance Company of the State of Pennsylvania
Landmark Insurance Company
Mt. Mansfield Company, Inc.
National Union Fire Insurance Company of Pittsburgh
American International Surplus Lines Insurance Co.
Lexington Insurance Company
Japan International Accident & Fire Insurance Co. Ltd.
National Union Fire Insurance Company of Louisiana
NHIG Holding Corp.
Audubon Insurance Company
Audubon Indemnity Company
Agency Management Corporation
The Gulf Agency, Inc.
New Hampshire Insurance Company
A.I. Network Corporation
Marketpac International, Inc.
American Fidelity Company
American Global Insurance Company
American International Oil & Gas Corporation
Granite State Insurance Company
New Hampshire Indemnity Company, Inc.
Illinois National Insurance Co.
New Hampshire Insurance Services, Inc.
UNAT, S.A.
PHILAM (Philippine American Life Insurance Co.)
Pacific Union Assurance Company
Philippine American General Insurance Company, Inc.
Philippine American Assurance Company, Inc.
Philippine American Accident Insurance Company, Inc.
Philippine American Management and Financing Co., Inc.
International Lease Finance Corporation
AIG Trading Corporation
Transatlantic Holdings, Inc.
Rick Specialist Companies, Inc.
Ticino Societa d' Assicurazioni Sulla Vita
Ueberseebank, A.G.
UGC (United Guranty Corporation)
United Guaranty Residential Insurance Co. of N. C.
United Guaranty Residential Insurance Company
United Guaranty Commercial Insurance Co. of N. C.
United Guaranty Commercial Insurance Company
United Guaranty Credit Insurance Company
United Guaranty Services, Inc.

AMERICAN NATIONAL CAN COMPANY

AMERICAN PETROFINA, INC.
Fina Oil and Chemical Company

AMERICAN STERILIZER COMPANY

AMERICAN TELEPHONE & TELEGRAPH

AMOCO CORPORATION
Amoco Chemical Company
Amoco Oil Company
Amoco Production Company

AMR CORPORATION
American Airlines, Inc.
AMR Services, Inc.
AMR Information Services, Inc.
AMR Eagle, Inc.

AMSTED INDUSTRIES, INC.
Baltimore Aircoil Company, Inc.
BAC-Pritchard, Inc.

ANADARKO PETROLEUM CORPORATION

ANALOG DEVICES INC.

ANGELICA CORPORATION
Angelica Healthcare Services Group, Inc.
Angelica Uniform Group
Life Uniform & Shoe Shops

ANHEUSER-BUSCH COMPANIES, INC.
Anheuser-Busch, Inc.
Anheuser-Busch International, Inc.
Busch Agricultural Resources, Inc.
Busch Creative Services Corporation
Busch Entertainment Corporation
Busch Properties, Inc.
Busch Industrial Products Corporation
Campbell Taggart, Inc.
Civic Center Corporation
Container Recovery Corporation
Eagle Snacks, Inc.
Manufacturers Railway Co.
Metal Container Corporation
St. Louis Refrigerator Car Company

APPLE COMPUTER, INC.

ARBITRATION MEDIATION INTERNATIONAL, INC.

ARISTECH CHEMICAL CORPORATION

ARKANSAS BEST CORPORATION
ABF Freight System, Inc.
ABC-Treadco, Inc.

ARVIN INDUSTRIES INC.
Maremont Corporation
Calspan Corporation
Systems Research Laboratories, Inc.
Schrader Automotive, Inc.
Roll Coater, Inc.

ASARCO, INC.
American Limestone Company
Asarco Oil and Gas Company, Inc.
Capco Pipe Company, Inc.
Enthone, Incorporated
Federated Metals Corporation
The International Metal Company
Lone Star Lead Construction Corp.
Midland Coal Company
Watauga Stone Company

ATLANTIC RICHFIELD COMPANY

ATOCHEM NORTH AMERICA CORPORATION

AVERY INTERNATIONAL CORPORATION

AVON PRODUCTS, INC.
Giorgio Beverly Hills, Inc.
Retirement Inns of America, Inc.
The Mediplex Group, Inc.
Parfums Stern Inc.

BANCAL TRI-STATE CORPORATION
Bank of California

BANCORP HAWAII, INC.
Bank of Hawaii
First Federal Savings & Loan Assoc. of Amer.
First National Bank of Arizona
Hawaiian Trust Company
Bancorp Finance of Hawaii-Guam

BANKAMERICA CORPORATION

BANKERS TRUST NY CORPORATION
Bankers Trust Company

BASSETT FURNITURE INDUSTRIES, INC.
Bassett Furniture Industries of NC, Inc.
The E.B. Malone Corporation
Impact Furniture, Inc.

BAXTER INTERNATIONAL, INC.
Travenol Laboratories, Inc.
American Hospital Supply Corporation
Baxter Travenol World Trade

BECHTEL GROUP, INC.

BELL ATLANTIC CORPORATION
The Chesapeake & Potomac Telephone Companies
New Jersey Bell Telephone Company
Bell of Pennsylvania/Diamond State
Telephone Companies
Bell Atlantic Enterprises

BELLSOUTH CORPORATION
BellSouth Enterprises, Inc.
Bell South Services Inc.
South Central Bell Telephone Company
Southern Bell Telephone & Telegraph Co.

BEMIS COMPANY, INC.
Curwood, Inc.
Hayssen Manufacturing Company
Milprint, Inc.
Morgan Adhesives Company (MACtac)

BERNARD JOHNSON, INC.

BEST PRODUCTS COMPANY, INC.

BETHLEHEM STEEL CORPORATION

BETZ LABORATORIES, INC.
Betz PaperChem, Inc.

Betz Process Chemicals, Inc.
Betz Energy Chemicals, Inc.
BL Chemicals, Inc.
Betz Entec, Inc.
Betz Europe, Inc.
Betz International, Inc.

BEVERAGE MANAGEMENT INC.

BINDLEY WESTERN INDUSTRIES, INC.
BW Food Distributors, Inc.
BW Transportation Services, Inc.
Special Services Company

BIRD, INC.
Bird Environmental Systems & Services, Inc.

BLACK & DECKER CORPORATION
Black & Decker (U.S.), Inc.

E. E. BLACK LTD.
Black Construction Corporation

BLOCK DRUG COMPANY, INC.
Block Drug Corporation
Dentco, Inc.
Reed & Carnrick Pharmaceuticals
Reedco, Inc.
Stafford-Miller International, Inc.

BLOUNT, INC.
Blount International, Ltd.
Blount Energy Resource Corp.

BLUE BELL, INC.

BOEHRINGER MANNHEIM CORPORATION

BOEING COMPANY

BOISE CASCADE CORPORATION

BORDEN, INC.

BOURNS, INC.
Bourns Instruments, Inc.
Bourns Sensors/Controls Inc.
Bourns Networks, Inc.
Precision Monolithics, Inc.
Wendover Investments, Inc.

BOWATER, INC.

BRIGGS & STRATTON CORPORATION

BRISTOL-MYERS SQUIBB COMPANY
Clairol Incorporated
The Drackett Company
Mead Johnson & Company
Monarch Crown Corporation
Squibb Corporation
Westwood Phamaceuticals, Inc.
Zimmer, USA

BROOKLYN UNION GAS COMPANY
Advanced Energy Options, Inc.
Fuel Resources, Inc.
Gas Energy, Inc.

BROWN-FORMAN CORPORATION
Lenox, Inc.
Hartman Luggage Company
Jack Daniels Distillery, Inc.
Crouch & Fitzgerald
Athalon, Inc.

BROWN & ROOT, INC.

BROWNING-FERRIS INDUSTRIES, INC.
Cecos International, Inc.

BRUNSWICK CORPORATION
Brunswick Marine Group
Brunswick Marine Power
U.S. Marine
Sea Ray Boats
Brunswick Bowling & Billiards Corp.
Leiserv, Inc.
Vapor Corp.

BRUSH WELLMAN, INC.
Williams Gold Refining Company
Technical Materials, Inc.
Bucyrus Blades, Inc.

BUDD COMPANY
Milford Fabricating Company
Waupaca Foundry, Inc.
Connelly Skis, Inc.

BULOVA CORPORATION

BURLINGTON INDUSTRIES, INC.

BURLINGTON MOTOR CARRIERS INC.

BURLINGTON RESOURCES, INC.

BUTLER MANUFACTURING COMPANY
Bucon, Inc.
Naturalite/EPI, Inc.

CABOT CORPORATION

CALIFORNIA AND HAWAIIAN SUGAR COMPANY
Hawaiian Sugar Transportation Company

CAMCO INTERNATIONAL INC.
Lawrence Technologies
NOWCAM Services
Reda
Reed Tool Company
Safety Technology & Oilfield Protectors

CAMERON MUTUAL INSURANCE COMPANY

CANADIAN MARCONI COMPANY
Cincinnati Electronics Corporation
CMC Electronics, Inc.

CAPITAL HOLDING CORPORATION
Commonwealth Life Insurance Company
Peoples Security Life Insurance Company
Public Savings Life Insurance Company
National Liberty Corporation
ACI Financial Corporation
Worldwide Underwriters Insurance Company

Capital Initiatives Corporation
First Deposit Corporation

CARDINAL AMERICAN CORPORATION
Production Experts, Inc.
Butler Products, Inc.

CARNATION COMPANY

CAROLINA FREIGHT CORPORATION
Carolina Freight Carriers Corporation
G.I. Trucking Company, Inc.
Red Arrow Freight Lines, Inc.
Cardinal Freight Carriers, Inc.
Carrier Computer Services, Inc.

CAROLINA POWER & LIGHT COMPANY

CARPENTER TECHNOLOGY CORPORATION

CARTER HAWLEY HALE STORES, INC.
Thalhimes Brothers, Inc.

CASCHEM, INC.

CATERPILLAR, INC.
Caterpillar Industrial, Inc.
Solar Turbines, Inc.
Caterpillar Financial Services Corporation

CDI CORP
CDI Corporation
CDI Marine Company
CDI Temporary Services, Inc.
CDI Transportation Group, Inc.
CompData Services Corporation
Management Recruiters International, Inc.
Midwest Technical, Inc.
Modern Engineering Service Co.
Stubbs Overbeck & Associates, Inc.

CECO INDUSTRIES, INC.
The Ceco Corporation

CENTEL CORPORATION
Central Telephone Company
  Central Telephone Co. of Florida
  Central Telephone Co. of Illinois
  Central Telephone Co. of Virginia
Central Telephone Company of Ohio
Centel-Texas, Inc.
  Central Telephone Co. of Texas
  Telcon, Inc.
Centel Capital Corporation
Centel Cellular Co. of Alabama
Centel Cellular Company
  Centel Cellular Co. of Laredo
  Centel Cellular Co. of Petersburg
  Centel Cellular Co. of Sioux City
  Centel Cellular Co. of Greensboro
  Centel Cellular Co. of Charlottesville
  Centel Cellular Co. of Florida
  Centel Cellular Co. of Hickory
  Centel Cellular Co. of Iowa
  Centel Cellular Co. of Peoria
  Centel Cellular Co. of South Carolina
  Centel Cellular Co. of Virginia
    Centel Cellular Co. of Lynchburg
L.J. Systems Corp.
TeleSpectrum Inc.
  Empire Cellular, Inc.
  Telespectrum of Virginia, Inc.
  UTS Paging Company
Virginia Metronet, Inc.
  Richmond Cellular Telephone Co.
Centel Communications Company
  Centel Financial Systems, Inc.
  Centel Microwave Services, Inc.
  Telecommunications Service Bureau, Inc.
  Centel Facilities Communications
Centel Communications Systems, Inc.
Centel Credit Company
Centel Directory Company
Centel Federal Systems, Inc.
  Centel Federal Services Corp.
Centel Information Systems, Inc.
Centel Network Communications, Inc.
Centel Operator Services, Inc.
Centel Supply Company
Centel Videopath, Inc.

CENTRAL BANCSHARES OF THE SOUTH, INC.
Central Bancshares of the South, Inc.
Central Bank N.A.
Compass Bancshares, Inc.
Compass Bank-Houston
Compass Bank

CENTRAL LIFE ASSURANCE COMPANY
Midland Financial Savings, FSB
Park Leasing Company
Iowa Realty

CENTRAL VERMONT PUBLIC SERVICE CORPORATION
Connecticut Valley Electric Company, Inc.

CERTAINTEED CORPORATION

CETUS CORPORATION

CHASE MANHATTAN CORPORATION

CHEMICAL BANKING CORPORATION
Chemical Bank
Texas Commerce Bancshares, Inc.

CHEVRON CORPORATION
Chevron U.S.A. Inc.
Chevron Chemical Company
Chevron Research Company
Chevron Resources Company
Chevron Land and Development Company
Chevron Shipping Company
Chevron Pipeline Company
Chevron International Oil Company
Chevron Overseas Petroleum Inc.
Huntington Beach Company

CHICAGO PNEUMATIC TOOL COMPANY

CHRYSLER CORPORATION

CHUBB & SON INC.
Federal Insurance Company
Vigilant Insurance Company

Pacific Indemnity Company
Great Northern Insurance Company

CIGNA CORPORATION

CINCINNATI FINANCIAL CORPORATION
Cinti Casualty Company
Cinti Life Insurance Company
CFC Investment Corporation

CINCINNATI MILACRON INC.
Cincinnati Milacron Marketing Company
Sano Inc.
International Laser Machines Inc.
LK Tool USA Inc.
Chesapeake Laser Systems Inc.

CITISTEEL USA, INC.

CITIZENS SECURITY GROUP, INC.
Citizens Security Mutual Insurance Company
Citizens Fund Insurance Company

CITY FEDERAL SAVINGS BANK
City Consumer Services, Inc.
Cityfed Mortgage Company
CityFed Equivest, Inc.
City Insurance Services, Inc.
City Trust Services, N.A.

CLARCOR
Baldwin Filters
J. L. Clark

CLAYTON CORPORATION
Convenience Products, Inc.

CLEVELAND-CLIFFS INC.
The Cleveland-Cliffs Iron Company
Picklands Mather & Co.

CLEVELAND CLINIC FOUNDATION

CLOROX COMPANY
The Household Products Company
The Kingsford Products Company
Food Service Products Company
Deer Park Spring Water, Inc.
The HVR Company
Prince Castle, Inc.

CMS ENERGY CORPORATION
NOMECO
Consumers Power Company
CMS Generation Company

COASTAL LUMBER COMPANY
Coastal Lumber International
Coastal Lumber Company of Mississippi

COATS & CLARK INC.
Dynacast Inc.
Susan Bates, Inc.

COCA-COLA COMPANY

COLGATE-PALMOLIVE COMPANY
Hill's Pet Products, Inc.
Princess House, Inc.

COLLINS INDUSTRIES
Capacity of Texas, Inc.
Collins Bus Corporation
Collins Ambulance Corporation
Mobile Tech Corporation
Wheeled Coach Industries, Inc.
World Trans, Inc.

COLUMBIA GAS SYSTEM, INC.
Columbia Gas System Service Corporation
Columbia Gas Transmission Corporation
Columbia Gas of Ohio, Inc.
Columbia Gas Development Corporation
Columbia Gulf Transmission Company

COLUMBIA NITROGEN CORPORATION/NIPRO, INC.

COMMONWEALTH EDISON COMPANY
Commonwealth Edison Company of Indiana, Inc.
Commonwealth Research Corporation
Concomber, Ltd.
Cotter Corporation
Edison Development Canada, Inc.
Edison Development Company

COMMUNICATIONS EQUITY ASSOCIATES, INC.

COMDISCO INC.
Comdisco Disaster Recovery Services
Comdisco Resources, Inc.
Comdisco Data Services, Inc.

CONSOLIDATED NATURAL GAS COMPANY
The Peoples Natural Gas Company
Hope Gas, Inc.
Consolidated Gas Transmission Corporation
CNG Producing Company
CNG Development Company
Consolidated Natural Gas Service Company

CONSTAR INTERNATIONAL, INC.
Sewell Plastics, Inc.

CONTINENTAL BANK CORPORATION
Continental Bank, N.A.

CONTINENTAL CORPORATION
Accord Holding, Inc.
AFCO Acceptance Corporation
AFCO Service Inc.
AFCO Agent Service Corporation
AFCO Credit Corporation
All American Marine Slip
Bayside Management Company, Inc.
Bayside Reinsurance Company Limited
Boston Old Colony Insurance Company
The Buckeye Union Insurance Company
Casualty Insurance Company
Commercial Insurance Company of Newark, N.J.
Continental Asset Management Corp.
Continental Guaranty & Credit Corporation
The Continental Insurance Company
The Continental Insurance Company of New Jersey
Continental Lloyd's Insurance Company
Continental Re Management Inc.
Continental Rehabilitation Resources, Inc.

Continental Reinsurance Corporation
The CPI Group Incorporated
CPI Pension Services, Inc.
Ctek, Inc.
The Fidelity and Casualty Company of New York
Firemen's Insurance Company of Newark, New Jersey
First Benefit Insurance Producers, Inc.
First Benefit Services, Inc.
First Commercial Life Insurance Company
First Fire and Casualty Insurance of Hawaii, Inc.
First Indemnity Insurance of Hawaii, Inc.
First Insurance Company of Hawaii, Ltd.
The Glens Falls Insurance Company
Harbor Insurance Company
Hull and Cargo Surveyors, Inc.
Insurnet, Incorporated
International Central Bank and Trust Corporation
Kansas City Fire and Marine Insurance Company
The Maiden Lane Syndicate Inc.
Marine Office of America Corporation
The Mayflower Insurance Company, Ltd.
National-Ben Franklin Insurance Company of Illinois
Niagara Fire Insurance Company
Pacific Insurance Company
Puerto Rican-American Insurance Company
Security National Life Insurance Company
Settlement Options, Inc.
The South Place Syndicate Inc.
TCC Acquisition Corp.
TCC Properties, Inc.
UAC Rehabilitation International, Inc.
Underwriters Adjusting Company
United States P.&I. Agency, Inc.
Workers Compensation and Indemnity Company of California

CONTROL DATA CORPORATION

CONWOOD COMPANY LP

COOPER INDUSTRIES, INC.

COOPER TIRE & RUBBER COMPANY

COPPERWELD CORPORATION
Copperweld Steel Company
Copperweld Bimetallics Products Company
Copperweld Tubing Products Company

CROMPTON & KNOWLES CORPORATION
HES, Inc.
Ingredient Technology Corporation
Orlex Chemicals Corporation

CROSS & TRECKER CORPORATION
Cross Company
Kearney Trecker Corp.
Warner & Swasey Company
Tychoway Bearings Company
Roberts Corporation
Alliance Systems Corporation

CROWN CENTRAL PETROLEUM CORPORATION
Fast Fare, Inc.

CTS CORPORATION

DAN RIVER INC.- CHEMICAL PRODUCTS DIVISION

DANA CORPORATION

DAY INTERNATIONAL CORPORATION
Allen Industries, Inc.
Beneplan Strategies
L.E. Carpenter & Company
Colonial Rubber Works, Inc.
Faulkner Plastics, Inc.

DAYTON HUDSON CORPORATION
Dayton Hudson Deparment Store Company
Lechmere
Mervyns
Target

DEERE & COMPANY
John Deere Company
John Deere Credit
John Deere Industrial Equipment Company
John Deere Insurance Company
John Deere Life Insurance Company
John Deere Power Products
John Deere Technologies, International
Funk Manufacturing Company
Heritage National Healthplan

DEGUSSA CORPORATION
Metz Metallurgical Corp.
Degussa Carbon Black Corp.
Nilok Chemicals, Inc.

DEKALB ENERGY COMPANY

DEKALB GENETICS CORPORATION
DEKALB-Pfizer Genetics, Inc.
DEKALB Swine Breeders, Inc.
DEKALB Poultry Research, Inc.

DEL WEBB CORPORATION
Del Webb California Corp.
Del Webb Communities, Inc.
Sun City Las Vegas
Sun City Tucson

DELTA AIR LINES INC.

DELUXE CORPORATION
Deluxe Data Systems, Inc.
Current, Inc.
Colwell Systems, Inc.

DENNIS CHEMICAL COMPANY
Diversified Compounders

DENNISON MANUFACTURING COMPANY
Dennison Computer Supplies, Inc.
Dennison Monarch Systems, Inc.
Dennison National Company, Inc.
Dunn Paper Company

DENTSPLY INTERNATIONAL INC.

DETROIT EDISON COMPANY
SYNDECO, Inc.

THE DIAL CORP
The Dial Corporation
Purex Corporation

Verex Corporation
Greyhound Financial Corporation
Greyhound Lines of Canada, Ltd.
Motor Coach Industries, Inc.
Transportation Manufacturing Company
Consultants & Designers, Inc.
Travelers Express Company, Inc.
Restaura, Inc.
Glacier Park, Inc.

DIAMOND SHAMROCK, INC.
Autotronic Systems, Inc.
Diamond Shamrock Refining and Marketing Co.
Diamond Shamrock Stations, Inc.
Industrial Lubricants Co.
North American InTeleCom, Inc.
Petro/Chem Environmental Services, Inc.
Sigmor Corporation

DIANA CORPORATION
Entree Corporation
Farm House Foods Corporation
Retailing Corporation of America
Atlanta Provision Company, Inc.
Pill & Puff: Wil-Car Enterprises
Economy Dry Goods
Convenient Food Mart

DIEBOLD, INC.
Diebold Credit Corporation
Diebold Finance Company

DIGITAL EQUIPMENT CORPORATION

R. R. DONNELLEY & SONS

DOVER CORPORATION
Dover Elevator International
Dover Diversified
Dover Industries
Dover Resources
Dover Technologies

DOWELANCO
United AgriSeeds, Inc.

DR PEPPER/SEVEN-UP COMPANIES, INC.
•Premier Beverages, Inc.

DUKE POWER COMPANY
Crescent Land & Timber Corporation
Mill Power Supply Company

E. I. DUPONT DE NEMOURS & COMPANY
Conoco Inc.
Consolidated Coal Company
Remington Arms Company

EAGLE-PICHER INDUSTRIES, INC.

EAST OHIO GAS COMPANY

EATON CORPORATION
Eaton-Kenway, Inc.

EBCO MANUFACTURING COMPANY

ECHLIN INC.
Ace Electric Company, Inc.
Automotive Controls Corp.
Beck/Arnley Worldparts Corp.
BWD Automotive Corporation
Midland Brake, Inc.
Brake Parts, Inc.

EG&G, INC.
EG&G Astrophysics Research Corporation
EG&G Automotive Research, Inc.
EG&G Canada, Ltd.
EG&G Chandler Engineering Company
EG&G Energy Measurements, Inc.
EG&G Flow Technology
EG&G Florida, Inc.
EG&G Gamma Scientific, Inc.
EG&G GmbH
EG&G Idaho, Inc.
EG&G Instruments, Inc.
EG&G InterTech, Inc.
EG&G Ireland, Ltd.
EG&G Japan, Inc.
EG&G Judson Infrared, Inc.
EG&G KT Aerofab, Inc.
EG&G Mound Applied Technologies, Inc.
EG&G Ocean Products, Inc.
EG&G Pressure Science, Inc.
EG&G Power Systems, Inc.
EG&G, S.A.
EG&G Sealol, Inc.
EG&G, Ltd.
EG&G, SpA
EG&G Structural Kinematics, Inc.
EG&G Services, Inc.
EG&G Special Projects, Inc.
EG&G Ventures, Inc.
EG&G Washington Analytical Services Center, Inc.
Crosby Drive Investments, Inc.
Frank Hill Associates, Inc.
GeoMetrics, Inc.
Pressure Science U.K., Ltd.
Reticon Corporation
Reynolds Electrical & Engineering Co., Inc.
Torque Systems, Inc.
Vactec, Inc.
Wakefield Engineering, Inc.
Wright Components, Inc.

ELCOR CORPORATION
Elk Corporation of America
Elk Corporation of Alabama
Elk Corporation of Arkansas
Elk Corporation of Texas
Chromium Corporation
Mosley Machinery Company, Inc.
Gory Associated Industries, Inc.
Orloff Engineers, Ltd.
Mosley Service Corporation

ELDEC CORPORATION

ENGRAPH, INC.
The Morrill Press, Inc.
Package Products Company
Screen Art, Inc.
Standard Cap & Seal, Inc.
Rixie
Patton

Screen Graphics

A. EPSTEIN AND SONS INTERNATIONAL, INC.
Epstein Construction, Inc.
A. Epstein and Sons, Inc.
Epstein Process Engineering, Inc.
Epstein Civil Engineering, Inc.
Architectural Interiors, Inc.
Epstein Material Handling Engineering, Inc.
Epstein Engineering Export, Ltd
Computer Technology Management, Inc.
Epstein Engineering, Inc.

ERB LUMBER COMPANY

ESTEE LAUDER INC.

EXIDE CORPORATION

FABRI-CENTERS OF AMERICA, INC.
Jo-Ann Fabrics
Best Fabric Outlet
House of Fine Fabrics
Cargo Express

FALCON TOOL COMPANY

FARM & HOME FINANCIAL CORPROATION
Farm & Home Savings Association
Caltrop Corporation
Farm & Home Funding Corporation
Farm & Home Funding Corporation II
Lakewood Oaks, Ltd.
Consolidated Agencies of Texas
Consolidated Insurance Service

FARM HOUSE FOODS CORPORATION

FARMERS INSURANCE GROUP OF COMPANIES

FEDDERS CORPORATION
Fedders North America, Inc.
Columbia Specialties, Inc.
Rotorex Corporation

FEDERAL EXPRESS CORPORATION

FEDERAL PAPER BOARD COMPANY, INC.

FEDERAL SIGNAL CORPORATION
Emergency One, Inc.
Elgin Sweeper Company
Dayton Progress Company
Autocall, Inc.
Federal APD, Inc.

FEDERAL-MOGUL CORPORATION
The Mather Company
Huck Manufacturing Company
Federal-Mogal World Trade, Inc.

FEDERATED DEPARTMENT STORES
Abraham and Strauss
Bloomingdale's
Burdines
Goldsmith's
Lazarus
Rich's

FERRO CORPORATION

FIREMAN'S FUND INSURANCE COMPANIES
American Insurance Company
American Automobile Insurance Company
Associated Indemnity Corporation
Interstate National Corporation
National Surety Corporation

FIRESTONE TIRE & RUBBER COMPANY

FIRST BANK SYSTEM, INC.
First Bank National Association, Minnesota
First Bank N.A., Wisconsin
First Bank of South Dakota
First Trust National Association, Minnesota
First Bank, Billings
FBS Mortgage Corporation
FBS Business Finance Corporation
FBS Insurance

FIRST BRANDS CORPORATION

FIRST CHEMICAL CORPORATION

FIRST CHICAGO CORPORATION
The First National Bank of Chicago

FIRST CITY BANCORPORATION OF TEXAS, INC.
First City, Texas Member Banks
Collecting Bank, N.A.
First City Asset Servicing

FIRST INTERSTATE BANKS
First Interstate Bank of Dallas

FIRST MARYLAND BANCORP
First National Bank of Maryland
First Omni Bank, N.A.
First Manufactured Housing Credit Corporation

FIRST NATIONAL SUPERMARKETS, INC.

FIRST WACHOVIA CORPORATION
The Wachovia Corporation
Wachovia Bank & Trust Co., NA
First Atlanta Corporation
First Wachovia Corporate Services, Inc.
First Wachovia Trust Services, Inc.

FIRSTAR CORPORATION
Firstar Banks
First Wisconsin Banks
Elan Insurance Services, Inc.
Elan Investment Services, Inc.

FLEETWOOD ENTERPRISES, INC.
Fleetwood Homes of California, Inc.
Fleetwood Homes of Florida, Inc.
Fleetwood Homes of Georgia, Inc.
Fleetwood Homes of Idaho, Inc.
Fleetwood Homes of Indiana, Inc.
Fleetwood Homes of Mississippi, Inc.
Fleetwood Homes of North Carolina, Inc.
Fleetwood Homes of Oregon, Inc.
Fleetwood Homes of Pennsylvania, Inc.
Fleetwood Homes of Tennessee, Inc.
Fleetwood Homes of Texas, Inc.

Fleetwood Homes of Virginia, Inc.
Fleetwood Homes of Washington, Inc.
Westfied Manufactured Homes, Inc.
Fleetwood Motor Homes of California, Inc.
Fleetwood Motor Homes of Indiana, Inc.
Fleetwood Motor Homes of Pennsylvania, Inc.
Fleetwood Travel Trailers of California, Inc.
Fleetwood Travel Trailers of Indiana, Inc.
Fleetwood Travel Trailers of Maryland, Inc.
Fleetwood Travel Trailers of Nebraska, Inc.
Fleetwood Travel Trailers of Ohio, Inc.
Fleetwood Travel Trailers of Oregon, Inc.
Fleetwood Travel Trailers of Texas, Inc.
Fleetwood Travel Trailers of Virginia, Inc.
Fleetwood Canada Limited
Fleetwood Folding Trailers, Inc.
Gold Shield Fiberglass, Inc.
Gold Shield Fiberglass of Indiana, Inc.
Hauser Lake Lumber Operation, Inc.
Housing Supply, Inc.
C.V. Aluminum, Inc.
Fleetwood Credit Company

FLEMING COMPANIES, INC.
Dixieland Food Stores, Inc.
Malone & Hyde, Inc.
Godfrey Company
Sentry Foods, Inc.

FLORIDA ROCK INDUSTRIES, INC.
Virginia Concrete Corporation
The Arundel Corporation
Maryland Rock Industries, Inc.

JOHN FLUKE MFG. CO., INC.

FMC CORPORATION

FORD MOTOR COMPANY
Ford Aerospace Corporation
Ford Motor Credit Company
Associates First Capital Corporation
United States Leasing International, Inc.
The American Road Insurance Company
Ford Motor Land Development Corporation
First Nationwide Bank
Ford New Holland, Inc.

FRUEHAUF CORPORATION

FUQUA INDUSTRIES, INC.

GAF CORPORATION
GAF Chemicals Corporation
GAF Building Materials Corporation

GATES CORPORATION
The Gates Rubber Company
Gates Energy Products, Inc.
Gates Formed-Fibre Products, Inc.
Gates Power Drive Products

GATX CORPORATION
American Steamship Company
GATX Leasing Corporation
GATX Terminals Corporation
General American Transportation Corporation

GAY TOYS, INC.

GEICO CORPORATION
Government Employees Insurance Company
GEICO General Insurance Company
GEICO Indemnity Company

GENERAL ALUM & CHEMICAL CORPORATION

GENERAL CINEMA CORPORATION
General Cinema Theatres, Inc.

GENERAL DYNAMICS CORPORATION

GENERAL ELECTRIC COMPANY

GENERAL INSTRUMENT CORPORATION
General Instrument Corporation
American Totalisator Company, Inc.
Cable/Home Communications Corp.
TOCOM, Inc.
Dalmo Victor, Inc.

GENERAL MILLS, INC.

GENERAL MOTORS CORPORATION

GENERAL PUBLIC UTILITIES CORPORAITON
GPU Service Corporation
GPU Nuclear corporation
Jersey Central Power & Light Company
Metropolitan Edison Company
Pennsylvania Electric Company
Energy Initiatives, Inc.
General Portfolios Corporation

GENERAL RE CORPORATION
General Reinsurance Corporation
General Reassurance Corporation
North Star Reinsurance
Herbert Clough, Inc.
Genstar Management
Genesis Underwriting Management

GENERAL SIGNAL CORPORATION

GEORGIA GULF CORPORATION

GEORGIA PACIFIC CORPORATION

GIANT FOOD, INC.

GIBRALTAR FINANCIAL CORPORATION
Gibralter Savings
Gibralter Savings, F.A.
Gibralter Management of Properties, Inc.

GIFFORD-HILL & COMPANY, INC.
Gifford-Hill Cement Company
Gifford-Hill Cement Company of South Carolina
Gifford-Hill Cement Company of Texas
Amcord, Inc.
Gifco Properties, Inc.

GIW INDUSTRIES, INC.

GOLD KIST, INC.
Agratech Seeds Inc.

Carolina Golden Products, Inc.
GK Stores, Inc.
Golden Poultry Company, Inc.
Luker Inc.

B.F. GOODRICH COMPANY
Tramco, Inc.
Tremco, Inc.

GOODYEAR TIRE & RUBBER COMPANY

W.R. GRACE & COMPANY
Grace Energy Corporation
National Medical Care, Inc.

GRACO INC.
Lockwood Technical Inc.
Graco Robotics Inc.

GRAND TRUNK CORPORATION
G.T.W. R.R. Company
C.V. R.R. Company
DW&P Rly Company

GRAPHIC CONTROLS CORPORATION

GREAT AMERICAN INSURANCE COS.

GREAT LAKES CHEMICAL CORPORATION

GREAT LAKES CONSTRUCTION COMPANY

GREAT WEST CASUALTY COMPANY

GROLIER, INC.

GROW GROUP, INC.
Devoe & Raynolds Company
Ameritone Paint Corporation
Consumer & Professional Products Group

GRUMMAN CORPORATION

GTE CORPORATION

GUARDIAN INDUSTRIES CORPORATION

GULFSTREAM AEROSPACE CORPORATION
Gulfstream Aerospace Corporation

GUY F. ATKINSON COMPANY OF CALIFORNIA
Atkinson Dynamics
Guy F. Atkinson Construction Company
Atkinson Systems
Comco Pipe & Supply Ltd.
Lake Center Industries
Monterey Construction Company
Tyger Construction Company Incorporated
Walsh Construction Company

HAL, INC.
Hawaiian Airlines, Inc.
West Maui Airport, Inc.

M. A. HANNA COMPANY
Allied Color Industries, Inc.
Avecor, Inc.
BenePlan Strategies, Inc.
Bruck Plastic Company
Burton Rubber Processing, Inc.
Cadillac Plastic Group
Colonial Rubber Works, Inc.
Day International Printing Products Worldwide
Day International Textile Products Worldwide, Inc.
Gow & Hanna, Inc.
Iron Ore Company of Canada
PMS Consolidated
Southwestern Chemical Services

HANOVER INSURANCE COMPANY
Massachusetts Bay Insurance Company
Hanover American Insurance Company

HANSECO
John Hancock Indemnity Company
John Hancock Property & Casualty Insurance Co.
John Hancock Reinsurance Company

HARLEY-DAVIDSON, INC.
Holiday Rambler Corporation

HARLEYSVILLE INSURANCE COMPANIES
Atlantic Insurance Company of Savannah
Harleysville Insurance Company of New Jersey
Harleysville Life Insurance Company
Huron Insurance Company
Worcester Insurance Company

HARNISCHFEGER INDUSTRIES, INC.
Harnischfeger Corporation
Beloit Corporation
Syscon Corporation
Harnischfeger Engineers, Inc.

HARSCO CORPORATION

HARTZ MOUNTAIN CORPORATION
Hartz Mountain Industries, Inc.
Georgia-Tennessee Mining & Chemical Company
Harmon Publishing Company, Inc.
Stern Publications, Inc.

HARVEST STATES COOPERATIVES
Terminal Agency, Inc.
Country Hedging, Inc.

HAUSERMAN, INC.
Sunarhauserman, Inc.

HEINEN'S INC.

HEMPHILL BROTHERS, INC.

HERCULES, INC.

HERSHEY FOODS CORPORATION
Hershey Chocolate U.S.A.
Hershey Pasta Group

HEWLETT-PACKARD

HILLENBRAND INDUSTRIES
American Tourister, Inc.
Batesville Casket Company, Inc.
The Forethought Group, Inc.
Hill-Rom Company, Inc.

Medeco Security Locks, Inc.
SSI Medical Services, Inc.

HILLS DEPARTMENT STORES, INC.
Hills Stores Company
Canton Advertising
Corporate Vision, Inc.
CRH International
Interstate Leasing Corporation
Rudnick & Sons, Inc.

HILTON HOTELS CORPORATION
Hilton Inns, Inc.
Hilton Suites, Inc.
Conrad International Hotels Corporation
Hilton Nevada Corporation

HIMONT, INC.
Himont U.S.A., Inc.

HOECHST CELANESE CORPORATION

HOFFMANN-LA ROCHE INC.

HOME LIFE INSURANCE COMPANY
Home Life Financial Assurance Company
W.S. Griffith
Sentra

HOMEFED BANK
Home Capital
HomeFed Insurance Services
Nationwide Lending

HON INDUSTRIES INC.
BPI Inc.
CorryHiebert Corporation
Heatilator Inc.
Holga Inc.
HON Export Limited
Ring King Visibles, Inc.
The Gunlocke Company
The Hon Company
XLM Company

HONEYWELL, INC.

HOUSEHOLD INTERNATIONAL

HOWARD CORPORATION

J. M. HUBER CORPORATION
AVEX Electronics Inc.
Underground Warehouses, Inc.

ICI AMERICAS, INC.

IDEX CORPORATION
Viking Pump
Strippit
Warren Rupp
Lubriquip
Vibratech
Band-It

IDS FINANCIAL SERVICES, INC.
IDS Life Insurance Company
IDS Certificate Compay
IDS Bank & Trust
IDS Securities Corporation

ILLINOIS POWER COMPANY

IMO INDUSTRIES, INC.
Varo, Inc.
Baird Corporation
Warren Pumps, Inc.

IMPERIAL HOLLY CORPORATION
Holly Sugar Corporation

INB CORPORATION
INB National Bank
INB National Bank, Northwest
INB Banking Company
INB Leasing, Inc.
INB Mortage Corporation
INB Brokerage Services, Inc.

INDIANA FARM BUREAU COOPERATIVES ASSOCIATION, INC.
FarBest, Inc.
Indiana Commodities, Inc.
AgraLink, Inc.

INGERSOLL-RAND COMPANY
Schlage Lock Compay
The Torrington Company
The Aro Corporation

INLAND STEEL INDUSTRIES, INC.
Inland Steel Company
Jos. T. Ryerson & Son, Inc.
Tull Metals

INSILCO CORPORATION
CCG Division
Curtis Manufacturing
DAC Easy, Inc.
Dual-Lite, Inc.
Rolodex Division
Signal Transformer Co., Inc.
Sinclair Paint Company Division
Steel Parts Corporation
Stewart Connector System, Inc.
Stewart Stamping Corporation
Taylor Publishing Company
Thermal Components Division
Valentec International Corporation

INTEL CORPORATION

INTERCRAFT INDUSTRIES, L.P.

INTERMEDICS, INC.
CarboMedics, Inc.
Calcitek, Inc.
Intermedics Orthopedics, Inc.

INTERNATIONAL BUSINESS MACHINES (IBM)
IBM Credit Corporation
Rolm Corporation

IRVINE COMPANY
Irvine Office Company
Irvine Hotel Company

Irvine Retail Properties Company
Irvine Industrial Company
Irvine Community Builders
Foothill Community Builders
Coastal Community Builders
Irvine Pacific
Irvine Land Management Company
Irvine World News

ITT CORPORATION
Federal Electric Corporation
Hartford Fire Insurance Company
ITT Commercial Financial Corporation
ITT Community Development Corporation
ITT Consumer Financial Corporation
ITT Gilfillan, Inc.
ITT Higbie Manufacturing Company
ITT Lester Industries, Inc.
ITT Rayonier Incorporated
The Sheraton Corporation
United States Transmission Systems, Inc.

IU INTERNATIONAL CORPORATION
Ryder/P-I-E Nationwide, Inc.
C. Brewer and Company Limited
Bigger Brothers, Inc.
Unijax, Inc.
Conversion Systems, Inc.
International Mill Service, Inc.

JACK ECKERD CORPORATION

JOHNSON CONTROLS
Hoover Universal, Inc.
Johnson Controls International, Inc.
Nihon Johnson Controls Company, Ltd.

JOSLYN CORPORATION
ADK Pressure Equipment Corporation
Air-Dry Corporation of America
Joslyn Canada, Inc.
Joslyn Clark Controls, Inc.
Joslyn Electronic Systems Corporation
Joslyn Foundation
Joslyn Hi-Voltage Corporation
Joslyn Manufacturing Company
Joslyn Power Products Corporation
Sunbank Electronics, Inc.
Sunbank Family of Companies, Inc.

JOSTENS, INC.

JOY TECHNOLOGIES INC.
Ecolaire Incorporated
Joy Energy Systems Inc.

KAISER ALUMINUM & CHEMICAL CORPORATION

KAISER STEEL RESOURCES, INC.
Kaiser Steel Land Development, Inc.
Kaiser Eagle Mountain, Inc.
Kaiser Waste Treatment, Inc.
Kaiser Steel Corporation

KATY INDUSTRIES, INC.
Airtronics
American Shoe Machinery Company
Bach-Simpson, Ltd.
Beehive Machinery, Inc.
Diehl Machines
Fulton Iron Works Company
Glit
Hamilton Precision Metals
Katy-Seghers, Inc.
Labour Pump Company
Moldan Corporation
Panhandle Industrial Company, Inc.
Peters Machinery Company
Quality Food Machinery, Inc.
B.M. Root Company
W.J. Smith Wood Preserving Company
Waldom Electronics, Inc.
Walsh Press Company

KELLOGG COMPANY
Fearn International, Inc.
Mrs. Smith's Frozen Foods

KENDALL COMPANY
Kendall Healthcare Products Company
Polyken Technologies

KENNEDY VAN SAUN CORPORATION

KEYSTONE FOODS CORPORATION
Equity Meat Corporation
M&M Restaurant Supply
C&S Foods
W. Jackson Catt Technology Center
Key Fresh Foods

KIMBALL INTERNATIONAL, INC.
Kimball Office Furniture Company
National Office Furniture Company
Artec
Kimball Health Care Company
Kimball Keyboard Products
Kimball Furniture Reproductions, Inc.
Kimball Hospitality Furniture
Jasper Plastics
ToolPro
Kimball Electronics, Inc.

KINETICS TECHNOLOGY INTERNATIONAL CORPORATION

KOLENE CORPORATION

LACLEDE STEEL COMPANY
Laclede Chain Manufacturing Company
Laclede Mid America, Inc.

LAMSON & SESSIONS COMPANY

LEARJET INCORPORATED

LEASEWAY TRANSPORTATION CORPORATION
Anchor Motor Freight, Inc.
Custom Deliveries, Inc.
Gross & Hecht Trucking Service, Inc.
Leaseway Deliveries, Inc.
Leaseway Motorcar Transport Company
Midwestern Distribution, Inc.
Nu-Car Carriers, Inc.
Signal Delivery Services, Inc.

LEGGETT & PLATT, INC.

LEVITZ FURNITURE CORPORATION

LIBERTY MUTUAL INSURANCE COMPANY

LIBERTY MUTUAL FIRE INSURANCE COMPANY
Liberty Insurance Corporation
Liberty Northwest Insurance Corporation
Liberty Life Assurance Company of Boston
Liberty International Insurance Agency

ELI LILLY & COMPANY
Advanced Cardiovascular Systems, Inc.
Cardiac Pacemakers, Inc.
Devices for Vascular Intervention, Inc.
IVAC Corporation
Eli Lilly International Corporation
Physio-Control Corporation

LINCOLN NATIONAL CORPORATION
Lincoln National Life Insurance Company

LONZA INC.

LUKENS INC.
Flex-O-Lite, Inc.
Energy Coatings Company
Cathodic Protection Services Company
Simplicity Engineering, Inc.

LYONDELL PETROCHEMICAL COMPANY

MACK TRUCKS, INC.
Mack Financial Corporation

MALLINCKRODT

MANITOWOC COMPANY, INC.
Bay Shipbuilding Corporation
Manitowoc Equipment Works (Operating Division)
Manitowoc Engineering Company (Operating Division)

MANVILLE CORPORATION
Manville Building Materials Corporation
Manville Forest Products Corporation
Holophane, Inc.

MAPCO INC.
MAPCO Coal Inc.
MAPCO Gas Products Inc.
MAPCO Petroleum Inc.
MAPCO Transportation Inc.

MARION LABORATORIES INC.

MARITZ INC.
Maritz Motivation Company
Maritz Travel Company
Maritz Communications Company
Maritz Marketing Research Inc.
Maritz Information Resources
Maritz Limited

MARK CONTROLS CORPORATION
Center Line
Dynalco
Flowseal
Pacific Valves
Powers Process Controls

MARLEY COMPANY
Marley Cooling Tower Company
Layne-Western Company, Inc.
Engineers & Fabricators, Co.
Weil-McLain
Marley Pump Company
Marley Electric Heating
Layne and Bowler

MARYLAND CASUALTY COMPANY
Northern Insurance Company of New York
Assurance Company of America
Valiant Insurance Company
Steadfast Insurance Company
Advanced Technology Systems, Inc.

MAYTAG CORPORATION
Admiral Company
Jenn-Air Company
Magic Chef Company
Maytag Company
Maycor Appliance Parts & Service Company
Dixie-Narco, Inc.
Domicor, Inc.
Hoover Company

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY

MCDONALD & COMPANY SECURITIES, INC.

MCDONNELL DOUGLAS CORPORATION

MCI COMMUNICATIONS
MCI Communications Corporation

MCKESSON CORPORATION
Corporation of America
Crocker Plaza Company
First Aid, Inc.
Garrett-Hewitt International, Inc.
Gentec Health Care, Inc.
Johnson Drug Co.
Lone Star Veterinary Supply Co.
McKesson Envirosystems Company of Puerto Rico, Inc.
Mutual Supply Company
S-P Drug Co.
Spectro Industries, Inc.

MCNALLY PITTSBURGH, INC.
Kennedy Van Saun Corporation

MEAD CORPORATION
Escanaba Paper Company
Forest Kraft Company
Mead Data Central Inc.
InfoSource, Inc.
Mead Data Central International, Inc.
Mead Environmental Improvement Corporation
Mead Realty Group, Inc.
Mead Leasing Company
Mead Packaging International, Inc.
Mead Panelboard, Inc.
Mead Pulp Sales, Inc.
Mead Real Estate Investments, Inc.

Mead Reco, Inc.
Mead Loss Control Consultants, Inc.
Mead Reinsurance Corporation
Adena Syndicate, Ltd.
Mead SA, Inc.
Mead TI, Inc.
Mead Timber Company
R. Corp.
Ampad Corporation
Mead Coated Board, Inc.
Mead Coated Board International, Inc.
Illinois Code Company
M-B Pulp Company
Micromedex, Inc.
Harborage Realty, Inc.
Mead Supplyco, Inc.
Pulp Asia Limited
Zephyer Properties, Inc.

MEDTRONIC, INC.
Andover Medical, Inc.
International Medical Corporation
Interventional Medical, Inc.
Medtronic Blood Systems, Inc.

MELLON BANK CORPORATION
Commonwealth National Bank
Mellon Bank (Central)
Mellon Bank (DE)
Mellon Bank (East)
Mellon Bank (MD)
Mellon Bank, N.A.
Mellon Bank (North)
Mellon Financial Services Corporation

MENASHA CORPORATION

MERCANTILE STORES COMPANY INC.
Bacons
Castner Knott Co.
Gayfers
Glass Block
Hennesy's
The Jones Store Co.
JB White
Joslins
de Lendrecie's
Lion
McAlpin's
Root's

MERCK & COMPANY INC.
Hubbard Farms, Inc.
Calgon Corporation

MEREDITH CORPORATION
The Meredith/Burda Companies
San Joaquin Communications Corporation
KVVU Broadcasting Corporation

MERIDIA HEALTH SYSTEM
Meridia Euclid Hospital
Meridia Hillcrest Hospital
Meridia Huron Hospital
Meridia Suburban Hospital

MESA LIMITED PARTNERSHIP
Mesa Operating Limited Partnership

METROPOLITAN FINANCIAL CORPORATION
Edina Realty, Inc.
Metropolitan Federal Bank

METROPOLITAN PROPERTY & LIABILITY INSURANCE COMPANY

MIAMI ELEVATOR COMPANY

MICHIGAN NATIONAL CORPORATION
Beverly Hills Federal Savings Bank
Independence One Mortgage Corporation
Michigan National Bank

MILES INC.

MILLIKEN & COMPANY

MILLIPORE CORPORATION

MINNESOTA MINING & MANUFACTURING COMPANY (3M)

MINORCO (U.S.A.) INC.
Independence Mining Company Inc.

MITCHELL ENERGY & DEVELOPMENT CORP.
Mitchell Energy Corporation
The Woodlands Corporation
Southwestern Gas Pipeline, Inc.
Liquid Energy Corporation

MITSUI MANUFACTURERS BANK

MOBAY CORPORATION

MODINE MANUFACTURING COMPANY
Modine Autocool, Inc.
NRF B.V.
Windhoff Gmbh

MONOGRAM INDUSTRIES, INC.

MONSANTO COMPANY

MOONEY CHEMICALS, INC.

MORRISON INCORPORATED
Custom Management Corporation
Family Dining Division
Ruby Tuesday

MORRISON-KNUDSEN CORPORATION
Morrison-Knudsen Company, Inc.
MK-Ferguson Company
Morrison-Knudsen International Company, Inc.
Morrison-Knudsen Financial Company, Inc.
Emkay Development Company, Inc.
National Steel and Shipbuilding Company

MOTOROLA, INC.

MOUNT VERNON MILLS, INC.

MUNSINGWEAR, INC.
Shirtmate Apparel Group Ltd.
Princeton Hosiery Mills
Form-O-Uth, Inc.

MUTUAL LIFE INSURANCE COMPANY OF NEW YORK
MONY Life Insurance Company of America
MONY Legacy Life Insurance Company
MONYCO, Inc.
Evaluation Associates, Inc.
Evaluation Associates Investment Management Company
Kelly & Associates, Inc.
MONY Agricultural Financial Services, Inc.
MONY Credit Corporation
MONY Reinsurance Corporation
MONY Securities Corp.

NACCO INDUSTRIES, INC.
Hyster-Yale Materials Handling, Inc.
Hyster Company
Yale Materials Handling Corporation
The North American Coal Corporation
Hamilton Beach/Proctor-Silex, Inc.
The Kitchen Collection, Inc.

NALCO CHEMICAL COMPANY

NATIONAL CONVENIENCE STORES INCORPORATED
Stop N Go Markets of Georgia, Inc.
Stop N Go Markets of Texas, Inc.

NATIONAL GRANGE MUTUAL INSURANCE COMPANY
NMG Information Systems & Services Corporation
Presidential Property and Casualty Insurance Company

NATIONAL GYPSUM COMPANY
Gold Bond Building Products Division
The Austin Company

NATIONAL LIFE INSURANCE COMPANY
Vermont Life Insurance Company
Champlain Life Insurance Company
National Life Investment Management Company, Inc.
Sentinel Advisors, Inc.
Equity Services, Inc.
National Property Advisors Corporation

NATIONAL MEDICAL ENTERPRISES INC.
NME Hospitals, Inc.
The Hillhaven Corporation
Psychiatric Institutes of America
Rehab Hospital Services Corp. Inc.
Recovery Centers of America

NATIONAL RAILROAD PASSENGER CORPORATION
Washington Terminal Company
Chicago Union Station

NATIONAL SERVICE INDUSTRIES, INC.
AECO Products
Block Industries
Lithonia Lighting Company
Marketing Services
National Linen Service
North Bros. Company
Selig Chemical Industries
Zep Manufacturing Company

NATIONAL STARCH & CHEMICAL COMPANY

NATIONAL STEEL CORPORATION
American Steel Corporation
National Mines Corporation
National Steel Pellet Company

NATIONAL WESTMINSTER BANCORP INC.
National Westminster Bank USA
National Westminster Bank NJ

NATIONWIDE MUTUAL INSURANCE COMPANY
Nationwide Mutual Fire Insurance Company
Nationwide Life Insurance Company
The Wausau Insurance Companies
Beaver Insurance Company
Beaver Pacific Corporation
Colonial Insurance Company of California
Scottsdale Insurance Company
National Casualty Company
West Coast Life Insurance Company
Nationwide Communications Inc.

NEIMAN MARCUS GROUP, INC.

NESTLE FOODS CORPORATION

NEWELL COMPANY
Newwll Operating Companies
Anchor Hocking Corporation
Amerock Corporation
E Z Paintr

NICOR INC.
Northern Illinois Gas Company
NICOR Exploration and Production Co.
Birdsall, Inc.
Reliance Pipeline Company
Tropical Shipping and Construciton Co.
NICOR Exploration Company
NICOR Oil and Gas Corporation

NOLAND COMPANY
Noland Properties, Inc.

NORDSON CORPORATION

NORFOLK SOUTHERN CORPORATION
Norfolk and Western Railway Company
Southern Railway Company

NORTHEAST SAVINGS

NORTHEAST UTILITIES
Charter Oak Energy, Inc.
The Connecticut Light and Power Company
Holyoke Water Power Company
Northeast Nuclear Energy Company
Northeast Utilities Service Company
Western Massachusetts Electric Company

NORTHROP CORPORATION

NORTHWESTERN MUTUAL LIFE
MGIC
Robert W. Baird

NORTON COMPANY
Carborundum Abrasives Company
Chemplast, Inc.

NORWEST CORPORATION
Norwest Bank Minnesota, N.A.

Norwest Bank Iowa, N.A.
Norwest Bank Nebraska, N.A.
Norwest Bank North Dakota, N.A.
Norwest Bank South Dakota, N.A.
Norwest Financial, Inc.
Norwest Financial Services, Inc.

NTH CONSULTANTS, LTD.

NWNL COMPANIES, INC.
Chartwell Reinsurance Company
North Atlantic Life Insurance Co. of America
Northern Life Insurance Company
Washington Square Capital

NYNEX CORPORATION
New York Telephone Company
New England Telephone Company

OCEAN SPRAY CRANBERRIES, INC.
Milne Fruit Products, Inc.

OHIO BELL TELEPHONE COMPANY
Ohio Bell Communications, Inc.

OHIO CASUALTY CORPORATION
The Ohio Casualty Insurance Company
Ohio Security Insurance Company
The Ohio Life Insurance Company
West American Insurance Company
American Fire & Casualty Company
Ocasco Budget, Inc.

OLD DOMINION FREIGHT LINE INC.

OLIN CORPORATION

OMI CORPORATION

ONEIDA LIMITED
Buffalo China, Inc.
Camden Wire Company, Inc.

ORION CAPITAL CORPORATION
EBI Companies
DPIC Companies
Guaranty National Companies
Security Reinsurance Company

ORION CORPORATION
Orion Corporation of Nebraska
Albany-Chicago Company

OSHKOSH TRUCK CORPORATION

OSTENDORF-MORRIS

OWENS-ILLINOIS INC.

PACCAR INC.
PACCAR Financial Corp.
Trico Industries, Inc.
Grand Auto, Inc.
PACCAR Sales North America, Inc.
PACCAR Leasing Corporation

PACIFIC MUTUAL LIFE INSURANCE COMPANY
PM Group Life Insurance Co.
Pacific Investment Management Company
Parametric Portfolio Associates, Inc.
Pacific Financial Asset Management Corporation
Pacific Equities Network
Cadence Capital Management Corporation

R.B. PAMPLIN CORPORATION
K. F. Jacobsen & Company
Mount Vernon Mills, Inc.
Ross Island Sand & Gravel Company

PACIFIC TELESIS GROUP
Pacific Bell
PacTel Corporation

PALL CORPORATION
Pall Trinity Micro Corp.
Pall Biomedical Products Corp.
Pall Industrial Hydraulics Corp.

PAPERCRAFT CORPORATION
Barth & Dreyfuss of California
LePage's, Inc.
American Technical Industries, Inc.
Knomark, Inc.

PARKER-HANNIFIN CORPORATION

PAYLESS CASHWAYS, INC.
Knox Home Centers, Inc.
Somerville Lumber & Supply Company, Inc.

PEAT MARWICK MAIN & COMPANY

J. C. PENNEY COMPANY, INC.

PENNSYLVANIA POWER & LIGHT COMPANY
BDW Corporation
CEP Group, Inc.
Greene Hill Coal Company
Greene Manor Coal Company
Interstate Energy Company
Lady Jane Collieries, Inc.
Pennsylvania Coal Resources Corporation
Pennsylvania Mines Corporation
Realty Company of Pennsylvania
Rushton Mining Company
Tunnelton Mining Company

PENNZOIL COMPANY
Pennzoil Exploration and Development Company
Pennzoil Products Company
Pennzoil Sulphur Company

PENTAIR INC.
Delta International Machinery Corp.
Lincoln
F.E. Myers
Porter-Cable Corporation
Cross Pointe Paper Corp.
Niagara of Wisconsin Paper Corp.
Lake Superior Paper Industries
Federal Cartridge
Hoffman Engineering

PEOPLE'S BANK
People's Securities, Inc.
Guardian Federal Savings & Loan Association

MSB Real Estate Corporation

PEP BOYS

PERINI CORPORATION
R.E. Dailey & Company
Mardian Construction Company
Perini International Corporation
Perini Land and Development Company
Paramount Development Associates, Inc.
Pioneer Construction, Inc.

PETROLITE CORPORATION

PFIZER INC.

PHH GROUP INC.
PHH FleetAmerica
Avis Leasing
NTS
PHH Homequity
PHH US Mortgage Corporation
PHH Asset Management
PHH Fantus
PHH Europe
PHH Environments

PHILADELPHIA ELECTRIC COMPANY

PHILIP MORRIS COMPANIES, INC.
Philip Morris Incorporated
Kraft General Foods
Miller Brewing Company

PHILLIPS PETROLEUM COMPANY
Phillips 66 Company
Phillips 66 Natural Gas Company

PHOENIX MUTUAL LIFE INSURANCE COMPANY

PILLSBURY COMPANY
Burger King Corporation
The Haagen-Dazs Company, Inc.

PITT-DES MOINES INC.
PDM Strocal, Inc.

PITTSTON COMPANY
Brink's Incorporated
Burlington Air Express, Inc.
Brink's Home Security, Inc.
Pittston Coal Group, Inc.
Pyxis Resources

PITTWAY CORPORATION
Ademco/Alarm Device Manufacturing Company
BRK Electronics
Penton Publishing, Inc.
Seaquist Group
Barr Company

PIZZA HUT, INC.

PLASKOLITE, INC.

PNEUMO ABEX CORPORATION
Cleveland Pneumatic

PPG INDUSTRIES INC.

PRATT & LAMBERT
Pierce & Stevens Corporation
Southern Coatings

PRINCIPAL FINANCIAL GROUP
Principal National Life Insurance Co.
Delaware Charter Guarantee & Trust Co.
Eppler, Guerin & Turner, Inc.
Principal Casualty Insurance Co.
Princor Financial Services Corporation
INVISTA Capital Management, Inc.
Principal Health Care, Inc.
HMO IOWA, Inc.

PRUDENTIAL INSURANCE COMPANY OF AMERICA
Prudential Property & Casualty Insurance Company
Prudential Reinsurance Company
Pruco Life Insurance Company
PruCapital, Inc.
Pruco Life Insurance Company of New Jersey
Prudential Investment Corporation
Prudential Asset Management Company, Inc.
Prudential Development Company, Inc.
Prudential Mortgage Capital Company, Inc.
Pruco Life Insurance Company of Texas
Prudential Funding Corporation

PSI HOLDINGS, INC.
Public Service Company of Indiana, Inc.
PSI Investments, Inc.

PUBLIC SERVICE COMPANY OF COLORADO
Western Gas Supply Company
Fuel Resources Development Co.
Cheyenne Light, Fuel and Power Company

PUBLIC SERVICE ELECTRIC & GAS COMPANY
Energy Development Corporation
PSE&G Research Corporation

PUBLICKER INDUSTRIES INC.
Thermice Corporation
Golding Industries, Inc.

PUROLATOR PRODUCTS COMPANY
Purolator Products, Inc.
Purolator Products, Ltd.

QUAKER STATE CORPORATION
Quaker State Oil Refining Corporation
Heritage Insurance Group, Inc.
Truck-Lite Co., Inc.
Quaker State Minit-Lube, Inc.
The Valley Camp Coal Company
McQuik's Oilube, Inc.

RALSTON PURINA COMPANY
Continental Baking Company
Eveready Battery Company

RAYTHEON COMPANY
Amana Refrigeration, Inc.
The Badger Company, Inc.
Beech Aircraft Corporation
Caloric Corporation
Cedarapids, Inc.

Seismograph Service Corporation
Speed Queen Company
United Engineers & Constructors

RECOGNITION EQUIPMENT INCORPORATED

REEBOK INTERNATIONAL LTD.
Avia Group International, Inc.
The Rockport Company
Ellesse U.S.A., Inc.

REICHHOLD CHEMICALS, INC.

REVCO D.S., INC.
Revco Discount Drug Centers, Inc. (Michigan
Revco Discount Drug Centers of Cincinnati, Inc.
White Cross Stores, Inc. No. 14
Revco Discount Drug Centers, Inc. (Ohio)

REXNORD, INC.

REYNOLDS METALS COMPANY
ALRECO Metals, Inc.
Baker's Choice Products, Inc.
Conductor Products, Inc.
El Campo Aluminum Company
Eskimo Pie Corporation
Lake Charles Carbon Company
Mt. Vernon Plastics Corporation
Presto Products Company
Reynolds Aluminum Recycling Company
Reynolds Metals Development Company
Southeast Vinyl Company
Southern Gravure Service, Inc.
Southern Reclamation Company

RICELAND FOODS, INC.

RJR NABISCO
R.J. Reynolds Tobacco International, Inc.
Nabisco Brands, Inc.
Heublein, Inc.
Kentucky Fried Chicken Corporation
R.J. Reynolds Quick Service Restaurants, Inc.
Freshness, Inc.
Zantiago Corporation
Skolniks, Inc.
Kentucky Fried Chicken International Corporation
KFC Corporation
KFC National Management Company

ROADWAY SERVICES INC.
Roadway Express, Inc.
Roadway Package System, Inc.
Roberts Express, Inc.
Spartan Express, Inc.
Viking Freight, Inc.

ROBBINS & MYERS, INC.
Electro-Craft Corporation

ROCHESTER TELEPHONE CORPORATION

ROCKWELL INTERNATIONAL

ROHM & HAAS COMPANY

ROLM SYSTEMS

ROUNDY'S, INC.
Scot Lad Foods, Inc.
Cardinal Foods, Inc.
Cedarburg Dairy, Inc.
Bonnie Baking Company, Inc.

ROYAL GROUP, INC.
Royal Insurance Company of America
Royal Indemnity Company
Globe Indemnity Company
Safeguard Insurance Company
Newark Insurance Company
American and Foreign Insurance Company
Royal Life Insurance

RUBBERMAID INC.
MicroComputer Accessories, Inc.
Rubbermaid Commerical Products Inc.
The Little Tikes Company

RYKOFF-SEXTON, INC.
S.E. Rycoff & Co.
John Sexton & Co.

RYLAND GROUP, INC.
Ryland Homes
Ryland Modular Homes
Ryland Mortgage Company
Ryland Acceptance Corporation

SAFECO CORPORATION
SAFECO Insurance Company of America
General Insurance Company of America
First National Insurance Company of America
SAFECO Life Insurance Company
SAFECO Properties, Inc.
SAFECO Credit Company, Inc.

SAFEWAY STORES, INC.

SANDOZ CORPORATION
Master Builders, Inc.
McLaren/Hart Environmental Engineering Corp.
Northrup King Company
Rogers NK Seed Company
Sandoz Chemicals
Sandoz Crop Protection Corporation
Sandoz Nutrition Corporation
Sandoz Pharmaceuticals Corporation
Vaughan's Seed Company
Zoecon Corporation

SANTA FE PACIFIC CORPORATION
The Atchison, Topeka & Santa Fe
Railway Company
Santa Fe Pacific Realty Corporation
Santa Fe Energy Resources, Inc.

SAVANNAH FOODS & INDUSTRIES, INC.
Colonial Sugars, Inc.
Everglades Sugar Refinery, Inc.
Michigan Sugar Company
Transales Corporation

SAVIN CORPORATION

SCHLUMBERGER LIMITED
Anadrill, Inc.

Dowell Schlumberger, Inc.
Schlumberger Industries, Inc.
Schlumberger Technologies, Inc.
Schlumberger Technology Corporation

SCIENTIFIC-ATLANTA, INC.

SEA-LAND SERVICE, INC.

SEALY CORPORATION
Advanced Sleep Products
Sealy Furniture Company
Sealy Mattress Company
Stearns & Foster Bedding Company
Stearns & Foster Upholstery Furniture Company
Woodstuff Manufacturing, Inc.

G.D. SEARLE & COMPANY

SEARS, ROEBUCK AND COMPANY
Coldwell Banker Real Estate Group, Inc.

SECURITY PACIFIC CORPORATION
Security Pacific National Bank
Security Pacific Bank Washington
Security Pacific Bank Arizona

SENTRY INSURANCE GROUP
Sentry Life Insurance Company
Middlesex Insurance Company
Dairyland Insurance Company

SERVICE MERCHANDISE COMPANY

SERVISTAR CORPORATION
Advocate Services, Inc.
Speer Hardware Co,
TEC - Total Exposition Concepts, Inc.

SFN COMPANIES, INC.
Scott Foresman and Company
South-Western Publishing Company
Broadcast Advertisers Reports, Inc.
Mindscape, Inc.
Biomedical Information Corporation
Data Acquisition Services, Inc.

SHAKLEE CORPORATION

SHAWMUT NATIONAL CORPORATION
Connecticut National Bank
Shawmut Bank, N.A.

SHERWIN WILLIAMS COMPANY

SHONEY'S, INC.

SIEMENS CAPITAL CORPORATION

SIEMENS ENERGY & AUTOMATION, INC.

J. R. SIMPLOT COMPANY
Simplot Canada Limited
Simplot Construction, Inc.

SIMPSON INVESTMENT COMPANY
Simpson Paper Company
Simpson Timber Company
Pacific Western Extruded Plastics Company
Arcata Redwood Company
Simpson Tacoma Kraft Company
Simpson Pasadena Paper Company
Simpson Plainwell Paper Company
Simpson Redwood Company

SINGER COMPANY

SMITH CORONA CORPORATION
Histacount Corporation
SCM Office Supplies Inc.

SMITH INTERNATIONAL INC.

SMITHKLINE BEECHAM COMPANY
Allergan, Inc.
Beecham Instruments, Inc.
SmithKline Bio-Science Laboratories, Ltd.
SmithKline Consumer Products, Inc.
Morden Laboratories, Inc.

SNAP-ON TOOLS CORPORATION

SNYDERGENERAL CORPORATION

SONY CORPORATION OF AMERICA

SOUTHERN STATES COOPERATIVE, INC.
Southern States Financial Corporation
Southern States Underwriters, Inc.

SOUTHLAND CORPORATION

SOUTHWESTERN BELL CORPORATION
Gulf Printing Company
Mast, Inc.
Metromedia Paging Services, Inc.
Southwestern Bell Mobile Systems, Inc.
Southwestern Bell Telecommunications, Inc.
Southwestern Bell Telephone Company
Southwestern Bell Yellow Pages, Inc.

SPRAGUE TECHNOLOGIES, INC.
Sprague Electric Company

SPIRE CORPORATION

SPRINGS INDUSTRIES, INC.
Carey-McFall Corporation
Clark-Schwebel fiber Glass Corporation
Graber Industries, Inc.

SQUARE D COMPANY

ST. PAUL COMPANIES, INC.
St. Paul Fire and Marine Insurance Company
John Nuveen & Company, Inc.
Seaboard Surety Company

STANDARD PRODUCTS COMPANY

STANDEX INTERNATIONAL CORPORATION
Crest Fruit Company
Custom Hoists, Inc.
Master-Bilt Products
Doubleday Bros. & Company
Roehlen Engraving

James Burn International

STANHOME INC.
Enesco Imports Corporation

STANLEY WORKS

STATE FARM MUTUAL AUTOMOBILE INSURANCE COMPANY

STEPAN COMPANY

STONE & WEBSTER, INCORPORATED
Stone & Webster Engineering Corporation
Stone & Webster Management Consultants, Inc.

STORAGE TECHNOLOGY CORPORATION
Relocation Operations, Inc.
StorageTek Computer Finance Corporation
StorageTek Computer Research Corporation
StorageTek Integrated Systems Inc.
StorageTek International Corporation
StorageTek Media Corporation
Storage Technology De Puerto Rico Inc.
Storage Technology Optical Disk Development Corporation
United Data Corporation

STURTEVANT, INC.

SUBARU OF AMERICA INC.

SUMMIT BANCORPORATION
Summit Trust Company
Ocean National Bank
Somerset Trust Company

SUN COMPANY, INC.
Sun Refining & Marketing Co.
Radnor Corporation
Sun Coal Company
Helios Capital Corp.

SUN-DIAMOND GROWERS OF CALIFORNIA

SUNDSTRAND CORPORATION
Sunstrand Data Control, Inc.
Sullair Corporation
Sunstrand Heat Transfer, Inc.
The Falk Corporation

SUN ELECTRIC COMPANY

SUPER VALU STORES INC.
ShopKo Stores, Inc.

SUTER COMPANY, INC.

SYNTEX CORPORATION
Syntex Laboratories, Inc.
Syva Company
Syntex Agribusiness, Inc.

SYRO STEEL COMPANY

TALLEY INDUSTRIES, INC.
Electrodynamics, Inc.
JJMA Holdings, Inc.
Talley Automotive Products, Inc.
Talley Defense Systems, Inc.
Talley Metals Technology, Inc.
Talley Realty Development, Inc.
Universal Propulsion Company, Inc.
Waterbury Companies, Inc.

TEACHERS INSURANCE & ANNUITY ASSOCIATION COLLEGE RETIREMENT EQUITIES FUND (TIAA-CREF)

TEKTRONIX, INC.

TEMPLE-INLAND INC.
Inland Container Corporation
Temple-Inland Financial Services Inc.
Temple-Inland Forest Products Corporation

TENNECO INC.
Albright & Wilson Americas, Inc.
Tenneco Gas
Tenneco Oil Company
Tennessee Gas Pipeline Company
East Tennessee Natural Gas Company
Midwestern Gas Transmission Company
Newport News Shipbuilding and Dry Dock Company
Monroe Auto Equipment Company
Walker Manufacturing Company
J.I. Case Company
Packaging Corporation of America
Tenneco West, Inc.
Tenneco Realty, Inc.
Tenneco Minerals Company

TERADYNE INC.

TESORO PETROLEUM CORPORATION
Tesoro Alaska Petroleum Company
Tesoro Alaska Pipeline Company
Tesoro Bolivia Petroleum Company
Tesoro Exploration and Production Company
Tesoro Indonesia Petroleum Company
Tesoro Petroleum Companies, Inc.
Tesoro Petroleum Distributing Company
Tesoro Refining, Marketing & Supply Company
Tesoro Tarakan Petroleum Company

TEXAS INSTRUMENTS INC.

TEXTRON INC.
Bell Helicopter Textron Inc.
Avco Corporation
Avco Financial Services, Inc.
Textron Financial Corporation
Paul Revere Life Insurance Company

THOMAS INDUSTRIES INC.
ASF Thomas Industries
Brey
Builders Brass Works
C&M Products
Commercial/Industrial Lighting Division
Electronic Division
Emco, Inc.
Gardco Lighting
Lumec, Inc.
Oliver Macleod Ltd.
Pneumotive

Portland Williamette
Power Air Division
Residential Lighting Division
Belvedere Lighting Center

THOMAS J. LIPTON, INC.
Lawry's Foods, Inc.
Good Humor Corporation

THREE COM CORPORATION

THRIFT DRUG, INC.
Express Pharmacy Services
Specialized Pharmacy Services
Thrift Drug Services, Inc.

TIMEX CORPORATION

TJX COMPANIES, INC.
The TJX Operating Companies, Inc.
Hit or Miss, Inc.
Chadwick's of Boston, Ltd.

TOKHEIM CORPORATION
Tokheim Investment Corp.
William M. Wilson's Sons, Inc.
Electronic Flo-Meters, Inc.
Sunbelt Hose & Petroleum Equipment Co.
National Controls Corporation
Tokheim of Canada, Ltd.
Tokheim B.V.
Tokheim GmbH

TOM BROWN INC.

TRANS WORLD AIRLINES

TRANSAMERICA CORPORATION

TRAVELERS COMPANIES

TRIBUNE COMPANY
Chicago Tribune Company
New York News Inc.
Tribune Broadcasting Company
Q & O Paper Company Ltd.

TRINOVA CORPORATION
Aeroquip Corporation
Vickers, Incorporated

TRW INC.

TU ELECTRIC
Dallas Power & Light Division
Texas Electric Service Division
Texas Power & Light Division

TURNER CORPORATION
Turner Construction Company
Turner Development Corporation
Turner International Industries, Inc.

UAL CORPORATION
United Airlines, Inc.

UJB FINANCIAL CORP.
United Jersey Bank
United Jersey Bank/Commercial Trust
United Jersey Bank/Central, N.A.
United Jersey Bank/South, N.A.
United Jersey Bank/Northwest
United Jersey Bank/Mid State
United Jersey Bank/First Colonia
First Valley Corporation
First Valley Bank
Hanover Bank of Pennsylvania
Lehigh Securities Corporation
The Hazelton National Bank
Gibraltar Corporation of America
Richard Blackman & Co., Inc.
Trico Mortgage Compay, Inc.

UNIGARD SECURITY INSURANCE COMPANY
Unigard Insurance Company
Unigard Indemnity Company
Unigard Service Corporation

UNION BANK
Market Investment Services Corp.

UNION CARBIDE CORPORATION

UNION PACIFIC CORPORATION
Overnite Transportation Company
Union Pacific Railroad Company
Union Pacific Resources Company
Union Pacific Realty Company
USPCI, Inc.

UNIROYAL, INC.

UNISYS CORPORATION
Unisys Finance Corporation

UNITED FINANCIAL GROUP INC.
United Savings Association of Texas

UNITED INDUSTRIAL CORPORATION
AAI Corporation
Detroit Stoker Company
Neo Products Company

UNITED PARCEL SERVICE OF AMERICA

UNITED SERVICES AUTOMOBILE ASSOCIATION

UNITED STATES SHOE CORPORATION

UNITED STATIONERS, INC.
MicroUnited Inc.
United Stationers Supply Co.

UNITED TECHNOLOGIES CORPORATION
Carrier Corporation
Otis Elevator
United Technologies Automotive Holdings, Inc.
Hamilton Standard
Norden Systems
Pratt & Whitney Aircraft
Sikorsky Aircraft

UNITED TELECOMMUNICATIONS, INC.

UNIVAR CORPORATION
Van Waters & Rogers, Inc.

UNIVERSAL FOODS CORPORATION
Universal Frozen Foods - an Oregon corporation
Universal Flavors Corporation - an Indiana corporation

UNOCAL CORPORATION

UNUM CORPORATION
UNUM Life Insurance Company
UNUM Life Insurance Company of America
First UNUM Life Insurance Company of America

USX CORPORATION
Marathon Oil Company
Marathon Petroleum Company
Quebec Cartier Mining Company
Texas Oil & Gas Corp.
Delphi Gas Pipeline Corporation
TXO Production Corporation
U.S. Steel Mining Co., Inc.

VALLEY NATIONAL CORPORATION

VAN DEN BERGH FOODS COMPANY

VAN DORN COMPANY
Central States Can of Puerto Rico, Inc.
Central States Can of Canada Ltd.

VENTURE STORES, INC.

VF CORPORATION
Bassett-Walker, Inc.
Lee Company
Modern Globe
Vanity Fair Mills, Inc.
VF International Division, Inc.
Red Kap
Vassarette
Wrangler/Rustler
Jantzen/JanSport

VISTA CHEMICAL COMPANY

VOLKSWAGEN OF AMERICA, INC.

VULCAN MATERIALS COMPANY
Statewide Transport, Inc.
Vulcan Gulf Coast Materials, Inc.
Vulcan Lands, Inc.

WABAN INC.
BJ's Wholesale Club
HomeClub, Inc.

WAL-MART STORES, INC.
Sam's Wholesale Clubs

WARNER COMMUNICATIONS INC.
Warner Bros. Inc.
Warner Cable Communications Inc.
Warner Bros. Records Inc.
Atlantic Recording Corporation
Elektra/Asylum/Nonsuch Records
Warner-Elektra-Atlantic Corporation
Warner Publishing, Inc.

WARNER-LAMBERT COMPANY
Parke, Davis & Company

WASHINGTON ENERGY COMPANY
Washington Natural Gas Co.
Thermal Energy, Inc.
Thermal Efficiency, Inc.
Thermal Exploration, Inc.

WASHINGTON MUTUAL SAVINGS BANK
Benefit Service Corporation
Columbia Services, Inc.
Composite Research & Management Company
Murphey Favre, Inc.
Mutual Travel, Inc.
Washington Mutual, A Federal Savings Bank
Washington Mutual Insurance Services, Inc.
WM Life Insurance Company
WM Trust Company

WATKINS-JOHNSON COMPANY

WEIRTON STEEL CORPORATION

WELLS FARGO & COMPANY
Wells Fargo Bank, N.A.

WEST POINT-PEPPERELL, INC.
Cluett, Peabody & Co., Inc.

WESTERN CAPITAL INVESTMENT CORPORATION
Bank Western Federal Savings Bank
WestAmerica Mortgage Company
Field Real Estate Company
Western Insurance Service, Inc.
Teton National Insurance Company
Field Investment Corporation
Westline Credit Corporation

WESTINGHOUSE ELECTRIC CORPORATION

WETTERAU, INC.
Fox Grocery Company
Hazelwood Farms Bakeries, Inc.
Laneco, Inc.
Shop 'N Save Warehouse Foods, Inc.
Wetterau Builders, Inc.
Wetterau Finance Company

WEYERHAEUSER COMPANY

WHIRLPOOL CORPORATION

WHITE CONSOLIDATED INDUSTRIES, INC.

WHITTAKER CORPORATION
Whittaker Bioproducts, Inc.
Whittaker Controls, Inc.

A. L. WILLIAMS CORPORATION
A.L. Williams Life Insurance Company
First American National Securities

WILLIAMS COMPANIES
Northwest Pipeline Corporation
Williams Gas Marketing Group, Inc.
Williams Natural Gas Company
Williams Pipe Line Company
Williams Telecommunications Group, Inc.

WILLIAMS PATENT CRUSHER & PULVERIZER COMPANY

WILLIAMSON COMPANY

WILSON BENNETT, INC.

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WILSON FOODS CORPORATION
Anderson Meat & Provisions, Inc.
Fischer Packing Company
Wilson Certified Express, Inc.
Toppers Meat Company
Gourmet America, Inc.
Pafco Importing Company
T&P Custom Marketing, Inc.

WINNEBAGO INDUSTRIES, INC.

WISCONSIN ENERGY CORPORATION
Wisconsin Electric Power Company
Wisconsin Natural Gas Company
Wisconsin Michigan Investment Corporation
WISPARK Corporation
WITECH Corporation
Badger Service Company

WISCONSIN PUBLIC SERVICE CORPORATION

WITCO CHEMICAL CORPORATION
Continental Carbon Company
Aero Oil Company, Inc.
Argus Chemical Corporation
Beam Oil Company, Inc.
Pearsall Chemical Corporation
Southwest Petro-Chem., Inc.
The Richardson Company
Witco Oil and Gas Corporation

WOLD OIL & GAS COMPANY

WOLVERINE WORLD WIDE, INC.
Brooks Shoe, Inc.
Town & Country Shoe, Inc.

WOODWARD GOVERNOR COMPANY

WORK WEAR CORPORATION, INC.
Work Wear Corporation of Canada Ltd.
Mars White Knight

WORTHINGTON INDUSTRIES, INC.
The Worthington Steel Companies
Worthington Cylinder Corporation
Buckeye Custom Products, Inc.
Buckeye Steel Castings Company

WYLE LABORATORIES
Burton Electrical Engineering
Electronic Enclosures
Electronics Marketing Group
Scientific Services & Systems Group

XEROX CORPORATION
Crum & Forster

ZENITH ELECTRONICS CORPORATION
Zenith Data Systems

ZURN INDUSTRIES, INC.

(1) Title: Arbitration in Disputes of Patent Matters and Famous International Arbitration Rules

(2) Date: October, 1992 (23rd General Assembly in Okayama)

(3) Source

(1) Source : PIPA
(2) Group : Japan
(3) Committee: 4

(4) Authors:

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(5) Key words: Patent, arbitration, interpretation

(6) Statutory provisions:

Article 786, Code of Civil Procedure

(7) Abstract: Arbitration is one means to resolve civil disputes over intellectual properties. Legal issues related to practical aspects of arbitration organs, usefulness of arbitration, and problems regarding arbitration under Japanese laws are discussed.

1. Arbitration and Litigation

As the two polarized means of settling civil disputes, there are litigations asking for judgement of the court, a national authoritative organ and compromises where each party makes concession to cease the dispute. In between these two are arbitrations, mediations and compromises before the court.

Arbitration is a proceeding where parties agree to comply with the arbitration award rendered by the arbitrator selected by the agreement of parties and the arbitrator takes steps based on the agreement.

Arbitration award has the same force and effect as the

final and conclusive judgement of the court (Article 800 of the Code of Civil Procedure). In order to obtain a title of debt, an execution judgement is required (Article 802, Code of Civil Procedure). If an action is brought to a court regarding the rights despite the arbitration agreement therefor, the defendant may argue its presence and the action will be rejected as without benefits.

Agreements to arbitrate can be classified into two types depending on the time when the dispute occurred; arbitration agreements concluded as the arbitration clause of a license agreement or a subcontract agreement by anticipating disputes, and arbitration agreements intended to resolve the disputes after a dispute had occurred. Arbitration agreements can also be classified into two types; the so-called ad hoc arbitration where parties establish an arbitration court every time a dispute occurs and the institutional arbitration where parties entrust the matter to institutions administering arbitration.

There are opinions that such arbitration system is often more suitable for resolving disputes over intellectual properties than litigation. One of the reasons is that in such disputes the scope of the plaintiff's right and the defendant's act must be recognized, that this recognition sometimes requires expertise knowledge which is beyond the normal burden of a judge, and that experts of the relevant field can be appointed as the arbitrators in arbitration proceedings.

This paper focuses on the usefulness of arbitration organs as viewed by Japanese corporations and evaluates arbitration and international arbitration rules.

In this paper, references made to the legal system are the

references to Japanese laws unless specifically mentioned otherwise.

2. Comparison of Famous Arbitration Institutions

JCA (Japan Commercial Arbitration Association)

Commercial Arbitration Rules June 1, 1991

AAA (American Arbitration Association)

Patent Arbitration Rules November 1, 1988

ICC (International Chamber of Commerce)

Rules of Arbitration January 1, 1988

London Court of International Arbitration

London Court of International Arbitration Rules

January 1, 1985

United Nations Commission on International Trade Law

Uncitral Arbitration Rules April 28, 1976

Out of these well known rules, we selected the rules of JCA, AAA and ICC of availability of materials and examined their differences.

(1) Initiation Procedure

JCA: Submit the request with the prescribed administrative fee to JCA (Article 7)

AAA: Notify the other party of its the intention to arbitrate and file the notice with the prescribed fee at any regional office of AAA (Article 7)

ICC: File Request for Arbitration at the Secretariat of the ICC Court or National Committee (Article 3)

(2) Place of Arbitration

JCA: Parties agree to choose JCA Headquarters or its branch office (Article 14)

AAA: Parties agree and arbitrarily decide (Article 11)

ICC: Parties agree and arbitrarily decide; failing agreement, ICC Court decides (Article 12)

(3) Language

JCA: No provision to limit the language to Japanese. The award shall be written in the Japanese language and the English language if so requested (Article 37). A Japanese language translation shall be attached to a document in a language other than the Japanese language (Article 39).

AAA: No relevant provision

ICC: Arbitrators decide (Article 15)

(4) Expenses

Assuming that the claimed amount is ¥50 million ($400,000; $1=¥125) and one arbitrator is appointed;

JCA: Filing fee; ¥50,000, Administrative fee; ¥800,000
Hearing fee; ¥30,000/session,
Expenses (witnesses, interpreters, etc.)
Arbitrator's fee

AAA: Administrative fee: ¥340,000
Expenses (witnesses, interpreter, etc.)
Arbitrator's fee

ICC: Administrative fee; ¥1 million
Arbitrator's fee; ¥1 million to ¥2.13 million

*Japanese litigation: Filing fee; ¥260,000
Expenses (witnesses, interpreter, etc.)

(5) Appointment of Arbitrators

JCA: By the agreement of parties (Article 16)

A resident in Japan if selected by JCA (Article 15)

A person of a different nationality from those of both parties if the parties so request and appointed by JCA (Article 20).

A list of arbitrators is prepared for the convenience of selection (Article 5).

AAA: Selected by the agreement of parties (Article 14)

Selection from the list of arbitrators if selected by AAA (Article 13).

A person of nationality different from any of the parties if the parties so request is appointed by AAA (Article 16).

*The 1990 list carries names of 58,000 persons (Orlando Business Journal, Feb. 1990)

ICC: Selected by the agreement of parties (Article 2)

A person recommended by the national committee if selected by ICC (Article 2)

(6) Term of Arbitration

JCA: Between 20 to 24 months (if the other party appears at the tribunal) (JCA)

AAA: 190 days on average (Orlando Business Journal, Feb. 4, 1990)

ICC: The term is for 6 months and is extendable (Article 18)

(7) Not Open to the Public

JCA: "The proceedings of the hearing shall be closed to public" (Article 30)

AAA: "The arbitrator shall maintain the privacy of the hearings unless the law provides to the contrary" (Article 25)

ICC: No definite provision

(8) Disclosure of Evidence

JCA: "The tribunal may, when it deems necessary, request the submission of evidence or voluntary appearance of a witness or an expert witness" (Article 26)

"The tribunal shall not request a witness or an expert witness to take oath" (Article 26)

"The tribunal may, when it deems necessary or when there has been a petition from a party, make inspection or investigation in the presence of parties" (Article 27)

*The tribunal as used herein means arbitrators.

AAA: The arbitrator may subpoena a witness or ask for submission of a document when authorized by the law (Article 31)

ICC: There is no provision regarding forced examination of evidences.

Article 796 of the Japanese Code of Civil Procedure provides that "The act judged as necessary by the arbitrator which the arbitrator cannot perform may be performed by the court upon request of the party; provided, however, the request is deemed as reasonable", indicating that cooperation from the court is available if the party so requests.

It is our understanding that Article 7 of Federal Code of Arbitrations and Section 7505 of New York State Civil Practice Law and Rules give the authority to arbitrators to issue subpoena and subpoena ducestecum.

(9) Representation

JCA: "Attorney at law or any person recognized to have a

valid reason to represent the party may be appointed as a representative" (Article 6)

AAA: "Any party may be represented by a counsel" (Article 22)

ICC: "Parties may present themselves or have legal representative to represent them" (Article 15)

(10) Statistics; number of arbitration cases

JCA: <1990> New cases; 9

<1991> New cases; 6, Disposed cases; 20

<May, 1992> Pending cases; 15

(Source: JCA)

AAA: <1987> Disposed cases; Patent Rules 2, Commercial Rules, 27

<1988> Disposed cases; Patent Rules 4, Commercial Rules, 57

<1989> Disposed cases; Patent Rules 4, Commercial Rules, 63

(Source: PIPA ESPE Oct., 1990)

<1991> Disposed cases; Arbitration about 14,000 cases including 262 international cases

(Source: JCA)

ICA: <1990> Disposed cases; 288

(Source: JCA Journal July, 1992)

New cases; 365

(Source: JCA Journal March 1992)

<1991> Disposed cases; 288

(Source: JCA Journal July, 1992)

3. Usefulness of Arbitration

The arbitration system and the civil proceedings at court are compared in view of expediency of dispute settlement, economicalness, fairness of judgement, confidentiality, and disposing of international disputes.

As the arbitration system provides only one chance of trial while the litigation system provides three chances, the former is assumed to give more expedient judgement. There are no other differences that would clearly distinguish the two. When compared to Japanese trials, aribitration may take somewhat less time.

The statistics published by the Supreme Court (see note) does not reveal the time taken from the filing to start of trial nor the frequency of hearings. While 239 cases or about 2/3 of 361 cases, the total number of cases, received judgement within three years, there are 122 cases that took more than three years. Seeing that 125 cases received judgements, we assume that the average period of time up to rendering of a decision is at least 4 years if it is disputed. It then transpires that JCA arbitration takes 20 to 24 months in a case where the other party disputed the case as mentioned in Section 2(6). Thus, arbitration appears to take a shorter time to resolve disputes. In practice, the complexity of the case affects the time if takes, and it may not be reasonable to decide which is more readily handled based on the statistics that do not reflect the content of the case.

If necessary period was the same, economicalness would not be much different. In an institutionalized arbitration, the total costs include the administrative cost paid to the institu-

tion, the fee paid to the arbitrator, and the attorneys' fees for the parties whereas those for the litigation include the official stamp fees paid to the court and the attorneys' fees for the parties.

In Section 2(4), the administrative fees were calculated for a case where the claim was ¥50 million. Compared to the official stamp fees, the cost for arbitration becomes about 4 times greater. However, the attorneys' fees and various expenses account for a large percentage of expenditures in the actual case. When these expenses are included, they would make differences in time and work load, thus making it difficult to compare arbitration and litigation in simple terms.

As for fairness of a judgement, general impression is that judges are fair and neutral. While an arbitrator may be an expert of the relevant field, one tends to think that the arbitration judgement for just once may be too much of a risk when one thinks of a possible inadvertence in hearing procedures and incomplete examination of evidences. In addition, operation of an arbitration institution depends on fees received for the cases that they handle. Thus, if one of the parties was a regular customer, that party may possibly receive a preferential treatment.

In the litigation, strict trial procedure is observed and evidences are examined by exercising coercion based on the obligations of a witness or an expert, etc. Arbitrations, on the other hand, examine evidences under ambiguous rules of proceedings without any coercion as a rule. This difference may affect equitability of a judgement.

Confidentiality can be maintained by arbitration as the dispute is not disclosed to third parties.

For disposal of an international dispute, the parties can expect neutral judgment by choosing a third country that is not related to both parties as the venue. It is meaningful to choose general arbitration rules in the case when a party is not familiar with the litigation system of the other party's country. If the country is a member to "Treaty Regarding Approval and Execution of Foreign Arbitration Award (1958)", the approval and execution of the arbitration award can be obtained without problems.

(NB) According to 1990 Annual Judicial Statistics, of 112,140 cases tried as ordinary litigations of the first instance by district courts in 1990, there were 361 cases related to intellectual property rights. These 361 cases can be classified as below.

[Details of decisions]

Judgement rendered in 125 cases; ruling in 11 cases, compromise in 157 cases; admission in one case; and withdrawl in 60 cases

Details of judgement

Acknowledged in 46 cases; dismissed in 79 cases; rejected in none.

[Period required to receive decision]

Up to	one month	9 cases
	Two months	12 cases
	Three months	10 cases
	Six months	25 cases
	One year	44 cases
	Two years	83 cases

	Three years	56 cases
	Four years	38 cases
	Five years	33 cases
More than five years		51 cases

[Value of the object of litigation]

Up to	¥900,000	7 cases
	¥1,200,000	8 cases
	¥1,500,000	4 cases
	¥2,000,000	10 cases
	¥2,500,000	3 cases
	¥3,000,000	8 cases
	¥5,000,000	31 cases
	¥10,000,000	68 cases
	¥50,000,000	130 cases
	¥100,000,000	34 cases
More than ¥100,000,000		42 cases
Incalculable * Non-property right		16 cases

4. Legal Issues in Arbitration

There are several legal issues regarding arbitration. Two issues for which there are no judicial precedents or clearly accepted rules are discussed below.

4-1: Attorney in arbitration case

Article 72 of the Lawyers' Law defines that "those who are not lawyers shall not handle or mediate legal businesses such as rendering expert opinion, acting as an attorney, arbitration or conciliation in general legal cases, etc.... for fee".

According to interpretation by Japan Federation of Bar Associations, "legal cases" are not restricted by Japanese laws, and therefore if the provision was strictly and literarily interpreted, a conclusion is drawn that arbitrators and attorneys for the parties in arbitration cases conducted in Japan should be the lawyers qualified in Japan.

We understand that JCA's list of arbitrators, however, enumerate names of persons who are not lawyers, but that the Japan Federation of Bar Associations has not issued any letters of warning regarding this fact.

We also understand that attorneys so far appointed in JCA arbitration cases have been Japanese lawyers.

According to Article 2 of the Law for Special Measures Regarding Handling of Legal Businesses by Foreign Lawyers (hereinafter the Law Related to Foreign Lawyers), foreign lawyers are defined as "those engaged in the business of legal matters in a foreign country who are equivalents of lawyers", and solicitors of foreign laws are defined as "those who have obtained the approval under Article 7 and whose names are registered under Article 24".

Article 3 of the Law Related to Foreign Lawyers defines that "solicitors of foreign laws shall engage in the business of legal affairs related to the country of original qualification upon request of the party and other related persons or commissioned by the government organs and agencies. Provided, however, this does not apply to performing the following legal businesses...." According to this provision, Article 72 of the Lawyers' Law is interpreted as exceptions that a foreign

solicitor may be appointed as an arbitrator and attorney regarding a dispute which designates the laws of the country of origin as the competent laws.

In arbitrations where Japan is designated as the place of arbitration, Article 786 et seq of the Code of Civil Procedure which govern arbitrations in Japan become relevant. Then, a question arises if a foreign solicitor can act as an arbitrator and attorney in a dispute where the law of its original country is designated as the governing law. The authors have not yet ascertained this point.

We also do not know if other countries have the legal provision similar to Article 72 of Japan's Lawyers' Law.

4-2: Effectiveness of Arbitration Award

There is a discussion regarding authority of arbitration or whether an arbitration award based on invalidity of an industrial property right can be rendered.

In Japan, there is an issue of interpretation of Article 786 of the Code of Civil Procedure; "The agreement to have one or more arbitrators render a judgement in a dispute is valid only when the parties have the right to reach conciliation about the object being disputed."

"Compromise" is made "by the parties agreeing to cease a dispute between them by making concessions" according to Article 695 of the Civil Code. "Dispute" is a conflict of assertions regarding the presence/absence, scope, amount, mode of rights/obligations and legal relations. "Concession" is abandoning a part of them. Abandon is a disposal made by the will to abandon by the party abandoning. Therefore, the matters that can be

conciliated should be those that can be disposed by the parties based on their will alone.

Thus, there remains a problem regarding arbitration of industrial properties whether the parties have the right to handle the industrial property right in question as invalid, the industrial property right accruing by the administrative disposition.

It is possible to find references that simply state that an arbitration award based on the invalidity of an industrial property right cannot be rendered.

We believe that the opinion to affirm appropriateness of an arbitration is more persuasive and prevalent. The opinion states that the effect of an arbitration award extends only to the parties that concluded an arbitration agreement, that the industrial property right is not really invalidated but it is treated as invalid by the parties, and that no administrative judgement is required for an agreement between the parties in the light of freedom of contract. The parties naturally have a right to deem an industrial property right as invalid between them. Therefore, they also have the right to make the validity of an industrial property right as the object of arbitration.

There is no decision that is related to this issue. JCA says that judging appropriateness of arbitration such as above is entrusted to arbitrators and that cases related to such a matter are acceptable.

There was a similar question raised in the United States. This matter was settled by a paragraph in 35 U.S.C. 294(1) which became effective on Feb. 27, 1983 holding that an arbitration agreement in a dispute over validity of a patent and infringe

ment was valid. An arbitration award becomes more effective by giving a notice to the Patent Office.

5. How PIPA Conciliation Should be Performed

Mediation (conciliation) is performed by the parties asking a third party to draft a conciliation agreement (proposed mediation) over a dispute between them. To accept such a draft conciliation agreement or not can be decided by the parties after the draft is actually submitted. When the result of conciliation is submitted to a Summary Court and recorded as a statement under Article 356 of the Code of Civil Procedure, it generates the same effect as the final and conclusive judgement.

PIPA's conciliation system provides conciliation rules as a conciliation organ, not as an arbitration organ. The fact that parties are not bound by it is its merits as well as demerits. Considering the current situation that this system has not been utilized even once since its inception in 1975, we may have to review its meaning of presence.

6. Conclusion

The subject of arbitration was taken up by AIPPI Tokyo Assembly in April, 1992 and by the meeting of Working Group of Non-governmental Organizations on Arbitration and Other Extra-judicial Mechanisms for the Resolution of Intellectual Property Disputes between Private Parties indicating mounting interests in international circles. In this context, this report is deemed to be timely.

The report describes the result of the review made by

our Committee in the first half of 1992 and is published with a wish to be useful in resolving problems.

(1) Title: Relation Between Selection Invention and Dependent Invention

(2) Date : 10/92 (23rd, Okayama)

(3) Sources

1) Source : PIPA
2) Group : Japan
3) Committee: 4

(4) Authors:

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(5) Key words: Dependent Invention, Selection Invention

(6) Statutory Provisions:

Articles 72 and 92 of Japanese Patent Law

(7) Abstract: Criteria for judging patentability of a selection invention have substantially been established by many dissertations and in daily practices. The prevailing theory that a selection invention once it is patented assumes a form of dependent invention and Articles 72 and 92 of Japanese Patent Law become applicable thereto is not considered to have been irrevocably established.

This paper reviews the relationship between a selection invention and a dependent invention in the light of the academic theories and past judgements, a most interesting subject for practitioners, examines presence/absence of dependency between an invention that may be patented as a selection invention and a prior patented invention, categorization between these two inventions, and [illegible]fy these relation.

1. Introduction

Article 72 of the [illegible]ty defines a dependent invention as one mode of an [illegible] made subsequent to a prior patented invention. Since a myriad of papers and materials define a dependent invention, its definitions may now be considered as firmly established. One definition is explained

briefly below.

* A dependent invention is an invention which utilizes a patented invention related to a prior application, and which cannot be reduced to practice unless the prior patent invention is practiced. There are two types of dependent inventions.

One is a dependent invention in thinking. It covers the entire gist of the prior invention, makes use thereof in its entirety, and falls within the technical scope of the subject of the patent to which the prior application is related. There is, on the other hand, a dependent invention in a practical sense. Such inventions include, for instance, a dependent invention of an article that uses an article related to a patented invention (patented article) and a patented invention related to a method of producing the patented article.(*7)

When a dependent invention is patented and a patent right accrues, practicing of the invention under said right is restrained by prior patented inventions. There is, however, a provision for relief from such restraint in the light of the intent of the Patent Law. More concretely, it is possible to ask the patentee, etc. of the prior patented invention for an agreement to grant a non-exclusive license, and failing such agreement, it is possible to ask for a judgement of the Director-General of the Patent Office.

It is also clear in theory and practice that there exists a selection invention as another mode of an invention made subsequent to a prior invention apart from the dependent invention.

Similarly to the dependent invention, a selection invention can be defined as follows.

* A selection invention is a concept incorporated in the superior concept of a prior invention (lower concept) all or part of which components are comprised of a general concept (superior concept), and corresponds to an invention which selects a thing that is not concretely embodied in the specification of a prior invention or in a reference. Affirmative judgement of the height of an invention is made if the invention achieves remarkable effects that are not disclosed in the specification of the prior invention or in references.(*1)

In practice, judging the patentability of a selection invention is considered to rely on a set of standards established by many dissertations and daily practices. The prevailing theory that when a selection invention is patented and becomes a dependent invention and Articles 72 and 92 of the Patent Law are invariably applied cannot be said as having been established currently. However, this issue is most interesting in practice.

This paper reviews academic theories and past judgements, classifies several pairs of prior patented inventions and selection inventions into categories, and examines the presence/absence of their dependency relation. Concretely speaking, we examined a use relation between an invention that is possibly recognized as a dependent invention and a prior patent invention, and attempted to categorize them, although we may be merely assuming.

2. Discussion of Academic Theories

Academic discussions are diverse and divided as to whether a selection invention which had been patented becomes a dependent invention or not because we lack a clear-cut legal theory.

A thinking that a selection invention does not hold a dependent relation to a prior patented invention is known as "a loophole theory". According to this thinking, if a selection invention is patentable, that portion is an incomplete part (void) in the prior patented invention, and therefore they are two separate inventions, and the right of the prior patented invention does not extend to the relevant part (selection invention)(*1,*2).

There are also theories of Uchida(*3), Yoshida(*4), Matsumoto(*5) which consider that there is no dependency relation between the selection invention and the prior patented invention (the selected invention).

The theories which affirm the dependency of the selection invention, on the other hand, include the following.

(1) A selection invention, as a rule, is always subordinate to a basic inclusive invention and is therefore a dependent invention(*6).

(2) When a selection invention is practiced, the selected invention is inevitably practiced. Thus a selection invention is always dependent on the selected invention as the basic invention(*7).

(3) It is reasonable to consider a selection invention as an additional element to a prior patent, and to affirm the dependency(*8).

The third thinking asserts that whether a selection invention which was patented is a dependent invention or not should be determined on a case-by-case basis.

For instance, Yoshifuji recognizes the following as a case where a selection invention was not a dependent invention; "the prior invention is related to a method of manufacturing a chemical substance which is a superior concept; the invention was patented because of the analgesic effects of the object substance. The posterior invention which corresponds to the lower concept is patented not because of the analgesic effects of the object substance but because of its coloring property." And yet, he states that "to deny the dependency for all of the selection inventions unreasonably limits the protection of the basic invention and is clearly against the intent of Article 72. In sum, the presence/absence of a dependency relation should be judged by the content of the selection invention."(*1)

As above mentioned, Matsumoto states that "the selection invention falls within the scope of patent claims of the prior invention. The selection invention was, however, patented because it exceeded the scope recognized as an invention by the inventor of the prior invention, and the protection of the prior invention extends only to the scope recognized by the inventor. Based on such thinking, a selection invention is separate and independent from the prior invention, and lacks a dependency relation or it does not fall within its technical scope." And yet he further states that "determination of whether there is a dependency relation between a selection invention and a prior invention cannot be made unilaterally, but should be judged on a case-by-case basis."(*5)

3. Discussion of Past Decisions

There are only very few court decisions that judged whether a selection invention is dependent on a prior patented invention or not. "Case of Edge Cutting and Conveying Device" (Osaka District Court Decision Sho 48(wa)3834 rendered on January 24, 1975) is one of such rare examples. This case involved a dispute whether the cutter/conveyor manufactured and sold by the defendant infringed the plaintiff's patent on "Edge Cutting and Conveying Device" for plastic film or other band-like members.

The plaintiff's patented claim was related to "a cutting and conveying device for edges of plastic film and other band-like members characterized in that (1) a rotary shaft is provided in a suction type or injecting type air conveying path utilizing the pressurized air without penetrating the path, (2) one or more rotary cutting knives which cross perpendicularly the air passing through the path and rotate around the rotary shaft are suspended and supported across the path, (3) one or more cutting knives corresponding thereto are provided fixedly on a portion of the peripheral side of the path, and (4) conveying by the air stream inside the air conveyor path crossing the path and discharging of cut pieces are automatically performed.

The defendant's article (device), on the other hand, is related to;

"a cutter/conveyor for band-like materials such as plastic film wherein (a) a cutting chamber corresponding to vertical rotation of a rotary cutting knife is provided at the center of the air conveying path, a rotating chamber having a shape not penetrating the said air conveying path is suspended inside the cutting chamber, (b) two rotary

cutting knives which perpendicularly cross the air inside the path and rotate around the rotary shaft are provided on the rotary shaft in such a way that the knives cross the path, (c) the fixed cutting knives corresponding to the rotary knives are provided on the bottom of the path, (d) the air flowing in the path is obstructed only by the rotary knives that cross the path, and (e) the diameter of the frontal portion (on the material supply side; the inner diameter of 80 mm) of the air conveying path formed by the cutting chamber being communicated with the front path is made extremely smaller than that of the rear portion of the air conveying path."

When the plaintiff's patented article and the defendant's article are compared, the latter (device) has the elements (1) to (4) of the former;

(1) there are provided an air path and a rotating shaft which is suspended inside the path, the axis without penetrating therethrough,

(2) there are provided one or more rotary cutting knives (two in the defendant's device) which are perpendicular to the air passage in the path and suspended and supported across the path,

(3) fixed cutting knives corresponding to the rotary cutting knives are provided on a portion of the peripheral side of the path (the bottom in the defendant's article),

(4) the only obstacle for the air stream is the said cutting knives which are suspended across the path;

and the diameter of the frontal portion of the path of the rotary cutter of the air passage is made extremely smaller than

that of the rear portion of the path (the factor 5).

The plaintiff's patented invention only discloses a device where the diameters of the front and the rear paths are the same. Thus, in the present case, the defendant's device has the same components as the prior invention with one of such elements being improved, thus falling in the category of so-called selection invention of the prior patent invention.

By adding the element 5 to this device, the defendant asserted that "the defendant's article can instantaneously stop the air flow by entirely closing the path with the rear part of the rotary cutting knives whereas the plaintiff's patented invention rotary cutter fails to stop the air flow by intercepting the conveyor path. While the patented invention enables rapid and efficient cutting, the defendant's article enables slowing down of the speed of suctioning the materials to be supplied and cutting the material in smaller pieces."

The decision taught the following in this case. "To make the inner diameter of the frontal portion of the air conveyor path exceedingly smaller than that of the rear portion of the path or to make it smaller than the rotary cutting knife is a matter of practically carrying out the invention. Even when the diameter is made as small as above, the description is recognized to cover all of the component elements of the patented invention, and therefore falls undeniably within its technical scope. If a specific ratio for the relation between the inner diameter of the front air path and that of the rear portion of the path is observed to demonstrate specific operational effects, and if this ratio is recognized as having a sufficient inventive height, there can possibly be a so-called

selection invention in respect of the technical thought on which the ratio is based. However, since there is observed also the dependency relation (subordinate relation) to the present patented invention, the defendant is deemed not authorized to perform the selection invention since there is no assertion or proof of having obtained the approval of the owner of the present patent."

The decision thus taught that there is recognized a dependency relation (subordinate relation) with the basic patented invention in spite of possible presence of a selection invention, thus clearly showing that there is a dependency relation between the selection invention and the prior patented invention.

[Refer to the attachment "Outline of Decisions"]

4. Dependency Relation Between Selection Invention Models and Basic Invention

In view of the limited number of past decisions related to the subject of this paper, it is difficult to deduce general rules regarding the dependency relation of the selection invention from the past decisions. We therefore assumed virtual selection inventions of several categories, and reviewed the dependency relation between these selection inventions and the prior inventions in order to reach at a perfunctory conclusion for the subject of this study.

[1] When the prior patent invention is related to an invention of a device or an article, and the selection invention is related to an invention of a device or an article which is a lower concept:

The above mentioned decision falls subject to this case. In this case, the defendant's device was selected out of the upper concept, and the diameter of the front and the rear portions of the air conveyor path that is not concretely described in the plaintiff's invention is modified and achieved the above mentioned effects, thus holding the status of a selection invention to the defendant's patented invention. However, the said device has all the elements (1) to (4) of the plaintiff's patented invention to thereby enable automatic conveying of the cut edges by the air flow inside the air conveyor path and dischargeing of cut pieces that are the effect of the plaintiff's patented invention. Thus it may be said that the said device uses all of the objectives, construction and effects or the technical thought of the prior patent invention, and there is clearly a relation of dependency between the two inventions.

In the case of devices, an invention of a lower concept or a selection invention device has all the elements of the prior patent invention at all times and additionally new functions or effects. It is therefore considered that selection inventions always hold the relation of dependency to the prior invention in case where the invention is related to devices.

[2] When the prior patent invention is related to a chemical substance and the selection invention is related to a chemical substance of a lower concept:

If there is no concrete disclosure in the prior

patented invention of a chemical substance presented as an upper concept, and if an invention of a chemical substance of a lower concept which has specific properties that are not anticipated from the former substance or the identical, or anticipated properties of the latter are exceedingly superior, such invention is not held to be identical but held as having the inventive height. Thus, the latter invention is to be patented as a selection invention.

This may not be a realistic example, but let us take the example of aromatic compounds with a benzene ring as the basic skeleton as an invention of upper concept. The prior patented invention of the upper concept is related to a novel compound of which plural substituents at specific positions of the basic skeletal compound are selectively substituted with hydroxyalkyl group and one of the effects of said novel compound is the vitamin activities. On the other hand, let us assume a chemical compound A of the lower concept also having a benzene ring as its basic skeleton and all of its plural substituents at specific positions have the combinations of specific hydroxyalkyl groups which are not concretely disclosed in the specification of the prior patented invention. Since the invention of the lower concept demonstrates several times more intense vitamin activities than the prior patented chemical substance, the former can be recognized as a selection invention. If we were to discuss the relationship of dependency regarding this selection invention, since the above mentioned selection invention

demonstrates similar effects as those demonstrated by the prior patented invention, it is clearly a technical thought which is based on the technical thoughts having the same structure, purposes and effects as the basic invention. Therefore, the selection invention is considered as a dependent invention of the above mentioned prior patented invention.

As another selection invention, there is an invention for a chemical substance B which also corresponds to a lower concept of the above mentioned prior patented invention but is different from the above mentioned chemical substance A which is also a lower concept. We shall examine the dependency relation of this selection invention which lacks vitamin activities and of which insecticidal effect is different from the prior patented invention.

If a chemical substance other than the chemical substance B which is included in the prior patented invention has no substantial insecticidal property but only has the vitamin activities and the chemical substance B substantially has no vitamin activities, the chemical substance B of the selection invention will demonstrate effects that are different from the basic invention. Therefore, the two inventions are considered to be based on entirely different technical thoughts, and the selection invention of the chemical substance B is considered not to be dependent on the above mentioned prior patented invention. Provided, however, if the chemical substance B substantially has the same vitamin

activities as the prior patented invention, it is reasonable to determine that there is a dependency relation as in the case of the chemical substance A. On the other hand, if the chemical substance B has the vitamin activities which are exceedingly inferior to those of a compound concretely disclosed in the specification of the prior patent and its activities are not practical, it is considered not to be a dependent invention of the said prior invention.

[3] When the prior patent invention is related to a method and the selection invention is related to a method of which processing temperatures are numerically limited:

Posterior inventions that demonstrate remarkable effects by the numerical limitations that are not disclosed concretely in the specification of the prior patent are not deemed identical to the prior patented invention, and deemed to have the inventive step. Subsequent inventions are thus patented as the selection invention.

For instance, let us assume that in a prior patent invention related to a method of paraffin-sealing the mouth of a glass bottle, the bottle is inverted to immerse the mouth in the paraffin bath melted by heat, is raised to the upright position, and is rotated in the axial direction to give excellent luster to the paraffin seal. Suppose there is an invention of method where processing after the bottle is raised and placed upright is performed at numerically controlled temperatures.

Since the latter invention improves the hardness of paraffin to prevent damages during transportation and prevents paraffin dripping in addition to improving the paraffin luster, the invention is deemed to be a selection invention. If we were to discuss the dependency of the selection invention on the said prior patent invention, we find that the above mentioned selection invention demonstrates at least the similar effects as those of the prior invention and therefore is a technical thought that is based on another technical thought having the identical objects, structure and effects as the prior invention. Thus, the above mentioned selection invention is considered to be dependent on the said prior patented invention.

On the hand hand, let us assume a selection invention which improves the hardness of the paraffin and prevents dripping by processing at numerically controlled low temperatures, but its luster is no different from that obtained by not turning the bottle in the axial direction. We shall examine the dependency relation between this selection invention and the above mentioned prior patented invention.

The effects achieved by the prior patent invention is the improved luster of paraffin seal, while those achieved by the selection invention are appropriately improved paraffin hardness and prevention of paraffin dripping. Thus, the effects of the two inventions are clearly different. Even though the two inventions may be based on the technical thoughts having different objectives,

structures and effects, the above mentioned selection invention is not dependent on the prior patented invention.

5. Conclusion

We have reached a conclusion, albeit provisionally, regarding the dependency relation of selection inventions and prior patented inventions by discussing a judgement and the relation between our selection invention models and prior patented inventions.

We support the academic theory #3. We believe that determination of whether a selection invention is dependent on a prior patent invention is not to be judged uniformly if we were to consider protection of the right of prior patent holders and the character of the selection inventions as separate inventions. It should be determined by the categories of the prior patented inventions and the selection inventions or by their contents. In particular, we believe that the judgement should be made by considering the specificity (uniqueness) of the effects of the selection invention which led to recognition of the patentability of the invention and the degree of achievement of the effects of the prior patented invention.

In discussing whether a selection invention can be a dependent invention of a prior patent invention, we find the discussion of the category of chemical substance inventions quite difficult. In the case of inventions of devices, we would hardly find an example where the component parts of a lower concept demonstrate utterly different operational effects from those of an upper concept, thus not leading to a judgement that

there is no dependency relation.

We wish to state in the end that the conclusion of this paper is not necessarily supported by a number of decisions and is still in the stage of assumptions. We expect our colleagues to attempt new discussions and deduce firmer general rules at the time points when we have many more decisions regarding selection inventions and the dependency relation.

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*3 Uchida, O.: "Practical Summary of Patent Law" p. 92

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*6 Mase, F.: "Technical Scope of Patent Invention", p. 68

*7 Mase, F.: "Discussion of Usefulness of Inventions" Annals of Japanese Society of Industrial Property Laws No. 7, 2984, p. 12

*8 Takeda, K.: "Knowledge of Patent", p. 420

Exhibit A

Case Number : Sho 48(WA) 3834

Demand for Injunction of Patent Infringement

〔判決概要〕

1．判決日、裁判所名、事件番号
　判決日：昭和５０年１月２４日
　裁判所名：大阪地方裁判所
　事件番号：昭和４８年（ワ）３８３４号

2．事件の種類
　特許権侵害差止請求事件

3．特許番号、発明の名称、特許請求の範囲
　登録番号：第５５４０１６号
　発明の名称：プラスチックフィルムその他の帯状体における耳片の切断搬送装置
　出願日：昭和４０年５月８日
　出願公告：昭和４４年４月１０日
　設定登録：昭和４４年８月２７日
　特許請求の範囲：（１）圧力空気による吸込式乃至吹出式による空気搬送経路内に、該経路を貫通することなく架設される回転軸に（２）経路内通過の空気流れと直交すると共に回転軸の回りに回動する回転切断刃の一個以上を可回動に且つ経路横断状に架設支持させ、（３）これと対応する固定切断刃を経路の周側一部に固設し、（４）経路内を横断する気流障害物を前記回転切断刃のみとすることにより、破切断耳片の空気搬送経路内における空気流による搬送と切断済み細片の搬出を自動的に行なうようにしたことを特徴とするプラスチックフィルムその他の帯状体における耳片の切断搬送装置

4．イ号物件
（ａ）空気搬送経路の中央部に回転切断刃の垂直回転に応ずる切断室が設けられ、この切断室内に空気搬送経路を貫通しない形状の回転室を架設し、
（ｂ）その回転軸に経路内空気と直交するとともに、回転軸の回りに回動する回転切断刃２個を経路横断状に架設支持し、
（ｃ）回転切断刃に対応する固定切断刃を経路の底部に設け、
（ｄ）経路内を横断する気流障害物を回転切断刃だけにし、
（ｅ）この切断室と前方経路（即ち材料供給側。内口径３０ミリメートル）及び後方経路（即ち材料送出側。内口径８０ミリメートル）が連通して空気搬送経路を形成していると共に前方空気搬送経路内は後方空気搬送経路内より著しく小径としたプラスチックフィルム等の帯状体材料の切断搬送装置。

争点
（１）被告（ダイコー精機株式会社）が製造，販売した「切断搬送装置」が原告（株式会社朋来鉄工所）が所有する特許のクレームの技術的範囲に含まれるか否かが争われた。
（２）具体的には空気搬送経路の前方経路が後方経路よりも小口径より小径とした被告の切断搬送装置が空気流が常に円滑に中断せず移動するという効果を有する原告特許のクレームに記載の切断搬送装置の発明の技術的範囲に含まれるか否かが争われた。

5．原告の主張

（１）被告のイ号物件（切断搬送装置）は本件特許の構成，作用効果と全く同一であり、本件特許発明の技術的範囲に属する。

6．被告の主張

〔１〕原告クレームの（１）～（３）の要件は公知，公用であり本件特許の必須の要素ではない。（４）の要素のみが本件特許の唯一の必須要素である。

〔２〕（４）の構成要素について比較すると

①本件特許発明では回転切断刃より前方の空気搬送経路と後方の空気搬送経路とはほぼ同径をなし、あるいはこれらの搬送経路内に空気流の障害となる程度の差を設けないが、被告物件では前方空気搬送経路が後方空気搬送経路に比べ著しく小口径となっており、円滑な空気の流れを害する構造となっている。

②本件特許発明では回転切断刃が搬送経路を遮蔽して空気流を阻止することがないのに対し、被告物件は回転切断部の背面部により経路内を全く遮蔽して空気流を瞬間的に阻止し得る構造となっている。

③これにより、本件特許発明では急速、能率的な切断処理をなし得るのに対し、被告物件では供給される材料の吸引移動速度を緩慢にし材料を一層微細に細断し得る。

④従って被告物件は本件特許発明の技術的範囲には含まれない。

7．原告の反論

〔１〕本件特許は公知技術の単なる寄せ集めではなく、各要素を一体として有機的に構成したもので、全体として新規な発明である

〔２〕構成（４）について

①被告物件において切断室の内周面と回転切断刃の回転軌跡との間には明らかに隙間があり、前方経路が回転切断部の背面部によって遮蔽されることはない。

②本件特許請求の範囲の記載には空気搬送経路の口径の大小につき何らの限定的記載はない。

③被告物件で前方の空気搬送経路の口径を小さくしたことは単ある設計上の変更に過ぎない。

8．判決（要旨）

①（１）～（３）の事項はいづれもそれだけで独立した発明として特許請求の範囲に記載されているのではなく、本件特許発明を構成する要素として組み入れられ全体として新規なひとつの発明を構成するものとして記載されているものであることは明からであり、発明を構成する一部あるいは幾部の要素が出願時公知であるとしてもその事実だけで（１）～（３）の事項を特許発明の構成要素から排除すべき理由とはならない。

②空気搬入経路と切断後搬出する経路の口径を同一にすることについて「特許請求の範囲には勿論、発明の詳細な説明にもなんらこの点につき被告主張の如く限定して解釈すべき記載はなく、本件特許公報全体の記載によれば、本件特許の出願人はこの点につきなんら限定せずして特許請求をしたものであり、右図面の表示は単なる実施例を示したに過ぎないものと解すべきである」

③「尤も、前方空気搬送経路の内径と後方空気搬送経路の内径との関係につきある種の比率の大きさに構成することにより特異の作用効果を発揮することが明らかになりそれに進歩性が認められるならば、これを内容とする技術思

想にいわゆる選択発明が成立することがあり得る。しかし、この場合においても本件特許発明との関係においては利用関係（従属関係）が認められるから、本件特許の権利者の承諾を得たことについて主張立証のない本件にあっては、被告はその選択発明を実施することはできないことになる。」

Exhibit A

Case Number : Sho 48(WA) 3834

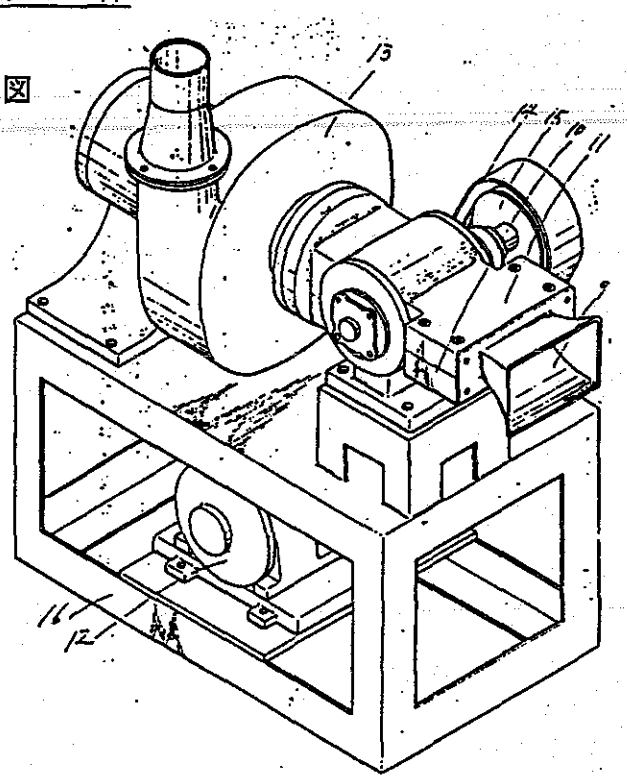
Demand for Injunction of Patent Infringement

事件番号：昭和４８年（ワ）３８３４号

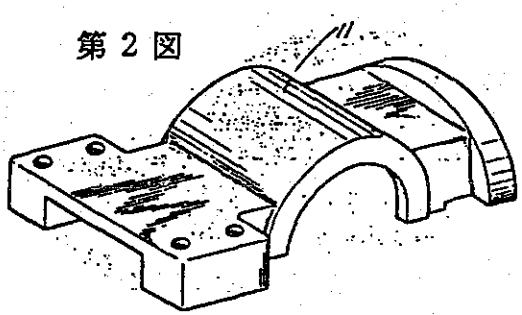
特許権侵害差止請求事件

イ　号　物　件

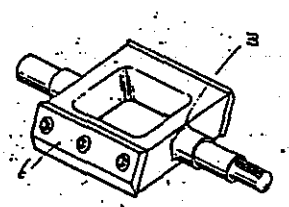
第１図



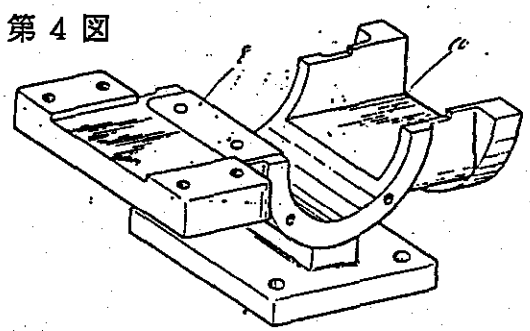
第２図



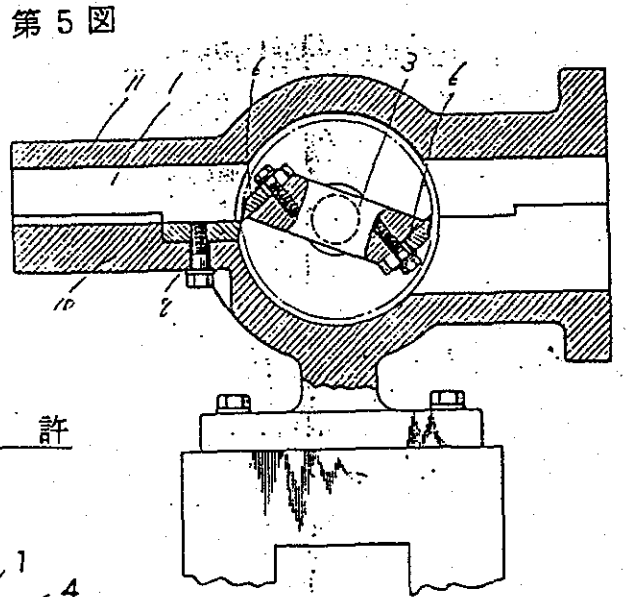
第３図



第４図

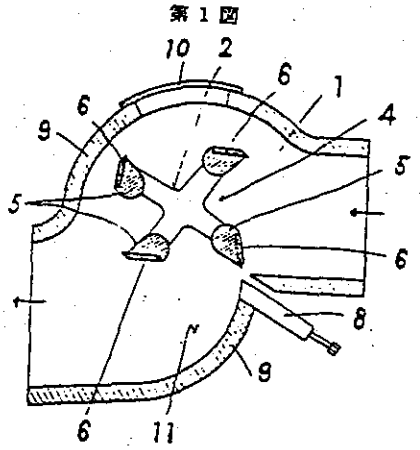


第５図



本　件　特　許

第１図



特許権侵害差止請求事件

原告番号：昭和４８年（ワ）２３１４号

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