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Contents

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Notifications

WIPO Convention

Accession

LEBANON

The Government of Lebanon deposited on September 30, 1986, its instrument of accession to the Convention Establishing the World Intellectual Property Organization, signed at Stockholm on July 14, 1967.

The said Convention will enter into force, with respect to Lebanon, on December 30, 1986.

WIPO Notification No. 138, of September 30, 1986.

Paris Convention

Accession to the Stockholm Act (1967) (with the exception of Articles 1 to 12)

LEBANON

The Government of Lebanon deposited, on September 30, 1986, its instrument of accession to the Stockholm Act of July 14, 1967, of the Paris Convention for the Protection of Industrial Property of March 20, 1883, with a declaration to the effect that its accession shall not apply to Articles 1 to 12.

Furthermore, the said instrument of accession contains the reservation that, pursuant to the provisions of paragraph (2) of Article 28 of the said Paris Convention, the Government of Lebanon declares that it does not consider itself bound by the provisions of paragraph (1) of that Article.

Lebanon will belong to Class VII for the purpose of establishing its contribution towards the budget of the Paris Union.

The Stockholm Act (1967) of the said Convention, with the exception of Articles 1 to 12, will enter into force, with respect to Lebanon, on December 30, 1986.

Paris Notification No. 117, of September 30, 1986.

The Hague Agreement

Accession to the London Act (1934), the Hague Act (1960) and the Stockholm (Complementary) Act (1967)

BENIN

The Government of Benin deposited, on October 2, 1986, its instrument of accession to the London Act of June 2, 1934, to the Hague Act of November 28, 1960, and to the Complementary Act of Stockholm of July 14, 1967, of the Hague Agreement Concerning the International Deposit of Industrial Designs of November 6, 1925.

Benin has not heretofore been a member of the Union for the International Deposit of Industrial Designs ("Hague Union"), founded by the Hague Agreement.

The London Act (1934) and the Hague Act (1960) of the Hague Agreement will enter into force, in respect of Benin, on November 2, 1986, whereas the Stockholm (Complementary) Act (1967) of the said Agreement will enter into force, with respect to the said State, on January 2, 1987.

The Hague Notification No. 26, of October 2, 1986.

Budapest Treaty

I. Change in the Name, Location and in the List of Kinds of Microorganisms Accepted for Deposit

CULTURE CENTRE OF ALGAE AND PROTOZOA (CCAP)

The following notification addressed to the Director General of WIPO by the Government of the United Kingdom under Rules 4.2 and 5.2 of the Regulations under the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure was received on September 22, 1986, and is published by the Interna-

tional Bureau of WIPO pursuant to Rules 4(2)*(d)* and 5(2)*(b)* of the Regulations:

1. The Culture Centre of Algae and Protozoa, at present at 36 Storey's Way, Cambridge CB3 0DT, United Kingdom, with effect from January 1, 1987, is to be renamed the Culture Collection of Algae and Protozoa and relocated at:

(i) Freshwater Biological Association, Windermere Laboratory, The Ferry House, Far Sawrey, Ambleside, Cumbria LA22 0LP, United Kingdom; and

(ii) Scottish Marine Biological Association, Dunstaffnage Marine Research Laboratory, PO Box 3, Oban, Argyll PA34 4AD, United Kingdom.

The Culture Collection of Algae and Protozoa will accept:

(i) freshwater and terrestrial algae and free-living protozoa at its Freshwater Biological Association address; and

(ii) marine algae, other than large seaweeds, at its Scottish Marine Biological Association address.

2. The assurances furnished in the communication by the Government of the United Kingdom dated July 20, 1982, that the Culture Centre of Algae and Protozoa complies and will continue to comply with the requirements specified in Article 6(2) of the Budapest Treaty apply and will continue to apply to the renamed international depository authority at its new locations.

3. In accordance with Rule 5.2 of the Regulations under the Budapest Treaty, the Government of the United Kingdom notifies you that during the course of relocation from October 1, 1986 to January 1, 1987, the Culture Centre of Algae and Protozoa will be unable to receive any deposits. No alternative temporary measures are planned for this short period.

4. In accordance with Rule 4.2 of the Regulations under the Budapest Treaty, the Government of the United Kingdom also notifies you that with effect from January 1, 1987, the Culture Collection of Algae and Protozoa will not accept parasitic protozoa not pathogenic to man or domestic animals, which can be maintained by in vitro culture, so limiting the kinds of microorganisms previously accepted by the Culture Centre of Algae and Protozoa.

5. In accordance with Rule 5(1)*(a)*(iv) of the Regulations under the Budapest Treaty, the Government of the United Kingdom notifies that measures consequential to this limitation are unnecessary since the Culture Centre of Algae and Protozoa does not hold any deposits of such parasitic protozoa for patent purposes.

[End of text of the notification of the Government of the United Kingdom]

Budapest Communication No. 30 (this Communication is the subject of Budapest Notification No. 54 of October 3, 1986).

II. Corrigendum

NATIONAL COLLECTION OF AGRICULTURAL AND INDUSTRIAL MICROORGANISMS (NCAIM)

The Government of Hungary has informed WIPO that the title of the above-mentioned international depositary authority should read as follows in Hungarian: Mezőgazdasági és Ipari Mikroorganizmusok Magyar Nemzeti Gyüjteménye (MIMNG).[1]

[1] See *Industrial Property*, 1986, p. 203.

Activities of the International Bureau

Celebration of the Hundredth Anniversary of the Berne Convention*

(Berne, September 11, 1986)

Celebration in Berne

The Berne Convention for the Protection of Literary and Artistic Works was signed on September 9, 1886.

The centenary was celebrated, on September 11, 1986, by four events organized by the Government of Switzerland. They took place in Berne, the capital of Switzerland.

The four events were the following:

— a gathering in the *Bundeshaus* (or *Palais fédéral* in French), the seat of both the Federal Council (*Conseil fédéral*) and the Parliament (*Assemblée nationale*);

— the opening of an exhibition devoted to the history of the Berne Convention, set up in the Archives of the Confederation (*Archives fédérales*);

— the unveiling of an artistic work in the gardens of the Archives;

— a banquet given by the Federal Council for the participants.

The participants included several of the highest and other high officials of the Swiss Confederation, the Director General and a number of staff members of the World Intellectual Property Organization (WIPO), diplomatic representatives of member States of WIPO or the Berne Union, members of the International Literary and Artistic Association (ALAI) (which held a special congress in Berne at the same time) and other personalities of the world of international copyright. Altogether, between 500 and 600 persons from some 100 countries took part.

Gathering in the Bundeshaus. This gathering took place in the meeting room of the *Conseil national*, the lower house of the Swiss Parliament.

The ceremonial gathering heard speeches—in this order— by H.E. *Mr. Alphons Egli*, President of the Swiss Confederation, *Dr. Arpad Bogsch*, Director General of the World Intellectual Property Organization, *Dr. Gyula Pusztai*, Chairman of the Assembly of the Berne Union and Delegate of Hungary in the same Assembly and *Dr. Georges Koumantos*, President of the International Literary and Artistic Association.

Between the two last speeches, the Chairman of the Assembly of the Berne Union declared that Assembly to be in extraordinary session and invited it to adopt a solemn declaration. The declaration was adopted by acclamation. Its text follows:

"The States members of the Assembly of the International (Berne) Union for the Protection of Literary and Artistic Works,

Convened *in an extraordinary session by the Director General of the World Intellectual Property Organization in order to commemorate the hundredth anniversary of the adoption of the Berne Convention for the Protection of Literary and Artistic Works, signed on September 9, 1886,*

Meeting, *at the invitation of the Federal Council of the Swiss Confederation in the* Palais fédéral, *in Berne, in the same place where the Berne Convention was adopted and signed a century ago,*

Inspired *by the enthusiasm, imagination, wisdom and foresight of those Governments and those individuals whose efforts brought the Berne Convention into existence,*

Paying tribute *to the memory of all those who contributed to the constant modernization, through the seven revisions that took place in the last hundred years, of the Berne Convention,*

Reaffirming *their commitment to protect the rights of authors in as effective and uniform a manner as possible:*

Solemnly declare *that copyright is based on human rights and justice and that authors, as creators of beauty, entertainment and learning, deserve that their rights in their creations be recognized and effectively protected both in their own country and in all other countries of the world;*

Solemnly declare *that the law of copyright has enriched and will continue to enrich mankind by encouraging intellectual creativity and by serving as an incentive for the dissemination throughout the world of expressions of the arts, learning and information for the benefit of all people;*

Solemnly declare *that international respect for the law of copyright opens paths across frontiers for works of the mind, thus contributing to a better international understanding and to the cause of peace;*

Solemnly declare *that the Berne Convention for the Protection of Literary and Artistic Works, by*

* For a full account, including the texts of the speeches, see *Copyright*, 1986, pp. 367.

providing an outstanding, comprehensive and harmonized codification of the rights of authors, has guaranteed for a hundred years the most effective international protection of those rights;

Pledge themselves *to continue to work together to safeguard the rights of authors against all forms of piracy and other unlawful acts and to ensure the effective application of those rights in the framework of new opportunities for communication between authors and the public created by economic, social, scientific and technological progress;*

Urge *all States that so far have not done so to join them by adhering to the Berne Convention for the Protection of Literary and Artistic Works."*

Exhibition. The exhibition on the history of the Berne Convention was opened by Mr. Jean-Louis Comte, Director of the Swiss Federal Intellectual Property Office.

The exhibition contained the original of the Berne Convention, bearing the signatures and seals of the plenipotentiaries of the countries that signed the Convention. It also contained documents issuing from some of the diplomatic conferences of revision, photographs of the buildings in which the Secretariat of the Berne Union had its headquarters in Berne and, since 1960, has had its headquarters in Geneva, and the portraits of its directors during the last hundred years.

Artistic Work. The artistic work is a wall, consisting of cubes in black granite and white marble, representing a chess board (some two meters long on each side and 40 centimeters deep), standing on its edge. The squares of one of the kings and one of the queens are missing, which gave the work its title of "Chess-Free Chess." The author is a Swiss, Mr. Heinz Brand (born in 1944). The work was unveiled after the speech by Mrs. Elisabeth Kopp, Federal Councillor, in charge of the Ministry *(Département)* of Justice and Police.

Banquet. The banquet was held at the Hotel Bellevue Palace, one of the most beautiful and agreeable old hotels in Switzerland if not the world.

Speeches were made by Mrs. Elisabeth Kopp, Federal Councillor, and Dr. Arpad Bogsch, Director General of the World Intellectual Property Organization.

* * *

The events recounted above were characterized by dignified solemnity, warm hospitality and perfect organization.

The merit, to a decisive extent, is due to Mr. Jean-Louis Comte who, with some of his colleagues in the Swiss Federal Intellectual Property Office, worked for months on the preparations and actually supervised all the details. Even the weather favored the participants: Berne, an exceptionally beautiful old city, with the *Bundeshaus* on a hill overlooking the River Aare, was bathed in sunshine, with the vegetation still rich in its summer colors.

Those who had the privilege of participating in those events will always remember the elegance and dignity with which they were conducted and will be ever grateful to the Swiss Government for having given so much attention to the anniversary of the Berne Convention, an important and successful treaty born in their capital a hundred years ago.

A.B.

WIPO Meetings

Governing Bodies of WIPO and the Unions Administered by WIPO

Seventeenth Series of Meetings
(Geneva, September 8 to 12, 1986)

NOTE*

The Governing Bodies of WIPO and the Unions administered by WIPO held their seventeenth series of meetings in Geneva from September 8 to 12, 1986. Delegations from 82 States, nine intergovernmental organizations and five non-governmental organizations participated in the meetings.

This year the following 10 Governing Bodies met in ordinary or extraordinary sessions:

WIPO Coordination Committee;
Paris Union Assembly;
Paris Union Conference of Representatives;
Paris Union Executive Committee;
Berne Union Assembly;
Berne Union Conference of Representatives;
Berne Union Executive Committee;
Madrid Union Assembly;
IPC [International Patent Classification] Union Assembly;
PCT [Patent Cooperation Treaty] Union Assembly.

The Governing Bodies paid a minute of silent tribute to the memory of the late Mr. Klaus Pfanner, former Deputy Director General, and of the late Mr. Claude Masouyé, former Director, Public Information and Copyright Department, of WIPO.

Director General's Address on the International Year of Peace. In 1982, the General Assembly of the United Nations proclaimed 1986 to be the International Year of Peace. Last year, the Governing Bodies of WIPO decreed several measures aimed at demonstrating the profound interest of WIPO in the International Year of Peace.

Amongst these was a speech which the Director General pronounced during the 1986 Governing Bodies. In his speech the Director General sought, *inter alia*, the answers to two questions: first, what role, if any, can the international protection of intellectual property play in securing peace; second, what can the World Intellectual Property Organization, as an organization, contribute to securing peace. To the first question, he said:

> "I believe that considering the fruits of labor and imagination as objects in which their creators have certain rights—namely, intellectual property rights—is a matter of justice. Being just is an indispensable condition for the creation and preservation of peace. Thus, since the protection of intellectual property rights serves justice, and since justice serves peace, consequently, in a sense, the protection of intellectual property rights serves peace. That protection serves peace when it exists both at the national level and at the international level. Obtaining that protection efficiently and economically and as extensively as possible ensures harmonious relations within a State and across international boundaries."

To the second question, the Director General said:

> "The World Intellectual Property Organization does, of course, promote the international recognition of the rights in inventions and artistic creations, and it does that in a manner which is not one-sided but well balanced. The latter means that the rights in question are not protected without limit and in perpetuity but with due regard to the legitimate interests of the consuming public and the economic goals of all governments, whether of developing or developed countries, and for limited periods of time.
>
> "Finding this right balance is difficult enough inside each State, and national governments and legislators struggle with the problem all the time. Finding this right balance is even more difficult at the international level since the material and economic situations of the various States are widely divergent, and the cultural and economic goals of their governments are different both on account of the factual differences and on account of their different perception of values based on tradition, political ideology or religion....
>
> "...In other words, one of the most fundamental conditions of peace is mutual understanding. Such understanding can best be created by personal contacts among individuals coming from all parts of the world.

* Prepared by the International Bureau.

"The World Intellectual Property Organization is a microcosmos in which such mutual understanding is worked for every day....

"...By promoting cooperation among people, the World Intellectual Property Organization is serving, and wishes to continue to serve, peace not only in the present International Year of Peace but in all the years thereafter."

The International Bureau also produced a special publication consisting of a collection of articles on the interrelationship between intellectual property and peace and issued a WIPO medal to commemorate the event; both the publication and the medal were distributed to the Heads of the Delegations of member States attending the Governing Bodies.

Commemoration of the Centenary of the Berne Convention for the Protection of Literary and Artistic Works. The main events which commemorated the centenary are outlined on page 433 of the present issue of *Industrial Property*.

During discussions in the meeting of the Assembly of the Berne Union, a number of delegations referred to the remarkable achievements of the Berne Convention during its first hundred years in the promotion of creativity. According to them, it was a time not only for honoring the wisdom and foresight of those whose efforts brought into existence the Berne Convention, but also for anticipating the future of the Convention with enthusiasm.

In particular, the Delegation of the United States of America informed the Assembly that the movement towards its country's adherence to the Berne Convention was stronger now than at any time in the past. The Convention had been transmitted in June 1986 by President Reagan to the United States Senate for its advice and consent. The sole remaining question was the adoption of the appropriate legislation amending the 1976 Copyright Act to bring it into full compliance with the requirements of the 1971 Paris Act of the Berne Convention.

Diplomatic Conference on the Revision of the Paris Convention for the Protection of Industrial Property. After extensive consultations and discussions, the Assembly of the Paris Union decided that two Consultative Meetings would be held in January and February 1987, and May 1987, with the possibility of a third Meeting in September 1987. Those Meetings would deal only with the possible substantive content of a number of Articles in the Paris Convention. The Assembly also decided that at its 1987 session it will consider questions concerning the revision of the Paris Convention, including possible changes in the mechanisms of consultations, and whether or not to fix a date for the resumption of the Sessions of the Diplomatic Conference for the Revision of the Paris Convention.

Preparations for a Possible Diplomatic Conference on the Conclusion of a Treaty on the Protection of Integrated Circuits. It will be recalled, in this context, that two meetings were held in 1986 (in February and in June). Consultants and experts participated in those meetings and had discussions on technical issues involved in the protection of integrated circuits.

During the Governing Bodies, preparations for a possible diplomatic conference on the conclusion of a treaty on such protection were discussed. The WIPO Coordination Committee and the Assembly of the Paris Union decided that any decision on the convocation of a diplomatic conference on integrated circuits should be postponed until the 1987 sessions of the Governing Bodies and that, in the meantime, the Director General should continue the preparations with the necessary studies and the convening of at least one session of an intergovernmental committee of experts, taking into account the necessary balance among all interested parties.

Preparations for a Possible Diplomatic Conference on the Revision of the Madrid Agreement Concerning the International Registration of Marks. In January 1986, the Assembly of the Madrid Union met in an extraordinary session in Geneva. The only topic discussed was the giving of directions to the International Bureau concerning the preparation of a possible diplomatic conference of revision. Also in January of this year, and again in July, the Working Group on Links between the Madrid Agreement and the Proposed (European) Community Trade Mark met in Geneva. Discussions were based on a memorandum prepared by the Director General of WIPO entitled "Possible Protocols to the Madrid Agreement." It contained the drafts of two Protocols. Draft Protocol A aimed at modifying the Madrid Agreement so as to make the Agreement acceptable to the four States members of the European Community without being members of the Madrid Union (namely, Denmark, Greece, Ireland and the United Kingdom). Draft Protocol B aimed at establishing a link between the Madrid Agreement and the future Community (European) Trade Mark, enabling the simultaneous use of the two systems.

Although in the Working Group it was not possible to agree on all the issues, a degree of progress was made that would seem to be sufficient to envisage seriously the convocation of a diplomatic conference for the adoption of texts along the lines of the two proposed Protocols.

During the sessions of the Governing Bodies, the Assembly of the Madrid Union had to pronounce itself on the question of whether such a diplomatic conference should be further prepared and convened. It was decided that the Working Group should, without any change in membership, hold a meeting during the first quarter of 1987. It was also decided that the Assembly of the Madrid Union would be called upon, during its ordinary session in September 1987, to take a decision

on the desirability of holding a diplomatic conference in 1988 for the revision of the Madrid Agreement, and also on the organizational details of such a conference, should it be decided to hold it.

Simplification of the Structure and Streamlining of the Procedures of the WIPO Permanent Committee on Patent Information. The Governing Bodies endorsed the conclusions of the Permanent Committee on Patent Information (PCPI), which met in the week preceding the sessions of the Governing Bodies. The conclusions were to the effect that the PCPI would pronounce itself later on the proposal of the Director General in this regard. At that time, the PCPI would also consider new proposals as well as several other matters including, *inter alia*, whether technical cooperation in the fields of trademarks and industrial designs should be organized, and certain proposals concerning developing countries.

The Permanent Committee felt that it should be given another opportunity to pronounce itself on the proposals before the competent Governing Bodies pronounce themselves in this regard. If this is accepted, the Permanent Committee will also take a position on the question whether technical cooperation in the fields of trademarks and industrial designs should be organized.

Accession of Greece and Spain to the Patent Cooperation Treaty (PCT). The Patent Cooperation Treaty (PCT) provides, for the benefit of nationals and residents of the States party to that Treaty, a system which facilitates the obtaining of patent protection for inventions in several countries. Under the PCT, only one application must be filed instead of the filing of separate applications for each of the designated States where protection is sought. An international application has the effect of a regular national application in each State designated for protection in the application. The PCT procedure consists of an "international phase" during which an international search report and—optionally—an international preliminary examination report are established, which give a sound basis for calculating the chances of obtaining patents for an invention before major costs in foreign countries are incurred. After the international phase, there follows the "national phase," i.e., the granting procedure before the patent offices of or acting for the various designated States. The national phase starts much later than under the traditional system, at a time when the applicant has a much better knowledge of the technical and economical value of the invention and whether and where he needs patent protection. Where the applicant decides that the chances of obtaining patents and exploiting the invention commercially are not good, he can save all of the costs (for fees, translations and patent agents) in the various designated States. The number of contracting States is at present 39.

It is also possible to use the PCT for the purposes of obtaining a regional patent, such as a European patent, for all those States members of the regional system which are also PCT contracting States. The accession to the PCT by Italy, effective in 1985, permitted the filing of an international application for a European patent for all States party to the European Patent Convention (EPC).

Greece and Spain have now become party to the EPC without, however, acceding to the PCT at the same time. Consequently, a declaration of the Assembly of the PCT Union urging those two States to join the PCT Union was discussed during the Governing Bodies, in order to restore the situation described in the preceding paragraph.

The Assembly unanimously declared that it would very much welcome the early accession to the PCT of Greece and Spain as well as of all the other countries not yet party to the PCT and invited those countries to join them in the PCT Union.

Furthermore, the Assembly unanimously declared its willingness to appoint the Registry of Industrial Property of Spain as an International Searching Authority under the PCT once all the conditions prescribed by the PCT and the Regulations thereunder are fulfilled, in particular, those which must be fulfilled by any Office acting as an International Searching Authority.

Appointment of the United States Patent and Trademark Office as an International Preliminary Examining Authority under the Patent Cooperation Treaty (PCT). It was anticipated that, in October 1986, the authority to withdraw the reservation made by the United States of America under Article 64(I) of the PCT with the effect of excluding the applicability of Chapter II of the PCT, dealing with international preliminary examination, with respect to that country would be given and the necessary implementing legislation would be adopted by the United States Congress (both steps were taken in October 1986), so that the withdrawal of the reservation could be effected before the next ordinary session of the Assembly.

In order to avoid the need to convene an extraordinary session before the next ordinary session, the Assembly took the necessary measures which would allow the United States Patent and Trademark Office (USPTO) to act as an International Preliminary Examining Authority under the PCT as soon as the said withdrawal is effective.

Staff Matters. The Coordination Committee gave favorable advice on the intent of the Director General to appoint Mr. Henry Olsson (national of Sweden) to the post of Director, Copyright and Public Information Department, and Mr. Georges Yung (national of France) to that of Director of the General Administrative Division. Mr. Olsson took up his duties in October, and Mr. Yung in November.

LIST OF PARTICIPANTS**

I. States

Algeria[1, 2, 4, 8]: H. Redouane

Argentina[1, 2, 4, 5]: E. Pérez Tomas; N. Fasano; J. Vigano.

Australia[1, 2, 4, 5, 9, 10]: P.A. Smith; N.D. Campbell.

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Bangladesh: M. Rahman.

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Colombia[1]: H. Charry Samper; L.A. Luna; C. Arevalo.

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Ghana[2]: A.M. Abdullah.

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Guatemala: A. Pallares-Buonafina; L. González-Pinto.

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Honduras: J.M. Maldonado; J.M. Ritter.

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Indonesia[1, 2, 4]: P. Koentarso; B. Prayitno; I. Cotan.

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Jamaica: K.G.A. Hill.

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Mexico[1, 2, 5, 7]: M.A. Arce de Jeannet; A. Arriazola.

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Mongolia[2, 8]: M. Dash.

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Nigeria[1, 3, 4]: J. Oniwon.

Norway[2, 5, 9, 10]: A.G. Gerhardsen; E. Liljegren.

Pakistan[5]: A. Ezdi; Z. Akram; B. Khan.

Panama: I. Aizpúrua Pérez.

** A list containing the titles and functions of the participants may be obtained from the International Bureau.

[1] WIPO Coordination Committee.

[2] Paris Union Assembly.

[3] Paris Union Conference of Representatives.

[4] Paris Union Executive Committee.

[5] Berne Union Assembly.

[6] Berne Union Conference of Representatives.

[7] Berne Union Executive Committee.

[8] Madrid Union Assembly.

[9] IPC [International Patent Classification] Union Assembly.

[10] PCT [Patent Cooperation Treaty] Union Assembly.

People's Democratic Republic of Korea[2, 8, 10]: Kwon Yon Son; Kim Yu Chol; Myeung Jin Youn.

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Republic of Korea[2, 10]: T.-C. Choi.

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Rwanda[2, 5]: B. Murekezi.

San Marino[3]: P. Giacomini; D. Thomas.

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Spain[2, 5, 8, 9]: J. Delicado Montero-Rios; W.R. Martinez Diez; A. Casado Cervino; E. de la Puente Garcia; M. Pérez del Arco.

Sri Lanka[2, 5, 10]: P. Nagaratnam; P. Kariyawasam.

Sudan[2, 8, 10]: A.M.A. Hassan; M.E. Abdel Moniem; Y. Abdel-Galil Mahmoud.

Sweden[1, 2, 5, 7, 9, 10]: S. Niklasson; A.-K. Wegmann; H. Olsson; K. Hokborg.

Switzerland[1, 2, 4, 5, 7, 8, 9, 10]: J.-L. Comte; J.-M. Souche; W. Frei.

Thailand[5]: S. Visessurakarn; S. Kanchanalai; S. Mongkolphantha; P. Larpkesorn; Y. Phuangrach; P. Limpaphayom; N. Punyakij; K. Phutragool; C. Moodhitaporn.

Togo[2, 5, 10]: K.A. Kato.

Tunisia[1, 2, 5, 7]: B. Zgaya; T. Ben Slama.

Turkey[1, 2, 6, 7]: S. Tokat; M. Cetin; A. Arsin.

Ukrainian SSR: A. Ozadovski.

United Kingdom[1, 2, 5, 7, 9, 10]: P.J. Cooper; A. Sugden; M. Todd; T. David; A. Toothe; F.W. Wheeler.

United Republic of Tanzania[1, 2, 4]: S.J. Asman.

United States of America[1, 2, 4, 9, 10]: D.J. Quigg; H.J. Winter; R. Oman; L.J. Schroeder; J.P. Richardson.

Uruguay[1, 2, 4, 5]: S. Pacheco-Egea; R. Gonzáles-Arenas.

Venezuela[1, 5, 7]: H.C. Azocar; L.D. Ruiz.

Viet Nam[2, 8]: Nguyen Van Vien; Vu Huy Tan.

Yugoslavia[1, 2, 4, 5, 8]: B. Pajković.

Zambia[2]: A.R. Zikonda.

II. Intergovernmental Organizations

United Nations (UN): T. Zoupanos; A. Djermakoye; R.S. Dhanjee; E. Bonev; G. Pérez-Arguello. **United Nations Educational, Scientific and Cultural Organization (UNESCO)**: A. Amri. **Secretariat of the General Agreement on Tariffs and Trade (GATT)**: P.J. Williams. **African Regional Industrial Property Organization (ARIPO)**: J.H. Ntabgoba. **Benelux Designs Office (BBDM)**: P. Rome. **Benelux Trademark Office (BBM)**: P. Rome. **European Patent Organisation (EPO)**: P. Braendli; G. Gall. **Interim Committee for the Community Patent**: H.W. Kunhardt. **Organization of African Unity (OAU)**: H.M. Tunis.

III. Non-Governmental Organizations

Enropean Association of Industries of Branded Products (AIM): G.F. Kunze. **European Broadcasting Union (EBU)**: M. Burnett. **International Association for the Protection of Industrial Property (AIPPI)**: G.E. Kirker. **International Chamber of Commerce (ICC)**: J.M.W. Buraas. **International Federation of Translators (IFT)**: D. Schmidt.

IV. Officers

WIPO Coordination Committee

Chairman: D.J. Quigg (United States of America). *Vice-Chairmen:* J. Hemmerling (German Democratic Republic); S. Asman (United Republic of Tanzania).

Paris Union Assembly

Chairman: Huang Kunyi (China). *Vice-Chairmen:* O. Leberl (Austria); J. Hemmerling (German Democratic Republic).

Paris Union Conference of Representatives

Chairman: .... (Syria). *Vice-Chairmen:* S.A. Hachemi (Iran (Islamic Republic of)); A.F. Okoh (Nigeria).

Paris Union Executive Committee

Chairman: K. Iliev (Bulgaria). *Vice-Chairmen:* W.Z. Kamil (Egypt); A. Kuroda (Japan).

Berne Union Assembly

Chairman: Gy. Pusztai (Hungary). *Vice-Chairmen:* S. Niklasson (Sweden); N. Vejjajiva (Thailand).

Berne Union Conference of Representatives

Chairman: P. Verdoux (Madagascar). *Vice-Chairmen:* A.M. Bracegirdle (New Zealand); J. Szomański (Poland).

Berne Union Executive Committee

Chairman: B. Zgaya (Tunisia). *Vice-Chairmen:* P.J. Cooper (United Kingdom); M. Bělohlávek (Czechoslovakia).

Madrid Union Assembly

Chairman: M. Fortini (Italy). *Vice-Chairmen:* M. Albane (Algeria); I.S. Nayashkov (Soviet Union).

IPC [International Patent Classification] Union Assembly

Chairman: D.J. Quigg (United States of America). *Vice-Chairmen:* P.R. França (Brazil); I.S. Nayashkov (Soviet Union).

PCT [Patent Cooperation Treaty] Union Assembly

Chairman: P.A. Smith (Australia). *Vice-Chairmen:* K. Iliev (Bulgaria); I. Marinescu (Romania).

V. International Bureau of WIPO

A. Bogsch *(Director General)*; M. Porzio *(Deputy Director General)*; L.E. Kostikov *(Deputy Director General)*; G. Ledakis *(Legal Counsel)*; S. Alikhan *(Director, Developing Countries Division (Copyright))*; L. Baeumer *(Director, Industrial Property Division)*; P. Claus *(Director, Classifications and Patent Information Division)*; F. Curchod *(Director, PCT Division (Patent Cooperation Treaty))*; M. Ficsor *(Director, Copyright Law Division)*; K. Idris *(Director, Development Cooperation and External Relations Bureau for Arab Countries)*; L. Kadirgamar *(Director, Development Cooperation and External Relations Bureau for Asia and the Pacific)*; T.A.J. Keefer *(Director, Administrative Division)*; E. Pareja *(Director, Development Cooperation and External Relations Bureau for Latin America and the Caribbean)*; I. Thiam *(Director, Development Cooperation and External Relations Bureau for Africa)*; C. Fernández Ballesteros *(Assistant Legal Counsel)*; P. Maugué *(Senior Counsellor, Industrial Property (Special Projects) Division)*; B. Davoudi *(Head, Conference and General Services Section)*; I. Pike-Wanigasekara *(Special Assistant, Office of the Director General)*; G. Yu *(Special Assistant, Office of the Director General)*; A. Damond *(Head, Registry, Documents and Meetings Service)*.

Activities of Other Organizations

International Association for the Protection of Industrial Property

XXXIIIrd Congress
(London, June 8 to 13, 1986)

NOTE*

Introduction

The International Association for the Protection of Industrial Property (AIPPI) held its XXXIIIrd Congress in London (United Kingdom) from June 8 to 13, 1986. Mr. Edward Armitage, C.B., President of the AIPPI, presided over the Congress, which was opened by Mr. Geoffrey Pattie, Minister of State for Industry and Information Technology of the United Kingdom. The work of the Congress was followed by around 2,000 members of AIPPI; 16 governments, as well as several intergovernmental organizations and international non-governmental organizations, were represented. The World Intellectual Property Organization (WIPO) was represented by its Director General, Dr. Arpad Bogsch, by Dr. Klaus Pfanner, Deputy Director General, by Dr. Ludwig Baeumer, Director, Industrial Property Division and Mr. François Balleys, Head, Industrial Property (Special Projects) Division.

At the opening ceremony, the Director General of WIPO delivered an address, which is reproduced below.

The Congress dealt in plenary sessions with the following questions: the international registration of trademarks; the legal and economic importance of utility models; obtaining evidence of the infringement of industrial property rights; measures against counterfeiting of branded goods; protection of computer software and integrated circuits. Several workshops were held; they dealt with the protection of functional design, biotechnological inventions, character merchandising/franchising, and harmonization of patent laws.

During the same period, the Executive Committee of AIPPI and the Council of Presidents of AIPPI held several meetings.

The work of the Congress culminated with the ratification, by the Executive Committee of AIPPI, of a certain number of resolutions the essential contents of which are also reproduced below.

* Prepared by the International Bureau of WIPO.

Address by the Director General of WIPO

"Your Excellency, Minister Geoffrey Pattie, Mr. President of the International Association for the Protection of Industrial Property, Edward Armitage, Mr. Executive President, Donald Vincent, Ladies and Gentlemen,

The World Intellectual Property Organization, in whose name I have the honor to address myself to you, wishes to congratulate the International Association for the Protection of Industrial Property on the work accomplished by your Association since its last Congress.

The three years since the Congress of Paris—of which we still cherish the memory—have been particularly active and particularly effective in furthering your Association's main objective, which is the promotion of the protection of industrial property through international cooperation.

You have been examining and expressing views and advice on all the issues that are under international discussion in order to adjust national *legislation to the changing needs of our times and in order to secure or improve* international *arrangements in respect of the same.*

Those issues can be divided into three groups.

The first group *of issues is a consequence of* technological developments. *They are mostly in the field of patent law, at least as far as your Association is concerned. They are also in the field of copyright law and, sometimes, they straddle both patent law and copyright law. Maybe your Association will wish to become active also in the field of copyright law since in more and more instances the issues are of a mixed, industrial property and literary and artistic property, nature.*

One of the said first group of issues, issues flowing from technological development, is the protection of computer programs. *Does the Berne Convention really oblige States to grant copyright protection to computer programs, and do the minimum requirements of protection provided for in that Convention apply to computer programs? If so, all is in order. If not, or if not quite clearly so, one should do something about it because the intellectual creativity going into the making of computer programs deserves secure protection and because the economic value of computer programs is enormous and should be exploited also in international trade relations.*

Another issue in the field of technological developments is the issue of integrated circuits *or* microchips. *The World Intellectual Property Organization presented the first draft of a possible multilateral treaty on their protection to a meeting of a committee of experts in February 1986, and it prepared and published a second*

draft intended for a further meeting of that committee that will be held later this month.

Still another issue is biotechnology. *In my view, there are inventions made in the field of biotechnology which should be afforded patent protection but, in fact, are not afforded such protection. The aim is, or should be, to make protection available to all kinds of biotechnological inventions. Without such extension of patent protection, the patent system risks losing much of its relevance in the decades to come.*

Your Association and the World Organization are both active in trying to find solutions to the said issues. We follow your discussions and welcome your advice. We are pleased that you delegate representatives to our meetings. They are always listened to with attention.

The second group *of issues concerns the* enforcement *of industrial property rights. It is not enough that industrial property rights exist on paper, in theory. If such rights are menaced by infringement, prevention should be promptly available, and if they are infringed, the sanctions should truly compensate the right holder for the damage suffered and should deter the infringer from repeating his criminal activity.*

The plenary session of this Congress will deal with two questions falling within this group, namely, "Obtaining Evidence of the Infringement of Industrial Property Rights" and "Measures Against Counterfeiting of Branded Goods."

The World Organization does not yet deal with the first, although probably it should do so, following the example of your Association. It would not be for the first time in the history of your Association that the initiative comes from it. It is a good thing if it does because it is evidence of the existence of a need, noted by those who are fully involved in the everyday application of industrial property laws and inventions.

As to counterfeiting, *the World Organization convened a first meeting of a committee of experts in May 1986; it plans to convene a second meeting next January and a third meeting a year from now. The representatives of your Association will be welcome in those meetings and their contribution will doubtless be valuable as it was in the first meeting.*

The third *group of issues could be called issues of* simplification. *National patent and trademark laws frequently differ from each other for no economical, legal, logical or other good reasons but merely for historical reasons, namely, that national laws developed without much effort at coordination. Such diversity makes the life of the applicant or owner of industrial property rights unnecessarily difficult. Complexity causes legal uncertainty and unnecessary expenses.*

The World Organization is working towards the conclusion of a new multilateral treaty, provisionally called a treaty on the harmonization of certain provisions of patent law. Three international meetings on the subject of harmonization have been held by the World Organization in the last two years, and several others are planned at the approximate rate of one meeting every six months. They should lead to the so-called harmonization treaty.

Among the efforts of the World Intellectual Property Organization directed at simplifying the securing of protection, the efforts concerning the international registration of marks are *particularly important. There are three questions that are tackled simultaneously. Could the Madrid Agreement be made attractive to the United Kingdom and the other countries members of the European Community but not party to the Madrid Agreement? Could one establish a link between international registrations under the Madrid Agreement and European registrations under the future Community trade mark system? Could one establish a global system for the centralized filing of trademark applications and the centralized renewal and modifications of national registrations?*

These are the questions—in the field of simplification—on whose solution the World Organization has been working for the last year or two and on which it will continue to work in the years to come. Your Congress will discuss, in plenary, the question entitled "The International Registration of Marks." Its decisions will be of consequence on future developments in this field.

I have mentioned these examples of the activities of your Association and of the World Organization to show how similar our objectives are and to ask that you continue to give your advice and participate in the meetings of the World Organization.

We have always benefited by such advice and participation. I wish to express appreciation for them. My thanks go to all of you, particularly the chairmen and members of the national groups and the working groups dealing with the said subjects. My thanks go, naturally, also to the permanent officers of your Association, in particular to your Secretary General, Mr. Alfred Briner, your Reporter General, Mr. Geoffroy Gaultier, and your Treasurer General, Mr. Gabriel Frayne.

*And my particular thanks go to your Executive President, Mr. Donald Vincent and—most importantly—to your President, Mr. Edward Armitage. The term of office of these two distinguished gentlemen, my esteemed friends, Edward and Donald, has been a particularly brilliant one in the history of your Association. They did not consider their office as an honorary function. They worked hard, and successfully, on your Association being pragmatic—in the best British tradition—*and *active* and *effective in the shaping of the future of international industrial property protection. They were indefatigable. They were assisted by their lovely wives, Mrs. Marjorie Armitage and Mrs. Hazel Vincent.*

Now, in this Congress, they will enjoy the fruits of their labor. They, and all the other British organizers of this Congress—which promises to be both useful and elegant—should receive the thanks and congratulations of all participants.

It is my great pleasure, as one of the participants, to offer to Mr. Edward Armitage, and to his British colleagues, my thanks and congratulations."

Resolutions Adopted

Protection of Computer Software and Integrated Circuits

RESOLUTION

AIPPI found, at its Executive Committee Meeting in Rio de Janeiro in May 1985, that the protection of integrated circuits is necessary and urgent.

The institution of a new specific treaty appears necessary in order to assure that an integrated circuit protected in one country can be protected in another country under the same conditions as applicable to integrated circuits of nationals of that other country.

....

AIPPI *is of the opinion* that this new treaty should contain the following essential rules:

I. *Definition of Subject Matter of Protection Provided for by the Treaty*

....

...[T]he treaty ought to protect the layout-design of an integrated circuit, which may be defined to mean the three-dimensional disposition of the active elements, interconnections and passive elements, if any, of a semiconductor integrated circuit, which integrated circuit is intended to perform an electronic function, in whichever form such disposition is fixed or encoded.

This definition allows for protection of the layout-design of the integrated circuit, whatever the means of its manufacture.

....

II. *Conditions for Protection*

....

AIPPI *is of the opinion* that neither technical progress nor novelty should be taken into consideration as a condition for protection.

AIPPI *is of the opinion* that to be the subject of protection the layout-design of an integrated circuit must be original.

The notion of originality of a layout-design of integrated circuits is interpreted to mean:

- the layout-design or the integrated circuit must not be a copy of another layout-design;
- it must be the result of an intellectual effort;
- it must not be commonplace to interested persons.

III. *Rights*

1. AIPPI *approves* the provisions of Article 3(1)*(a)* of the second draft treaty prepared by WIPO (document IPIC/CE/II/2), and proposes to consider unlawful the following acts if committed without authorization:

(a) copying of the layout-design or a material portion thereof (in this regard AIPPI supports the view expressed by WIPO in note 49 to Article 3 of the draft treaty, which refers to copying of less than the totality as requiring authorization, provided such copying is of an essential and/or substantial portion of the layout-design);

(b) incorporating the copied layout-design in an integrated circuit and incorporating the copied integrated circuit in an industrial article;

(c) importing, offering for sale, selling or otherwise dealing with such integrated circuits or industrial articles or the layout-designs in whatever mode they may appear.

2. AIPPI *is of the opinion* that a person who, without authorization, has copied the layout-design or has incorporated it in an integrated circuit should always be held to have infringed, regardless of whether that person has acted in good faith or in bad faith.

On the other hand, AIPPI *takes the view* that the Contracting States may foresee less strict sanctions for those who in good faith merely import, offer for sale, sell or otherwise deal with integrated circuits and/or industrial articles containing an integrated circuit made according to a copy of an original layout-design.

However, AIPPI *affirms* that in any case it must be possible to stop these unlawful acts in order not to end up in a non-voluntary license.

3. AIPPI *believes* that the treaty should not consider unlawful the following acts:

- use of a concept behind the layout-design of the integrated circuit;
- copying of the layout-design solely for educational purposes, provided the results of such copying are not incorporated in an integrated circuit;
- copying of the layout-design solely to analyze and evaluate it for the purposes of reverse engineering, provided that the result of the reverse engineering is an original layout-design.

AIPPI *notes* that reverse engineering is understood by industry to refer to the situation where a later layout-design results from the extraction and use of the circuits, logic flow, ideas and methodology embodied in the earlier layout-design.

IV. *Compulsory License*

AIPPI *is of the opinion* that the question whether the treaty should allow compulsory licenses specifically in the interest of national security should be studied.

However, AIPPI *is of the opinion* that, given the possibilities of independent development and reverse engineering of competing integrated circuits, technical progress in integrated circuits will not be hindered by the absence of compulsory licenses.

V. *Sanctions*

AIPPI *approves* the provisions of Article 3(1)*(b)* of the draft treaty according to which any Contracting State should provide for measures to ensure the prevention and repression of acts considered unlawful.

VI. *Formalities*

AIPPI *is of the opinion* that any Contracting State may make protection conditional upon the deposit of material allowing the identification of original layout-designs.

However, AIPPI *takes the view* that this deposit should be kept secret at the request of the depositor.

A secret deposit should, however, be available for inspection for anyone accused of committing an infringement provided that appropriate measures are taken to preserve the depositor's rights (such as a trade secret) and, in any event, the deposit should be available to the public at the end of the term of protection.

VII. *Duration of Protection*

AIPPI *is of the opinion* that the minimum duration of protection for a layout-design of an integrated circuit should be 10 years.

AIPPI *wishes* that the starting point of this duration be the same in all Contracting States, and that this starting point be established with certainty.

....

Legal and Economic Significance of Protection by Utility Models

RESOLUTION

A. AIPPI *favors establishing* a utility model system for the following reasons:

1. Utility models can encourage inventors and investors to invest in and protect technical developments which do not fulfill the requirements of patentability and to obtain protection both at a lower cost and more quickly.

Consequently, utility models are of particular interest to small and medium-sized industries and can promote technical development in developing countries.

2. Utility models can fill a gap in the protection of inventions which occurs when the requirements relating to inventive step for patents mean that certain inventions which do not comply with those requirements cannot be protected. Moreover, this form of protection prevents the patent system from being devalued by being applied to minor technical inventions.

....

3. When a utility model is applied for at the same time as a patent, it may, if national law so permits, give the inventor protection during the prosecution time of the patent application when the latter gives no effective protection. This has a particular advantage when the patent application has been published so that the invention has been revealed to competitors.

B. AIPPI *appreciates* that any utility model system which is established must benefit society as a whole. AIPPI therefore *declares* itself in favor of introducing utility model systems under the following terms and conditions:

1. *Subject Matter to be Protected*

Utility models should protect at least three-dimensional articles but, although it should be left to the national laws to include other subject matter, there can be good reasons to extend the protection to all patentable subject matter specifically where a substantive examination is carried out.

Such protection should not, however, protect more than it is possible to protect by means of a patent.

Subject matter covered by utility models shall not be precluded from patent protection.

2. *Prerequisites for a Valid Utility Model*

(a) novelty;
(b) furthermore an additional requirement, chosen by national law, which preferably should be: the result of a creative effort in the sense of going beyond the state of the art but may be less than the inventive step necessary for the subject of a patent;
(c) written description and one or more claims.

3. *Grace Period*

The same international grace period as for patents, calculated back from the priority date.

4. *Disclosure*

The disclosure of the subject matter of the utility model should be as complete in describing the embodiments as for patents.

5. *Examination*

There must at least be an examination as to formal requirements, i.e., compliance with formal regulations and with the definition of subject matter.

The utility model need not be the subject of substantive examination before grant or registration.

But after grant or registration, there should at least be the possibility of obtaining a search report from an official agency at the request of either a third party or the proprietor.

In infringement proceedings the proprietor must always produce such a report.

If there is substantive examination it shall be carried out so as not to detract from the objects set out in paragraph A, above.

6. *Cancellation*

Provision for complete or partial cancellation procedure at the request of third parties.

7. *Duration*

Not less than five years from the national filing date and, if not exposed to substantive examination, not more than 10 years from the national filing date.

8. *Scope of Protection*

The scope of protection shall be as determined by national law but shall not exceed the following.

The extent of the protection shall be determined by the terms of the claim(s). Nevertheless, the description and drawings serve to interpret the claim(s).

9. *Effect and Remedies*

Same as for patents, as determined by national law. However, no remedy shall be available before publication.

10. *Multiple Protection for the Same Subject Matter*

Patents and utility models may be allowed to supplement each other provided, however, that an infringer is not in a worse situation as a consequence of overlapping protection, and provided that patents and utility models filed on the same day do not invalidate each other.

11. *Co-existence of Utility Models and Designs*

Utility models and designs can co-exist in relation to the same article.

Measures Against Counterfeiting of Branded Goods

Resolution

AIPPI

— *Considering* that the counterfeiting of trademarks today poses a serious problem where such counterfeiting consists of the unauthorized identical reproduction of the authentic trademark or such a reproduction that cannot be distinguished from the authentic trademark, used on products which are identical or similar to those protected by the authentic trademark, and so as to give deliberately the impression that the products bearing the counterfeit trademark come from the owner of the authentic trademark,

— *Considering* that this deliberate intention to give such an impression can especially be determined from the following circumstances:

the authentic trademark consists of words or elements of such complexity that their reproduction could be achieved only through knowledge of the authentic trademark,
the authentic trademark is so well known that its reproduction could be achieved only through knowledge of the authentic trademark,
the appearance of the authentic product or its packaging is reproduced in addition to the reproduction of the authentic trademark,
the trade name of the owner of the authentic trademark or other characteristic signs of the authentic product are reproduced, in addition to the reproduction of the authentic trademark,

— *Considering* that the measures referred to below should apply to all acts of counterfeiting and particularly to acts of manufacture, importation, distribution and offers to distribute,

— *Considering* that such acts of counterfeiting constitute serious economic offenses tantamount to theft,

— *Considering* that such counterfeiting is no longer just an occasional phenomenon but has become an international trade and now causes real systematic unfair competition with and the discrediting of marks of national or international reputation,

— *Considering* that the effects of such counterfeiting on business enterprises, on the reliability of business transactions and even on the equilibrium of national trade balances are now substantial,

— *Considering* the protection of the legitimate interests of consumers,

— *Considering* that national procedures have frequently been found ineffective for dealing with the new dimensions of counterfeiting operations, especially because the producer of the counterfeit goods is usually not located in the jurisdiction where the product is sold,

— *Considering* that strengthened measures, and even new solutions, need to be sought for preventing and suppressing such counterfeiting,

1. *recalls* that, in accordance with its resolution adopted in Munich in 1978 (see the Resolution of AIPPI on Question 70—Annuaire 1978/II, page 160), rights in trademarks constitute exclusive property rights and that their proprietor, whether a person or a group of persons, has to be protected by the law against any form of infringement and emphasizes that all acts of counterfeiting must be prohibited in all circumstances, including those where the products concerned are openly presented as reproductions;

2. *stresses* the negative effect of this counterfeiting:

— on the distinctive character of the authentic trademark,
— on the development of national economies and businesses,
— on the reliability of business transactions,
— on health, hygiene, safety and the environment,
— on the legitimate interests of consumers;

3. *notes*, then, that there exists a real economic problem presented by counterfeiting, necessitating strengthening of the prevention and suppression of same;

4. coosequently:

(a) *welcomes* initiatives which on a national or international level aim to suppress counterfeiting activities and especially welcomes the initiatives of WIPO, the European authorities and GATT;

(b) *recommends* that international cooperation in the field of police and customs action sbould be strengthened with a view to eliminating the international trade in goods which bear such a counterfeit mark;

(c) *recommends* particularly that internal legislation and its application ensure:

—the strengthening of detection measures in order to promote and speed up the seizure and confiscation of goods bearing such a counterfeit mark;

—the facilitating of the establishment of proof of counterfeiting, of origin and of the destination of such products so as to discover and deter those responsible for all the acts of counterfeiting and to establish the damage caused to the victims;

—the improvement of the procedures for provisional or final injunctions;

—the adoption of sanctions, both penal and civil, such as to have a dissuasive effect and make counterfeiting lose its reputation of being an offense or crime involving little risk;

(d) *recommends*

(i) to pursue the detailed study of two particular points:

—the action of police and customs in the detection of and dealing with counterfeiting, and their participation in its suppression;

—the administrative or judicial procedure likely to provide adequate information to victims of counterfeiting operations; this latter point should cover the procedures of investigation and examination by customs officials and police departments and also injunctions such as the "Anton Piller Order" in Anglo-Saxon law;

(ii) to follow the evolution of work undertaken by various international and intergovernmental organizations;

(iii) to extend the study to the problem posed by the slavish copy of a product, even in the absence of a counterfeit trademark, where the form or appearance of this product is perceived by the customer as characteristic of the goods of a certain enterprise.

International Registration of Marks

RESOLUTION

AIPPI

1. *Takes note* that, since the meeting of the Executive Committee of AIPPI at Rio de Janeiro in May 1985, the World Intellectual Property Organization has published drafts of two Protocols to the Madrid Agreement (Protocol A and Protocol B: document MACT/II/2), *notes* that each of these Protocols would, legally speaking, constitute a new treaty;

affirms that the first priority for achieving an international trademark registration system with a wider membership should be by way of revising the Madrid Agreement;

believes that Protocol A could form the basis for such a revision or else could constitute an entirely new treaty if a revision of the Madrid Agreement cannot be achieved;

believes that the relationships between countries party to the Madrid Agreement, on the one hand, and countries party to a new treaty, on the otber, would be very complex;

adopts the following Resolution after studying Protocols A and B:

— on Protocol A (paragraphs 2 to 6 of this Resolution),
— on Protocol B (paragraph 7 of this Resolution).

2. *Notes* that in countries that examine *ex officio* on absolute and on relative grounds (hereinafter referred to as "examination countries"), trademark owners can be disadvantaged by the need for a home registration, in particular because of the length of time needed for an application to mature into a registration;

confirms the Resolution passed by the Executive Committee at Rio de Janeiro (AIPPI Annuaire 1985/III) that an international registration could be based not only upon a home registration, but also upon a home application, which might already have been subjected to an examination of the absolute grounds of refusal, provided that this application eventually matures into a registration;

believes that an application for international registration should continue to be made through the national office of the home country and that a self-designation of the bome country should continue to be excluded;

notes that some examination countries (such as Australia, Canada, Finland, Israel, Japan and the United States of America) are of the opinion that no national basis should be required.

3. *Considers* that even though some of the difficulties with central attack and national dependency which are anticipated by certain countries might be eased by introducing a system whereby the owner of an international registration that has lost its home base could have the option of filing national applications in the previously designated countries, all of which would retain the priority of the international registration; nevertheless *believes* that such a system would create further difficulties, in particular because:

(a) it will be necessary to amend many of the national trademark laws to allow for such a "transformation," as it is called;

(b) it could jeaopardize one of the principal advantages of central attack, namely, that *inter partes* conflicts may be dealt with in the home country without a multiplicity of opposition or cancellation proceedings;

further believes that a period of 12 months to apply for such a "transformation" is, in any case, too long;

notes that certain countries that are not party to the Madrid Agreement would be ready to accept the temporary (i.e., five years) dependency rule and central attack, provided that it is attenuated by this proposed "transformation" system;

notes also that even some countries party to the Madrid Agreement could overcome their reservations about this solution if the accession of further countries to the Madrid Agreement depended on it.

4. *Considers* that the present time limit of 12 months for notifying a provisional refusal is sufficient, and prefers that this time limit be maintained. Indeed, such period has been found to be workable in countries such as Spain and Portugal where not only is an examination carried out on absolute and relative grounds, but there also exists the possibility of opposition by third parties;

takes note, however, of the apprehensions of some countries that a 12-month period may be too short for administrative reasons. The AIPPI could therefore accept a longer period if it led to a wider membership of the Madrid Agreement, but is strongly of the opinion that the period should not be more than 18 months.

5. *Prefers* the uniform rate system of fees as presently operated in the Madrid Agreement because a change to a system of different fees for different countries would detract from its simplicity, which is one of its main advantages.

However, recognizing that examination countries may be reluctant to accede to a system which does not fully compensate for the work carried out in the national offices, the AIPPI *realizes* that it may not be possible to maintain a uniform rate system and would accept that such countries could be compensated by granting them a supplement to the designating country fee paid by the applicant. The AIPPI also *accepts* that such a supplement should be set at a rate which would procure for the applicant a substantial financial advantage over filing nationally, and believes that once a fee is set it should only be changed at fixed intervals.

6. *Believes* that the present system of having only one language for operating the Madrid Agreement gives rise to no problems and that any proposal to add another language would only give rise to demands that further languages be added. However, if it were a sticking point for attracting new countries to the Madrid Agreement, the AIPPI would accept English as a second official language, but this should be done only on the clear understanding that no more languages should be introduced.

7. *Confirms* the Resolution adopted by the Executive Committee at Rio de Janeiro that any system should provide for a link with the proposed Community trade mark system (AIPPI Annuaire 1985/III);

recalls that the issues involved in providing such a link have already been the subject of a detailed study by the AIPPI;

decides that this study should be pursued in respect of the proposed Protocol B, referred to in paragraph 1.

8. *Resolves* to continue the study of all solutions which could result in a more universal system for the international registration of marks, including the TRT and the global treaty presently contemplated by the WIPO.

Obtaining of Evidence of Infringement of Industrial Property Rights

RESOLUTION

AIPPI

(A) ....

(B) *Considers* that an effective procedure to obtain evidence of infringement should permit the execution of orders for inspection, taking of samples, etc., without prior notice in appropriate cases, since the element of surprise makes it possible to prevent the removal of evidence.

(C) *Recognizes*, however, that in seeking to provide a solution to the above problems, it is necessary fully to protect the rights and interests of third parties, especially with regard to their trade secrets.

AIPPI accordingly *resolves* that:

I. There is a need to provide a system to enable the proprietor of an industrial property right to obtain evidence of infringement from the alleged infringer (where it is not otherwise reasonably obtainable) before formal institution of legal proceedings.

II. Under such a system:

1. The proprietor would be entitled to apply to a court or other competent authority (hereafter referred to as "the court") for an order for obtaining evidence (for example, but without limitation, for inspection of premises, examination and copying of documents and taking of samples).

2. ....

3. ....

4. ....

5. ....

6. ....

General Studies

Genetic Engineering and Industrial Property*

F.-K. BEIER** and J. STRAUS***

I. Introduction

1. Genetic engineering forms part of biotechnology and, indeed, biotechnology's claim to be the last and perhaps greatest technical revolution of this century[1] is primarily due to genetic engineering, that is to say, that collection of scientific and technical processes that have put man in a position to isolate genetic material, to build up new combinations and to reinsert those newly-combined nucleic acids into living organisms and to reproduce them in a new, natural or unnatural environment.[2] Admiration and anxiety, hopes and fears, accompany this recent technology that intervenes directly in living nature[3] and affects the very origins of life.

2. Despite the high hopes placed on genetic engineering—ranging from the cure for hitherto invincible diseases to the conquest of hunger—the public debate, at least in Europe,[4] does not center on how to *promote* scientific and technical developments in this field to the greater benefit of mankind. The uneasiness felt in many quarters at the manipulation of nature and the secret fear of that which is new and unknown, and its unforeseeable consequences, have meant, on the contrary, that the debate on genetic engineering has so far been dominated by the question of its admissibility and by the question of who is to set the limits, the scientist, under his own responsibility, the politician or the legislator.[5] This is understandably and rightfully so, since it has already enabled a number of misunderstandings to be cleared up and some provisional limits to be marked out, as for instance in the utilization of gene therapy.[6]

However, if it is indeed the desire to achieve the hopes and the social desiderata within the permissible

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* This study is based on a paper presented by the first-mentioned author on January 11, 1986, to the Sixteenth Bitburg Colloquium on Genetic Engineering and Law.

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[1] Cf., Office of Technology Assessment of the United States Congress (OTA), *Commercial Biotechnology, An International Analysis*, Washington, D.C., 1984, p. 11.

[2] According to Winnacker, *Gene und Klone. Eine Einführung in die Gentechnologie*, Weinheim, 1984, p. 1, and by the same author, *"Grundlagen und Methoden der Gentechnologie,"* in *Gentechnologie und Verantwortung*, a symposium of the Max Planck Society, Ringberg Castle, Tegernsee, May 1985, p. 14. It should be pointed out, however, that the definition of genetic engineering is a matter of dispute in scientific circles. For details, see Straus, *Industrial Property Protection of Biotechnological Inventions, Analysis of Certain Basic Issues*, WIPO document BIG/281, Geneva, July 1985, paragraph 12 and the literature cited there in footnote 59.

[3] Thus Staab, *Gedanken zum Thema des Symposions*, conclusion, *op. cit.*, footnote 2, p. 78.

[4] Whereas the studies carried out by the American OTA deal fairly extensively with matters of patent protection and of industrial property in general (cf., *Commercial Biotechnology, op. cit.*, footnote 1, pp. 383 *et seq.*, and *Impacts of Applied Genetics, Micro-Organisms, Plants and Animals*, Washington, D.C., 1981, pp. 237 and 238), the study projects put in hand so far or already completed by the Federal Parliament and the Federal Government make almost no reference to that field (cf., Catenhusen, *"Aus der Arbeit der Enquête-Kommission 'Chancen und Risiken der Gentechnologie' des Deutschen Bundestages,"* in *Gentechnologie und Verantwortung, op. cit.*, footnote 2, pp. 45 *et seq.*, and the newly submitted report of the Working Group on In Vitro Fertilization, Genome Analysis and Gene Therapy. At the *Réunion internationale de bioéthique* in Rambouillet in April 1985, the question of simplification of the patent laws was nevertheless mentioned in one sentence although it should not be forgotten that representatives of both the United States of America and Japan also participated in the discussions in Rambouillet. For more detail, see Eser, *"Gentechnologie—Rechtspolitische Aspekte aus internationaler Sicht,"* in *Gentechnologie und Verantwortung, op. cit.*, footnote 2, pp. 53 and 54. An exception is constituted by the work of the Organisation for Economic Co-operation and Development (OECD) and of the World Intellectual Property Organization (WIPO), to which we shall return in more detail.

[5] Cf., e.g., the contributions published in the Thematic Number, *"Ethische Aspekte der Gentechnologie"* of the periodical *Projekt Europa*, No. 28 of March 1985; likewise the replies given at the *Réunion internationale de bioéthique*, April 1985, to the questions put by the French President, François Mitterand (reproduced in German translation by Eser in *Gentechnologie und Verantwortung, op. cit.*, footnote 2, p. 81); also the contributions to *Gentechnologie und Verantwortung, op. cit.*, footnote 2, and in Friedrich-Naumann-Stiftung (editor): *Gentechnologie, Genforschung und Genmanipulation, Chancen und Risiken*, documentation for expert discussions and the comments and materials on that subject from the political, ethical and legal viewpoints, Munich, 1985. However, it must be pointed out that ethical and social questions also receive great attention in the United States of America, where a commission charged by the U.S. President with the examination of ethical questions in genetic engineering in medical, biomedical and behavioral research published in 1982 a report entitled "Splicing Life" that received great attention.

[6] Cf. the recently filed report of the Working Group on In Vitro Fertilization, Genome Analysis and Gene Therapy jointly instituted by the Federal Minister for Justice and the Federal Minister for Research and Technology (hereinafter referred to as the "Benda report"), paragraph 4.2 (pp. 79 *et seq.*).

limits that are already perceivable, but still to be defined in detail, it will not be possible to continue neglecting the aspect of *promotion* within the framework of an overall legal consideration of the phenomenon of genetic engineering. It will not be enough simply to demand of the research workers behind these new technologies that they act with ethical responsibility and that they practice voluntary restraints, but a positive interest will have to be shown in them, in their rewards and in their further incentives, and one will have to consider the essential economic question of how to ensure protection for the huge investments required by this new area of research and development.[7]

3. This concerns not only the research minister and his technology programs, but also industrial property and, in particular, patent law. In order to promote technical, economic and social development, society has for centuries made use of a special, inexpensive, but effective legal instrument, that of protection for inventions. Despite the changes that have taken place and the differences in the economic and social parameters, the main objectives of protection have basically remained unchanged since its beginnings in the system of inventors' privileges instituted at the close of the Middle Ages.[8] That is to say that creations of the mind are given recognition by the grant of exclusive rights limited in time, the inventor is rewarded for his achievements that are useful to society, industry is encouraged to invent, invest and innovate and, finally, the disclosure and dissemination of technical knowledge is promoted.[9] In an area of law in which economic and legal motives of this kind are determinant, the debate on genetic engineering must naturally be conducted under aspects that differ from those of the debate on safety and avoidance of risks where criteria of ethics and morals dominate the stage. The prime aim is not to regulate but to promote the new technology by opening and adapting the existing and proven instrument of industrial property protection to the new technology. The question is, in other words, whether the patent system conceived for inventions in the traditional fields of technology and/or the already existing system of plant breeders' rights are adapted to inventions made by genetic engineering. Do there exist loopholes in protection or problems of adaptation and, if so, how can they be removed, by the courts or by the lawmaker?[10] There is but little place for ethical or moral judgments.

4. This does not of course mean that patent law should limit itself entirely to the promotion of technological progress and grant protection to all inventions of any kind just because they are new, inventive and industrially applicable, that is to say, that they satisfy the general requirements of patentability (Section 1(1) of the Patent Law of the Federal Republic of Germany,[11] Article 52(1) of the European Patent Convention[12] (EPC)). Although it is primarily an instrument of technical and economic policy, patent law forms part of the legal order. Therefore, sometimes despite appearances, patent laws, as other laws, are subject to the barriers inherent in the legal system, set by the Constitution, by public policy and by morals. These barriers exist in most countries. Both the German Patent Law and the European Patent Convention (Section 2(1), first sentence, of the Patent Law, Article 53(a) of the EPC) use the same words to exclude inventions the publication or exploitation of which would be contrary to *"ordre public"* or *morality*. These two general clauses constitute the necessary gates of entry for overriding social and ethical considerations into the patent law system, which is otherwise neutral in its judgment and entirely devoted to the technological appreciation of inventions.[13]

They leave, however, only rather limited scope for introducing ethical standards in the interpretation of

[7] In the United States of America in 1984, private industry alone invested 1,500 million dollars in this field. Cf., OTA report *Commercial Biotechnology*, *op. cit.*, footnote 1, p. 12. Cf. also the data given by the OECD Secretariat in the preface to Beier/Crespi/Straus, *Biotechnology and Patent Protection – An International Review*, OECD, Paris, 1985, p. 9.

[8] For the early development of the system of privileges, cf. Damme, *Der Schutz technischer Erfindungen als Erscheinungsform moderner Volkswirtschaft*, Berlin, 1910, pp. 42 *et seq.*; Machlup, *"Patentwesen, geschichtlicher Überblick,"* HdSW VIII, pp. 233 *et seq.*; Pohlmann, *"Neue Materialien zur Frühentwicklung des deutschen Erfindungsschutzes im 16. Jahrhundert,"* GRUR, 1960, pp. 272 *et seq.*; AIPPI (editor), *La legge veneziana sulle invenzioni*, Milan, 1974, particularly the contributions by Davidson and Sordelli, pp. 103 *et seq.* and 251 *et seq.*. As for the special form of importation privileges, see finally Dölemeyer, Barbara, *"Einführungsprivilegien und Einführungspatente als historische Mittel des Technologietransfers,"* GRUR Int. 1985, pp. 735 *et seq.*

[9] For details, see Beier/Straus, "The Patent System and Its Informational Function," 8 IIC 1977, pp. 390 *et seq.*; Beier, "The Significance of the Patent System for Technical, Economic and Social Progress," 11 IIC 1980, pp. 563 *et seq.*, 571 *et seq.*, with further references in each case.

[10] Cf., e.g., the contributions by Beier, "Future Problems of Patent Law," 3 IIC 1972, pp. 423 *et seq.*, 428 *et seq.*; Beier/Crespi/Straus, *op. cit.*, footnote 7; Blum, *"Fragen der Patentfähigkeit von Erfindungen auf dem Gebiet der lebenden Materie,"* GRUR Int., 1981, pp. 293 *et seq.*; Hüni/Buss, "Patent Protection in the Field of Genetic Engineering," *Industrial Property*, 1982, pp. 396 *et seq.*; Lederer, "A Prospective of Patenting Organisms under the European Patent Convention: Prospects and Considerations," APLA Q.J., Vol. 7, 1979, pp. 288 *et seq.*; von Pechmann, *"Zum Problem des Schutzes gentechnologischer Erfindungen bei Pflanzen durch Sortenschutz und/oder Patente,"* GRUR, 1985, pp. 717 *et seq.*; Straus, "Patent Protection for New Varieties of Plants Produced by Genetic Engineering – Should 'Double Protection' Be Prohibited?," 15 IIC 1984, pp. 426 *et seq.*; Vossius, *"Patentfähige Erfindungen auf dem Gebiet der genetischen Manipulation,"* GRUR, 1979, pp. 579 *et seq.*; by the same author, *"Zum Patentschutz von Lebendmaterial,"* *Naturwissenschaften*, 1984, pp. 552 *et seq.*; Vossius/Jaenichen, *"Zur Patentierung biologischer Erfindungen nach Europäischem Patentübereinkommen und Deutschem Patentgesetz – Formulierung und Auslegung von Patentansprüchen,"* GRUR, 1985, pp. 821 *et seq.* For further literature, see bibliography in Beier/Crespi/Straus, *op. cit.*, footnote 7, pp. 113 *et seq.*

[11] See *Industrial Property Laws and Treaties*, GERMANY (FEDERAL REPUBLIC OF) – Text 2-002.

[12] See *Industrial Property Laws and Treaties*, MULTILATERAL TREATIES – Text 2-008.

[13] More detail in Benkard (Bruchhausen), *Patentgesetz, Gebrauchsmustergesetz*, 7th edition, Munich, 1981, paragraphs 3 to 6 on Section 2 of the Patent Law.

patent law.[14] In the statement of grounds, it is explicitly said that "public order" comprises only the "major principles of the legal order" and that those principles are not necessarily infringed solely because exploitation of the invention is prohibited by law or administrative regulations. This surprisingly restrictive provision was thought up by the European patent law harmonizers primarily because it was not necessarily in the general interest to deny patentability in all cases where the exploitation of the invention concerned was prohibited, for instance, under a foodstuffs law only allowing certain additives. The inventor of a new additive with possibly less harmful effects should, indeed, have the possibility of obtaining a patent since it is possible that the prohibition of exploitation may be subsequently removed. Account is also taken of the fundamental consideration that a patent does not afford its owner a positive right to use, but solely a right to prohibit.[15]

However, this restrictive definition of public policy is not likely to have much significance for genetic engineering inventions since the constitutional provisions that could possibly be affected, such as the inviolability of human dignity[16] and the right to life, physical integrity and personal freedom (Article 2(2) of the Basic Law of the Federal Republic of Germany) indubitably belong to the major principles of our legal order as do the provisions that protect life and health.[17]

Obviously, genetic engineering inventions are also subject to the general rule that the legality or morality of an invention is always to be judged in respect of the *normally intended use* of the patented product or process and not on the simple possibility of misuse. Where a given product, for instance a poisonous chemical substance, can be legally used as a pesticide, the fact that the same substance can also be used in warfare against human beings, and is indeed prohibited by international law, does not mean that it is excluded from patentability.[18]

In relation to genetic engineering, this principle would mean that a process for transferring foreign genes by means of what is known as microinjection, which may be used generally and without problems at all in genetic engineering, is not excluded from patentability for the sole reason that it could also be used for transferring genes to human germ line cells, although it is also our view that this type of gene transfer "is not compatible with the fundamental option of Article 1(1) of the Basic Law in favor of the protection of human dignity nor is it compatible with the objective legal content of the basic right to life and physical integrity contained in Article 2(2), first sentence, of the Basic Law, since human life would here be the subject of experimentation."[19]

Despite this restrictive interpretation, presaged by the patent legislator, the provisions on the exclusion of illegal or immoral inventions in the field of genetic engineering will assume in the future a considerably greater significance than today. They will permit the Patent Office and the Courts to assert the fundamental principles of our legal order in the field of patent law, particularly the view, already set out in the decisions of the Imperial Patent Office, that human beings were not to be made the subject matter of technology.[20]

II. Animate Nature and Patent Protection—Old and New Aspects

If one attempts to study the question of *patentability of genetic engineering inventions*; a distinction between new and old aspects of that question seems to be useful.

(a) Old Aspects

5. The old aspects, which are nevertheless essential to understanding the problem, do not concern genetic engineering inventions[21]—since the latter are of more recent date—but rather concern all inventions belonging to the larger area of biotechnology,[22] of which genetic engineering constitutes the new, dramatic vanguard. How has patent law developed in this area?[23]

[14] Section 2(1), first sentence, of the Patent Law and Article 53(a) of the EPC are modeled on Article 2(a) of the Strasbourg Convention on the Unification of Certain Points of Substantive Law on Patents for Invention of November 27, 1963. For the background to this provision and interpretation of the French term *"ordre public"* contained therein, cf. Pfanner, *"Vereinheitlichung des materiellen Patentrechts im Rahmen des Europarats,"* GRUR Int., 1962, pp. 545 *et seq.* (547); and the same author, GRUR Int., 1964, pp. 247 *et seq.* (248 and 249).

[15] Cf. the statement of reasons of the Federal Government to the draft of a Law on the Convention of November 27, 1963, on the Unification of Certain Points of Substantive Law on Patents for Invention, the Patent Cooperation Treaty of June 19, 1970, and the Convention on the Grant of European Patents of October 5, 1973 (International Patent Treaties Law), of April 18, 1975, Federal Government publication 220/75, p. 7. See further Krieger, Albrecht, *"Das neue deutsche Patentrecht nach der Harmonisierung mit dem europäischen Patentrecht—eine Übersicht,"* GRUR Int., 1981, pp. 273 *et seq.* (274).

[16] BGHZ 48, 327, 330.

[17] More detail in Benkard (Bruchhausen), *op. cit.*, footnote 13, margin No. 5 on Section 2 of the Patent Law, with numerous references to case law.

[18] Cf. Federal Court of October 19, 1971, GRUR, 1972, 704 (707)—*"Wasser-Aufbereitung."* More in Benkard (Bruchhausen), *op. cit.*, footnote 13, margin No. 4 on Section 2 of the Patent Law.

[19] Thus the Benda report, margin No. 4.2.2.1.1 (p. 82) in respect of the constitutional problems of gene transfer in germ line cells.

[20] Cf. Patent Office of December 15, 1933, Mitt., 1934, 19 (20). See also Beier, 3 IIC 1972, pp. 431.

[21] Cf. footnote 2, above.

[22] According to the definition by Bull, Holt and Lilly, *Biotechnology, International Trends and Perspectives*, OECD, Paris, 1982, p. 21, biotechnology is to be understood as "the application of scientific and engineering principles to the processing of materials by biological agents to provide goods and services."

[23] More on this development in Duttenhöfer, Herta, *"Über den Patentschutz biologischer Erfindungen,"* in Häusser (editor), *Zehn Jahre Bundespatentgericht*, Cologne, etc., 1971, pp. 172 *et seq.*; Beier, 3 IIC 1972, pp. 428 *et seq.*; Krasser, *"Zum Patentschutz chemischer und biologischer Erfindungen,"* *Naturwissenschaften*, 1976, pp. 401 *et seq.* (402 *et seq.*). In each case with further references.

From the very beginning, its development was difficult, disputed and unsatisfactory, and the development in Germany did not form an exception.

6. For decades, the main obstacle to the ready incorporation of biotechnological inventions within the scope of patent protection, for which a need had made itself felt at an early date, was the patentability requirement of *technical nature* derived by legal theory and case law from last century's historical concept of invention and the historically restrictive interpretation of technology in the day-to-day practice of the German Patent Office and in the decisions that backed it up. According to that definition, technology could only concern the field of inanimate nature, and its utilization and modification according to the laws of physics and chemistry, with the result that patent protection long remained inaccessible to the majority of biotechnological inventions despite the fact that they fulfilled the statutory requirement of industrial applicability. For the engineers, physicists and chemists working as examiners in the Patent Office—a small number of biochemists and biologists has only recently been included—everything that crept and crawled, that behaved in an uncontrolled manner and that reproduced itself was something quite alien that could not be easily described in a patent claim and kept in the files.

However, from the very beginning, an exception was made for processes in the traditional fermentation industry, e.g., for the production of alcohol, beer, vinegar, yeast and the like, apparently ignoring the fact that all those products owed their existence to the metabolic activities of living organisms (which in fact subsequently were the first to obtain access to the field of patent protection reserved for technology, under the motto "the smaller, the sooner"). The next processes to qualify for patent protection were those of agriculture, that is to say, processes using chemical or physical means to influence the growth, properties or yield of plants, without interfering in their hereditary substance, and finally, as from the mid-1930s, processes for breeding new varieties of plants were patented although the granting practice at the Patent Office in fact never received the highest judicial blessing of the Supreme Court. Processes for breeding animals and inventions of new breeds of animals, on the other hand, have so far never obtained patents.[24] With the exception of the smallest living entities, which have indeed also been neglected by societies for the prevention of cruelty to animals, the Patent Office has so far found no place for animals.

7. It was not until 1969 that the Federal Supreme Court was given the opportunity of pronouncing on the question of the patentability of inventions in the field of animate nature. It was indeed in that very year of student demonstrations that the Court had to deal with the patentability of a red dove that was the result of multiple crossing that had led to the breeding of doves with particularly large, particularly beautiful and particularly red plumage. The various parents had been old German croppers—not quite so red. In its' leading decision, which has gone down in patent law history under the name of "Red Dove," the Federal Supreme Court made three quite unmistakable statements:

Firstly, the spirit of the Patent Law required that "the current state of scientific knowledge be applied to interpret the concept of 'invention,' which the legislator had not delimited in detail and which was inherently quite non-specific." Thus, the nineteenth century concept of invention in its historical sense was clearly rejected. It was replaced by an open, dynamic concept that makes patent protection available to every innovation containing "teaching for a systematic act utilizing controllable natural forces to achieve a causally foreseeable result."

Secondly, the Federal Court stated that no sufficient reason was perceivable in the current status of scientific knowledge to exclude the planned and now controllable utilization of *natural biological forces and phenomena* from patent protection. It thus explicitly supported the possibility of patenting processes for breeding animals and, indirectly, also the patentability of plant breeding processes.

Thirdly, and this is the major restriction, the biological teaching must be "repeatable" if it is to be patented, that is to say that other experts must be able to reproduce it each time with the same result. It would not be compatible with the principles of patent law if the requirement of repeatability of the invention in respect of which a patent was applied for were to be waived simply because the result of breeding, i.e., the new animal race or the new plant, can reproduce itself with hereditary stability and thereby is better able to enrich the community than a repetition of the arduous and time-consuming breeding activity itself. If such a process were not to be reproducible—and that is the case as a rule—then the enrichment of the community would consist solely of the breeding result that had been obtained once only. That would mean the breeder was not giving the expert a teaching in how to produce the new variety, but would simply refer the community to the physical result of breeding, which for the moment was in his possession alone, that is to say, the red dove in its cage. In place of a teaching enabling any skilled person to achieve the same result, there would in fact be a monopoly situation in the product derived alone from the once only act of breeding, This type of monopoly was alien to the patent system.[25]

[24] Cf. Duttenhöfer, *op. cit.*, footnote 23; Hesse, *"Zur Patentierbarkeit von Züchtungen,"* GRUR, 1969, pp. 644 *et seq.*; Schade, *"Patentierung von Pflanzenzüchtungen,"* GRUR, 1950, pp. 312 *et seq.*; Wuesthoff, *"Erschliessung des Patentrechts für neue Gebiete (dargelegt am Beispiel der Pflanzenzüchtungen),"* GRUR, 1953, pp. 230 *et seq.*

[25] Federal Supreme Court of March 27, 1969, I IIC 1970, pp. 136 *et seq.* (140, 141)—"Red Dove."

The red dove, together with all other creatures, whether animals or plants, although found to be patentable in principle thus continued to be banished from the paradise of patent protection. Their stumbling-block was the Federal Supreme Court's faithfulness to its principles.

8. The principles laid down in the "Red Dove" decision were confirmed, extended and, at the same time, limited by the Federal Supreme Court in a further decision, known as the "Baker's Yeast" decision, handed down in 1975.[26] That decision went along, in particular, with the findings of the Federal Patent Court that to supplement the necessary description of a microbiological invention the microorganism utilized may be deposited with a recognized depositary authority.

The Federal Supreme Court in that way solved, as had the Federal Patent Court[27] before it, as well as the United States Court of Customs and Patent Appeals (CCPA),[28] a particular problem of patenting microbiological inventions that had arisen in the thirties, that is to say on the discovery of the antibiotic penicillin. The essential new aspect of these inventions is no longer the way in which microorganisms that are known and generally available to the specialists are cultivated, but exclusively the selection of the microorganism, which was discovered somewhere in Venezuela in a puddle. Although there was no difficulty at all in describing precisely in the patent description the conditions of fermentation, such as temperature, time, pH values, composition of the nutrient and the like, it was not, however, so simple to describe the microorganism itself, which had now become the most important prerequisite of the invention, in such a way that a person with average skill in the art not possessing the microorganism concerned could repeat the invention, that is to say, fabricate the antibiotic.

To overcome this problem, a start was made in the United States of America already in 1949 in supplementing the usual description of the invention in the patent document by *depositing microorganisms* in publicly accessible depositary authorities. The practice was soon to be adopted in Germany and in other countries. This procedure was confirmed by the Federal Supreme Court in 1975, but was subjected to the requirement that the deposited microorganism should be made available to all those interested as from the time of first publication of the application documents, that is to say, on publication of the unexamined application.[29]

9. However, a factor that has had much more effect than this requirement of premature and unrestricted availability of the microorganism, which is quite rightly criticized by the majority of legal writers,[30] is that the Federal Supreme Court had again confirmed the requirement of *reproducibility*, which is frequently not feasible in practice, and had declared it to be applicable to microbiological products also.

Although protection can be obtained for a new microorganism, it will only be obtained if the inventor can demonstrate a repeatable means of producing the microorganism, that is to say, methods that may be reproduced with sufficient expectation of success, e.g., by induced mutation or by breeding. The deposit of microorganims as a supplement to the patent description is sufficient, according to the Federal Supreme Court, for obtaining a patent for a microbiological *process* since the deposit makes the initial microbiological material for the claimed process available to the specialist. However, a *product patent* for the microorganism itself cannot be granted since deposit does not replace the repeatable teaching despite the faculty of living organisms to replicate themselves.[31]

10. We shall not here go into the question whether, in its "Baker's Yeast" decision, the Federal Supreme Court simply followed the principles set out in the "Red Dove" decision or whether there still exist some inconsistencies between the two decisions.[32] To draw a *provisional conclusion* in respect of almost 100 years of patent law development, it may be said in respect of protection of biological and microbiological inventions in the year 1975 that the answer is yes, in principle, and no, in practice, at least as far as protection is sought for the microorganism or macroorganism itself. Although protection for the process is possible if the microorganism is deposited, the basically more extensive protection of the product itself falls down in the great majority of cases because it is not possible to demonstrate repeatability, a principle to which the Federal Supreme Court clung tightly as to a "rock of bronze."

However, the rock was soon to be shaken. The culprit was genetic engineering and the enormous progress it has made over the last 10 years.

(b) New Aspects

11. We therefore now come to the new aspects for assessing the patentability of biotechnological inven-

[26] Federal Supreme Court of March 11, 1975, 6 IIC 1975, pp. 207 *et seq.*—"Baker's Yeast."

[27] Of June 30, 1967, decisions of the Federal Patent Court 9, 150.

[28] Of December 17, 1970, 168 USPQ 99—*"In re Argoudelis"* = GRUR Int., 1973, 41—*"Mikroorganismus,"* with notes by von Mühlendahl.

[29] Cf. Federal Supreme Court of March 11, 1975, 6 IIC 1975, pp. 210 *et seq.*—"Baker's Yeast."

[30] Cf., e.g., Vossius, *"Das Problem der Freigabe von hinterlegten Mikroorganismen,"* GRUR, 1975, pp. 477 *et seq.*; von Pechmann, *"Hinterlegung und Freigabe neuer Mikroorganismen,"* Mitt., 1977, pp. 41 *et seq.*

[31] Federal Supreme Court, 6 IIC 1975, pp. 210 *et seq.*—"Baker's Yeast."

[32] Criticized most recently by von Pechmann, GRUR, 1985, pp. 721 and 722. Cf. also by the same author, *"Sind Vermehrungsansprüche bei biologischen Erfindungen ungesetzlich,"* GRUR, 1975, pp. 395 *et seq.*

tions. Just as genetic engineering has provided the key to explaining many secrets of nature, it is also on the way to opening wide the door, first opened and then practically closed again by the Federal Supreme Court, to protection for biotechnological inventions. Although it was still correct to speak of a "Greek gift" of the Federal Supreme Court[33] or of a "Pyrrhic victory" for the animal and plant breeders[34] following the "Red Dove" and "Baker's Yeast" decisions, because repeatability of the breeding process could not be demonstrated, the progress now achieved in genetic engineering has meant that the crucial requirement of repeatability of inventions in the field of animate nature loses some of its patent-hindering effects almost every day.

This derives firstly from the *quantitative* aspect of genetic science and engineering, that is to say, its ability to penetrate the smallest structures and relationships much more rapidly, more rationally and more efficiently, and therefore also to describe them.[35] To this must be added a *qualitative* aspect of the new technology, that is to say, "the prospect of giving biology a synthetic orientation."[36] *Winnacker* compares this prospect with the revolution in organic chemistry achieved by *Wöhler* in 1828 with his synthesis of urea from inorganic forerunns and he reports on one of the most recent and most impressive examples to support his prognosis, that is to say, a mutagenic process developed at Harvard permitting any conceivable mutation to be inserted into a given piece of DNA.[37]

This mutation analysis process, in which individual mutants can be separated and isolated, makes it possible for genetic engineers in future to furnish the repeatable method demanded by the courts, e.g., by stating how a new microorganism can be produced by means of induced mutation.[38] It is without doubt this progress achieved in penetrating the bases of molecular biology, with which genetic engineering has given a new stimulus to the patentability of inventions in the field of animate nature, that casts a new and different light on the subject.[39] As so often happens, the scientists and engineers have once more overtaken the lawyers, if not in the field of law, at least in the field of technology.

12. Since its beginnings in the early 1970s, genetic engineering, as the name itself says, has developed increasingly from a branch of fundamental scientific research into a true technology, that is to say, into a "teaching of the extraction and/or processing of raw materials and materials to obtain utilizable technical products."[40] It covers a multiplicity of new processes and products of utmost importance.

13. The following may be mentioned as new *processes*:

- the *in-vitro recombinant DNA process*, which basically takes place in four steps: obtaining the desired gene, e.g., by chemical synthesis, insertion of the gene into a vector in order to form what is known as a recombinant vector (splicing), separation of the successfully "constructed" cell from the unwanted cells and finally the fermentation of the cells to cause them to replicate and produce the desired product;[41]
- the *hybridoma process for manufacturing monoclonal antibodies* by fusing lymphocytes that produce antibodies (e.g., from the spleen of mice that have been immunized with a specific antigen) with malignant, rapidly propagating myeloma cells;[42]
- the *somatic cell hybridization process*, based on experience in tissue culture and which utilizes the isolation and fusion of protoplasts (cells of which the walls have been removed by enzymes, i.e., have been digested) and exploits the totipotency of plant cells;[43]
- and finally, the *microinjection process* in which DNA sequences that have been cloned by means of in-vitro recombinant DNA technology are injected into fertilized animal egg cells.[44]

14. Although it is still possible to obtain a relatively good overview of genetic engineering processes, to attempt to make a complete list of the *products* that these processes have brought to us or will bring to us in future is not possible. They range from the various DNA

[33] Thus Beier, 3 IIC 1972, p. 431.

[34] Thus Beier/Crespi/Straus, *op. cit.*, footnote 7, p. 24.

[35] Cf. Winnacker, *"Grundlagen und Methoden der Gentechnologie," op. cit.*, footnote 2, p. 19. This particularly significant aspect is strongly emphasized in the report on *Genetic Engineering of Plants—Agricultural Research Opportunities and Policy Concerns*, Washington, D.C., 1984, pp. 13 and 14, published by the Board of Agriculture, National Research Council.

[36] Winnacker, *"Grundlagen und Methoden der Gentechnologie," op. cit.*, footnote 2, p. 19.

[37] *Op. cit.*, p. 19.

[38] As required in the decisions of March 27, 1969, 1 IIC 1970, p. 136—"Red Dove;" of March 11, 1975, 6 IIC 1975, p. 207—"Baker's Yeast;" of December 11, 1980, GRUR, 1981, 262—"Bacterial Concentrate."

[39] Cf., e.g., already Beier, 3 IIC 1972, p. 431; Duttenhöfer, *op. cit.*, footnote 20, p. 200, and the contributions referred to in footnote 10.

[40] Definition to be found in *Meyers Enzyklopädisches Lexikon*, 9th edition, Mannheim, 1978, under the keyword *"Technologie."*

[41] See for details, Bull, Holt, Lilly, *op. cit.*, footnote 22, pp. 46 *et seq.*; Straus, *Industrial Property Protection of Biotechnological Inventions, op. cit.*, footnote 2, p. 25, in each case with further references.

[42] See Bull, Holt, Lilly, *op. cit.*, footnote 22, pp. 44 *et seq.*; Office of Technology Assessment (editor), *Impacts of Applied Genetics*, Washington, D.C., 1984, pp. 71 and 72, with further references.

[43] More detail on this technology in Shepard/Bidney/Barsby/Kemble, "Genetic Transfer in Plants Through Interspecific Protoplast Fusion," 219 *Science* 683-688 (1983); Lawrence, "The Scientific Background of Genetic Engineering: Current Technologies and Prospects for the Future," in UPOV (editor), *Genetic Engineering and Plant Breeding, Reports of a Symposium held on the Occasion of the 16th Ordinary Session of the Council of the International Union for the Protection of New Varieties of Plants*, Geneva, October 13, 1982, Geneva, 1983, pp. 13 *et seq.*

[44] Cf., e.g., Gordon/Ruddle, "Integration and Stable Transmission of Genes Injected into Mouse Pronuclei," 214 *Science* 1244-1246 (1981).

transfer vectors, such as recombined plasmids, viruses and cosmids, through synthetic genes, transformed human viruses (e.g., Epstein-Barr virus), transformed bacterial cells with specific properties, bacterial, plant and animal cell lines, monoclonal antibodies, cell tissue, calluses, regulatory proteins, such as human insulin, interferons and human growth hormones, right up to new plants and animals.[45]

15. A particularity of these processes and products is to be found in the fact that they do not respect the *division between microbiology and (macro)biology*, a scientific boundary that is problematic in any event, and therefore frequently overstep the boundary drawn by the legislator between that which is patentable and that which is not patentable in the field of animate nature. What can be contained in just *one* genetic engineering invention, from the smallest to the largest, is shown, for example, by a European patent application filed by the American firm Agrigenetics, containing, *inter alia*, the following claims:

> "— DNA transfer vector containing transfer DNA in which a given plant gene has been incorporated... (1)
>
> — Process for the genetic modification of a plant cell, comprising the following two steps... (10)
>
> — Plants, plant tissue or plant cells, manufactured in accordance with the claimed process (19)."[46]

Thus, what begins in the field of microbiology—leaving aside the question whether this term is the correct one for the production of plasmids, viruses or cosmids that transfer DNA—[47] may quite easily end up in the field of macrobiology satisfying almost perfectly the definition of invention proposed by the German Supreme Court as a "teaching for a systematic act utilizing controllable natural forces to achieve a causally foreseeable result."

III. Domestic and European Patent Law in the Field of Genetic Engineering

16. What is now the current legal situation? That situation has changed since the mid-1970s due to legislative activity, although not altogether to the advantage of genetic engineering. In view of the rapid development of this field and its perceivable economic effects, one might have presumed that the most recent amendments to patent law would have taken those developments into account, in some way reflecting them in patent law. Unfortunately, such was not the case, although these amendments are also the result of a welcome new development, namely, the creation of a European patent system and the related harmonization of national patent law in Europe. Although the legal builders of this system looked progressively towards the future European patent law, they took little account of the scientific and technical developments of recent decades.

Of course, we are all quite aware that the lawmaker always lags behind; many new laws are outdated on the very day of their promulgation. However, in the field of patent law, which is intended to promote technical progress of the most recent kind, such should certainly not be the rule. Although it is difficult to forecast scientific and technical developments with reliability[48] and the legislator is generally well advised to wait a while until a "need to legislate" establishes itself, the patent law needs to be adapted to new developments without delay or—better—be formulated in such a way that it is accessible to all new technical developments and can be adapted to them by the courts.[49]

17. The builders of the European patent system did not do that. As they set about, in the 1950s, to harmonize patent law with the high aim of creating uniform requirements for protection throughout Europe, the task appeared to them so difficult, and justifiably so in view of the enormous legal differences and contrasting interests, that they decided to avoid any unnecessary complications that could make consensus more difficult. It was also not wished to burden the envisaged European Patent Office in its starting-up phase with additional problems for which no experience and no satisfactory solutions existed at national level at that time, i.e., at the end of the 1950s and the beginning of the 1960s.[50] One of the new problem areas—in

[45] A good overview of the products of genetic engineering already available is given in Part III of the OTA report *Commercial Technology, op. cit.*, footnote 1, pp. 114-257. See also Straus, *Industrial Property Protection of Biotechnological Inventions, op. cit.*, footnote 2, pp. 33-42, with various examples of patents granted for genetic engineering processes and products.

[46] Published European patent application No. 0122791 (October 24, 1984).

[47] This process is indeed generally regarded as a biochemical process. Cf., e.g., von Pechmann, GRUR, 1985, 723; by the same author, *"Einige gegenwärtige Probleme beim Schutz von Arzneimitteln, genetischer Forschung und Mikroorganismen," Bulletin Europäischer Berater für den gewerblichen Rechtsschutz* of October 16, 1984, pp. 54 *et seq.* (61); Straus, 15 IIC 1984, p. 433.

[48] In his minority opinion of November 3, 1985, for example, the Cologne geneticist Professor Doerfler criticized the legal authors of the Benda report for their view that competent and involved groups could determine scientific developments in advance (*op. cit.*, footnote 6).

[49] The example of the "Red Dove" decision of the Federal Court has already shown that a dynamic interpretation of a liberal concept of invention was most suited to satisfying the needs of technical development. A further example, which drew attention throughout the world, was furnished by the US Supreme Court in its "Chakrabarty" decision of June 16, 1980 (206 USPQ 193; GRUR Int., 1980, p. 627, with note by Bodewig). Referring to almost 200 years of history of the U.S. Patent Law and of its own decisions, the Court stated: "We have also cautioned that courts 'should not read into the patent laws limitations and conditions which the legislature has not expressed'.... In choosing such expansive terms as 'manufacture' and 'composition of matter' modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope.... The Committee Reports accompanying the 1952 Act inform us that Congress intended statutory subject matter to 'include anything under the sun that is made by man.'" (206 USPQ 196, 197).

[50] It should be noted, however, that patents were granted for new plant varieties until the 1960s in Germany (Federal Republic of), Belgium, France, Italy, Japan, Sweden and Hungary. More details in Matthey, *Les brevets de végétaux*, Lausanne, 1954, pp. 13 *et seq.*; Eggener, *"Schutzmöglichkeiten für neue Pflanzenzüchtungen in anderen Ländern und ihre praktische Brauchbarkeit,"* Mitt. 1958, pp. 4 *et seq.*; Braun, *"Die vom Patentschutz ausgeschlossenen Erfindungen nach belgischem Recht,"* GRUR Int., 1960, pp. 133 *et seq.*; Földes/Palos, *"Der Rechtsschutz von Pflanzenzüchtungen in Ungarn,"* GRUR Int., 1967, pp. 390 *et seq.* (392).

addition to the protection of computer programs—was constituted by the protection of biotechnological inventions and it was therefore agreed at a very early stage (1961) that, as part of the harmonization work, matters of patentability of plant varieties, animal varieties and essentially biological processes for their production would be excluded from the harmonization to be achieved.[51]

Correspondingly, Article 2 of the *Strasbourg Convention* on the Unification of Certain Points of Substantive Law on Patents for Invention (Strasbourg Harmonization Convention), signed in 1963, although obliging the contracting States to protect *microbiological* processes and the products obtained with the help of such processes[52]—the chemical and pharmaceutical industry that was producing antibiotics made sure that such was the case—gave the contracting States a free hand as regards the protection of *plant varieties*, *animal varieties* and essentially *biological processes* for their protection[53]—at that time of no interest to the chemical and pharmaceutical industry.

A further reason for excluding biological inventions was the *International Convention for the Protection of New Varieties of Plants* (UPOV Convention) signed in Paris in 1961, which, based on the then status of breeding techniques, took account of the needs of breeders and of agriculture by means of special requirements for protection and a restricted scope of protection and prohibited, in the first sentence of Article 2(1), parallel protection for the same botanical genus or species by means of both patents and plant breeders' rights.[54]

18. The decision, taken 25 years ago now, to sacrifice biological inventions (with the exception of already established microbiological inventions), as possible troublemakers, on the altar of European patent law unification, has never been reviewed since then. It has been reflected both in the European Patent Convention signed in Munich in 1973 (Article 53(b) of the EPC) and in the national patent laws of the contracting States aligned on that Convention,[55] such as the current 1981 German Patent Law (Section 2(2) of the Patent Law), although in an unmistakably more stringent form for biological inventions.

Whereas the Strasbourg Harmonization Convention has left it to the contracting States to decide whether they would grant patents or not for biological processes and their products, including plant varieties,[56] the European Patent Convention, which governs the grant of European patents, and the German Patent Law, as well as the patent laws of other European countries, explicitly exclude such a possibility. Neither European nor national patents may be granted for plant or animal varieties or essentially biological processes for the protection of plants or animals. The provision is not to be applied, however, to microbiological processes or the products thereof or—and in this case the German practice differs a little from the European practice—to inventions of plant varieties which, in respect of their species, are not included in the list of species annexed to the Plant Variety Protection Law, and to processes for the production of such varieties.[57]

In other words, therefore, patents may be obtained only for those plants, essentially ornamentals, in which the Ministry of Agriculture has no interest or for which the Federal Plant Variety Office in Hannover does not have the necessary land available for the required growing tests over a number of years. However, the possibility of patenting that is not excluded in this way is quite meaningless for many valuable new plant varieties since they cannot be described in a repeatable way. This legal situation is not very satisfatory—Trüstedt calls it "chaotic"[57a]—and can, without legislative action, only be improved gradually and incompletely by the progress made in genetic engineering.

19. It may also be added that genetic engineering is also affected by the current patent law under a further aspect. Both European and national patent law (Article 52(4) of

[51] Details in Straus, *Industrial Property Protection of Biotechnological Inventions*, *op. cit.*, footnote 2, pp. 62 *et seq.*, with further references.

[52] It cannot go unmentioned that this obligation was only included in the Draft Strasbourg Convention following an intervention by the International Association for the Protection of Industrial Property (AIPPI) on May 24, 1962 (document EXP/Brev (62) 1), subsequently supported by the Delegations of France, Sweden and the United Kingdom and of Switzerland—as an observer—(cf. document EXP/Brev (62) 7, 8, 9 and 12). It is difficult to say what the patent protection of microbiological inventions under the European Patent Convention would have looked like if the interested circles had not taken that action.

[53] More details in Pfanner, GRUR, 1964, 248; and Beier/Crespi/Straus, *op. cit.*, footnote 7, pp. 28 and 29.

[54] For details of this prohibition and the controversial opinions on its justification, see Schade/Pfanner, *"Das Internationale Übereinkommen zum Schutz von Pflanzenzüchtungen,"* offprint from GRUR Int., 1962, No. 7/8, Weinheim 1962, pp. 19 and 20; Straus, 15 IIC 1984, pp. 438 *et seq.*; Beier/Crespi/Straus, *op. cit.*, footnote 7, pp. 27 *et seq.*; Lange, *"Die Natur des Züchterrechts (Sortenschutzrecht) in Abgrenzung zur patentfähigen Erfindung,"* GRUR Int., 1985, pp. 88 *et seq.* (91 and 92); WIPO document BioT/CE/2/2, *Industrial Property Protection of Biotechnological Inventions*, of November 5, 1985, paragraph 14; UPOV document INF/11, *Protection of Plant Varieties and the Debate on Biotechnological Inventions*, of December 10, 1985, paragraph 19.

[55] The other EPC Contracting States have adopted the provision in Article 53(b) literally or almost literally in their harmonized patent laws. Cf. Haertel, *"Die Harmonisierung des nationalen Patentrechts durch das europäische Patentrecht,"* GRUR Int., 1983, pp. 200 *et seq.* (202); Krasser, *"Die Anpassung der nationalen Patentgesetze an das Europäische Patentrecht,"* Oebl., 1982, pp. 1 *et seq.*

[56] Cf., in particular, Teschemacher, *"Die Patentfähigkeit von Mikroorganismen nach deutschem und europäischem Recht,"* GRUR Int., 1981, pp. 357 *et seq.*, with further references.

[57] For the interpretation of Article 53(b) of the EPC, see Teschemacher, GRUR Int., 1981, pp. 359 and 360; for Section 2(2) of the Patent Law, cf., in particular, Benkard (Bruchhausen), *op. cit.*, footnote 13, note 2-28 to Section 2 of the Patent Law.

[57a] Cf. Trüstedt, *"Patentrecht und Gentechnologie,"* GRUR, 1986, pp. 640 *et seq.*, 644.

the EPC; Section 5(2) of the 1981 Patent Law) exclude *methods for treatment of the human or animal body by surgery or therapy and diagnostic methods* practiced on the human or animal body from patentability. They are quite wrongly held by the lawmaker not to be industrially applicable since a doctor does not act industrially following a Federal Supreme Court's reasoning in a case, which concerns, of all things, a cosmetic operation for baldness.[58] Also, in this case of exclusion from patentability there is an exception in favor of the chemical and pharmaceutical industry. Products, in particular substances or compositions (diagnostic materials, pharmaceuticals) used in processes for diagnosis or therapy, are stated to be patentable.

The provisions referred to apply irrespective of whether the products were obtained by chemical or genetic engineering means and therefore make it quite clear that, for instance, regulatory proteins such as human insulin, interferons, growtb hormones or monoclonal antibodies, which may be used in therapy and diagnostic methods, are patentable.[59]

The legislative decision to exclude *processes* for the surgical or therapeutical treatment of *human* bodies from patent protection is not to be criticized, apart from the inappropriate systematic reasons given, which should be replaced by ethical and public bealth policy considerations, particularly in view of the extended possibilities given by genetic engineering.[60] In a general manner it solves a wbole series of ethical problems that would otherwise bave unavoidably arisen and would have to have been resolved on a case-by-case basis.[61] There can be no question of a monopoly existing for individual doctors to diagnose or treat human diseases by means of a method for which they have a patent.

The question that must be asked, however, is that of the inconsidered equation of the human and the *animal body* made by the legislator. This excludes not only advanced veterinary diagnostic and therapeutic methods from patent protection but also, possibly, modern processes already used to a considerable extent in animal breeding, such as embryo transfer.[62] Animal breeding processes and new animal varieties do not belong to the so-called "red" human biotechnology, but to the large field of "green" biotechnology, for whose admissibility and patentability other yardsticks must be applied.

20. If one analyzes that unsatisfactory statutory situation *in the light of patent office practice and of recent court decisions*, what are the possibilities for protection that exist for genetic engineering inventions in the Federal Republic of Germany? In so considering, we must—unfortunately—make a distinction between German patents granted by the German Patent Office and European patents granted by the European Patent Office with effect in the Federal Republic of Germany.[63] Despite the fact that both titles of protection are examined and granted on the basis of provisions having an identical wording and have the same legal effect, the legal unity sought by the legislator in the field of biotechnological inventions has by no means been achieved in practice. Whereas the German Patent Office and the Federal Patent Court are bound by the unchanging case law of the Federal Supreme Court on the patentability requirement of repeatability[64] to refuse product protection, even where a microorganism has been deposited, European patents are granted without problem for the same inventions. In an amendment to the Guidelines for Examination, the President of the European Patent Office indicated in December 1981 as follows:

> "As for microorganims deposited under the terms of Kule 28, repeatability is assured by the possibility of taking samples and there is thus no need to indicate another process for the production of the microorganism."[65]

However, whether the European patents that have been granted will find grace in the eyes of the Federal Supreme Court if they are ever subject to scrutiny in nullity proceedings, and how the courts of the other contracting States will decide on the question, is still

[58] Of January 4, 1968, GRUR, 1968, 142—"Operation for Baldness," cf. also Beier/Straus, *Der Schutz wissenschaftlicher Forschungsergebnisse*, Weinheim, etc. 1982, pp. 68 and 69.

[59] Cf. Vossius/Jaenichen, GRUR, 1985, pp. 821 *et seq.*; Straus, *Industrial Property Protection of Biotechnological Inventions*, *op. cit.*, footnote 2, pp. 33 *et seq.*, and the examples of European patents given there. The best-known example is that of the invention of Alpha-interferon by Professor Charles Weissmann of Zurich, EP No. 0032134 belonging to Biogen, that attracted worldwide attention on account of the disputes with the competing firm of Hoffmann-LaRoche.

[60] As regards the general problems of patentability of such processes, see, in particular, Bruchhausen, *"Erfindungen von Ärzten,"* in the *Festschrift für Philipp Möhring zum 75. Geburtstag*, Munich, 1975, pp. 451 *et seq.*; Wagner, *"Heilverfahren als nichtpatentierbare Behandlungsverfahren?,"* GRUR, 1976, pp. 673 *et seq.*, with further references in each case.

[61] If methods of therapy were to be basically patentable, the Patent Office would be unable to avoid the question of the patentability of gene transfer processes to somatic cells, on the one hand, and to germ line cells, on the other, and to give different answers in each case as things stand at present, as pointed out by the Benda report (*op. cit.*, footnote 6).

[62] The Comptroller-General of the United Kingdom Patent Office has already declared an embryo-transfer process to be non-patentable on the basis of Sections 4 and 130(7) of the Patents Act 1977 and Article 52(4) of the EPC (Decision of March 5, 1984, GRUR, 1985, 120—"Embryo Transplantation"). For the commercial significance of such processes, particularly for agriculture in the developing countries, see the report by Marsh, "Embryo Transplants Could Replace Artificial Insemination—Calves 'Settle' in the Wombs," *Financial Times*, January 25, 1985, p. 8.

[63] The Federal Republic of Germany ratified the EPC by means of the International Patent Treaties Law of June 11, 1976, BGBl. II 1976, 649. As regards the options available to applicants since 1978, cf. Beier, *"Das europäische Patentsystem—Möglichkeiten des Erwerbs von Patentschutz in Europa,"* in Beier/Haertel/Schricker (editors), *Europäisches Patentübereinkommen, Münchner Gemeinschaftskommentar*, Cologne, etc. 1984, 1st release, pp. 51 *et seq.* (margins Nos. 60-78).

[64] Cf. Federal Court of December 11, 1980, GRUR, 1981, 263—"Bacterial Concentrate."

[65] Communication by the President of the EPO on December 11, 1981, concerning the amendment of the Guidelines for Examination in the EPO, *Official Journal of the EPO*, 1982, p. 19.

uncertain.[65a] Even the distinct progress in the possibilities for description achieved by genetic engineering, including that for biological material such as plasmids and viruses,[66] cannot yet make us forget these regrettable basic differences in judgment. It is difficult to make a forecast. Anything is possible[67]: invalidation of the respective European patents granted for the Federal Republic of Germany, a changed case law of the Federal Supremc Court or legislative action, as in Austria. Our sympathies are for the middle-of-the-road alternative that is not only the most appropriate solution but also the most European one.

21. Having said all this and in the hope that the small number of experienced examiners so far active in the patent offices will be ablc to mastcr the problems of this new subject matter, there emerges thc following picture of the protection of genetic engineering processes and of their products, as things stand at present:

22. *Genetic engineering processes* are patentable both under European and German law, irrespective of whether they are classified as microbiological or biochemical processes.[68] They are patcntable both under Article 53(b) of the EPC and under Section 2(2) of the Patent Law, even when they serve for the breeding of plant or animal varieties.[69] So far, no one has claimed that genetic engineering processes are covered by the concept of "essentially biological processes" and are therefore excluded from protection.

Despite all the progress made by genetic engineering, it will, in fact, be a long time yet before the repeatability of processes can be assured in practice with the sole help of the patent description. For instance, it is unlikely that a given hybridoma that forms a given monoclonal antibody can be produced a second time.[70] The deposit of microorganisms and other biological material will therefore continue to be unavoidable.

It remains to be seen whether deposit will also be used in future to assure the repeatability of *genetic engineering processes for the breeding of plants and animals.* Nevertheless, the U.S. Patent and Trademark Office has already opened up this possibility for the area of plant breeding processes.[71] Now that the deposit of microorganisms in laboratories equipped for the purpose has proven itself and has become generally accepted, there should no longer be any patent law objections[72] to the dcposit of plants and parts of plants and perhaps to the provisional storage of animal organisms, but rather objections of a practical nature. However, it is unlikely to be an obvious concept for the patent granting authorities to have recourse to the deposit of macroorganisms in a botanical garden or even in a zoo, as a kind of latter-day Noah's Ark.

The *protection* of genetic engineering processes also extends, under both European and German patent law (Article 64(2) of the EPC; Section 9, second sentence, item 3, of the Patent Law), to *products obtained directly by means of the process.* How far this area of protection extends in the case of living organisms that are capable of self-replication is disputed. While some authors assume that the concept of directly obtained products cannot cover the products of subsequent propagation,[73] others argue that in the case of microorganisms, including plasmids, cell lines and viruses,[74] and also plants,[75] protcction does not only extend to the first generation (F_1) obtained directly by the process, but also to further generations (F_{1+x}).

In this context, another question is as yet unsettled in German law. Does the fact that a given plant variety is excluded from patent protection under Section 2(2) of the new version of the Patent Law since it is included in the list of species annexed to the Plant Variety Protection Law also exclude the protection of products obtained by the patented genetic engineering process?[76] In this case again, there are diverging opinions in the literature. On the one hand, it is assumed, without giving any particular reasons, that protection of products directly obtained by the process cannot extend to a variety included in the list of species,[77] and, on the

[65a] Reference is to be made here to Section 87a(2) of the Austrian Patent Law, as last amended on June 27, 1986 (*Bundesgesetzblatt für die Republik Österreich*, No. 382), now clarifying the legal situation in Austria.

[66] According to the Guidelines for Examination in the EPO, Part C-IV 3.5, plasmids and viruses also constitute "microorganisms" within the meaning of Article 53(b) of the EPC.

[67] Cf. the reflections made by von Pechmann, GRUR, 1985, 722.

[68] Cf. von Pechmann, GRUR, 1985, pp. 722 and 723; Straus, 15 IIC 1984, p. 433.

[69] Thus also, in agreement, von Pechmann, GRUR, 1985, 722; Straus, 15 IIC 1984, p. 433; Vossius, *Naturwissenschaften*, 1984, 553 (implicit).

[70] Cf. Vossius/Jaenichen, GRUR, 1985, pages 826 and 827.

[71] The view adopted by the U.S. Patent and Trademark Office some time ago on the possibility of depositing plant material (cf. Straus, *Industrial Property Protection of Biotechnological Inventions*, *op. cit.*, footnote 2, p. 69) was not refuted in the decision of its Board of Appeals and Interferences of September 18, 1985—*Ex parte Hibberd*. In that decision, it is stated literally that "Assuming that seeds may be deposited in the same manner as micro-organisms to comply with 35 USC 112 ...." (30 PTCJ 628, 629 (1985)). Cf., for more details on the US situation, Linck, Nancy J., "Patentable Subject Matter Under Section 101—Are Plants Included?," 67 JPOS, pp. 489 *et seq.* (1985).

[72] Likewise also Savignon, *"Die Natur des Schutzes der Erfindungspatente und seine Anwendung auf lebende Materie,"* GRUR Int., 1985, pp. 83 *et seq.* (85, right-hand column, below).

[73] Thus, e.g., Hesse, GRUR, 1969, 644, 650; Benkard (Bruchhausen), *op. cit.*, footnote 13, note 16 on Section 2 (p. 182) and note 54 on Section 9 (p. 154) of the Patent Law; Lange, GRUR Int., 1985, pp. 83 *et seq.* (93); Straus, 15 IIC 1984, p. 434 (only a report, however).

[74] Thus Vossius/Jaenichen, GRUR, 1985, 827.

[75] Thus von Pechmann, GRUR, 1985, 723. The same view is already to be found in Heydt in his note on the "Red Dove" decision of the Federal Court in GRUR 1969, 676.

[76] Of January 20, 1968, BGBl. I, 1968, 429, now in the version of January 4, 1977, BGBl. I, 1977, 105 (with corrigendum of February 7, 1977, BGBl. I, 1977, 286).

[77] Benkard (Bruchhausen), *op. cit.*, footnote 13, note 16 on Section 2 and note 54 on Section 9 of the Patent Law; Straus, 15 IIC 1984, p. 434.

other hand, by referring to practice under the prohibition of product protection that applied up to January 1, 1968, in respect of pharmaceuticals, foodstuffs and chemical substances, it is considered that such indirect protective effect of process protection cannot be denied.[78] Without looking at this question in detail, it may be remarked in respect of the latter view that there exists a considerable difference between the former prohibition of protection for chemical and pharmaceutical products and the still existing "prohibition of protection" for plants since the plant varieties contained in the list of species are not without any protection, but enjoy special protection under the Plant Variety Protection Law.

23. In addition to genetic engineering processes and the products directly obtained by such processes, *genetic engineering products themselves* are indeed also capable of protection under both European and German law. New plant varieties, however, are completely excluded under European law and practically excluded under German law from patent protection even when they do not qualify for plant breeders' rights.[79] New animals, however useful they may be, are accommodated by neither system. A question that has so far not been resolved is whether product protection may be claimed for new plants or animals in a genetically non-fixed form, a question that is gaining considerable significance as genetic engineering advances. Although such a possibility of protection is unlikely, it should nevertheless not be considered to be excluded in view of a recent decision by the European Patent Office.[80]

IV. Conclusion and Legal Prospects

24. As a conclusion we may note that although both German and European patent law currently protect extensive areas of genetic engineering, they also contain considerable gaps in protection. Both systems exclude plant and animal varieties from protection and German patent law additionally contains a *de facto* exclusion from product protection for those genetic engineering inventions that cannot be reproducibly disclosed by means of the description alone.

25. The lack of patent protection for plant and animal varieties is particularly regrettable from the point of view of economic and legal policy. The European patent legislators—as well as their followers, the national lawmakers—have thought solely of the patent law difficulties of protecting new varieties of plants and animals, with which they did not wish to burden the envisaged European patent system, and in so doing have left out of account the growing need for protection and the extraordinary progress achieved in the field of plant and animal breeding, not least thanks to genetic engineering. Now that the European system is operational and it has been shown that the exclusion of certain categories of inventions in areas of new technologies from patent protection creates more legal problems than would be created by their recognition, it is time to clear up this unsatisfactory situation.

26. The situation is tempered somewhat in the case of *new plant varieties*. There has existed since 1961 an independent system of protection, *plant variety protection*, the positive effects of which are to be seen in the considerably increased R & D spending and an ever-growing number of new and important plant varieties.[81] With its requirements of novelty, homogeneity and stability[82] of the plant variety, which differ from those of patent law but which are well adapted to the conditions of conventional plant breeding, international and national variety protection doubtlessly corresponds to the special protection needs of the conventional breeders, who are generally quite satisfied with it.

Despite that fact, a continually growing number of enterprises and research establishments that use genetic engineering consider plant variety protection to be inadequate. They justifiably object to the restriction of protection to the commercial production and marketing of propagating material within the producer stage, with the result that plants or parts of plants of a protected variety—tulips from Amsterdam—remain without protection when sold to the final customer, and also to the basic principle of plant variety protection that the protected propagating material may be freely used as

[78] Von Pechmann, GRUR, 1985, 723.

[79] Cf. statement of reasons of April 18, 1975, introducing the Law, Federal Government publication 220/75, p. 28. As to product protection under European and German patent law, see, in particular, Benkard (Bruchhausen), *op. cit.*, footnote 13, notes 12 to 14, 18, 21 on Section 2 of the Patent Law; von Pechmann, GRUR, 1985, pp. 721 *et seq.*; Teschemacher, GRUR Int., 1981, pp. 357 *et seq.*; Vossius, GRUR, 1975, pp. 477 *et seq.*; by the same author, *Naturwissenschaften*, 1984, pp. 552 *et seq.*; Vossius/Jaenichen, GRUR, 1985, pp. 821 *et seq.*

[80] Technical Board of Appeal 3.3.1 of July 26, 1983, GRUR Int., 1984, 301 = *Official Journal of the EPO*, 1984, pp. 112 *et seq.*—"Propagating Material/CIBA-GEIGY." It is stated that by Article 53(b) EPC, the legislator excludes plant varieties, whether in the form of propagating material or of the plant itself, from patent protection. As regards the definition of the variety, the Board held the definition given in the International Convention for the Protection of New Plant Varieties of December 2, 1961, to be determinant. However, the Board also noted that the EPC "prohibits only the patenting of plants or their propagating material in the genetically fixed form of the plant variety." Cf. considerations by Straus, *Industrial Property Protection of Biotechnological Inventions*, *op. cit.*, footnote 2, pp. 71 *et seq.*

[81] In the 10 years following adoption of the Plant Variety Protection Act in the United States of America in 1970, the number of new protected varieties of soybeans, for instance, has risen from 94 to 224, for wheat from 139 to 231 and for cotton from 64 to 96, an increase of 141%, 66% and 50%, respectively. During the same period, the private investments grew in a ratio of 2 to 3. In the decade that followed the promulgation of the United Kingdom Plant Varieties and Seeds Act of 1964, 170 million pounds sterling have been saved as a result of the increased resistance of wheat to diseases alone. Cf. Beier/Crespi/Straus, *op. cit.*, footnote 7, p. 18, together with further references.

[82] Details in the commentary by Wuesthoff, *Sortenschutzgesetz*, Weinheim/New York, 1977, pp. 43 *et seq.*

initial material for the breeding of new varieties.[83] It has also been pointed out that the grant of plant variety protection depends neither on disclosure ensuring repeatability nor on a supplementary deposit, with the result that the existing prohibition of patentability for plant varieties impairs the *information function* of patent protection in an increasingly important field of technology.[84] Although plant breeders' rights provide good service within the functional framework allotted to them, and will continue to do so in future, they do indeed not satisfy the demands for effective protection of genetic engineering inventions in the field of plant breeding.[85]

27. The most important demand from the point of view of *legal policy* is that genetic engineering inventions in the field of plant and animal breeding should be treated exactly as inventions in other fields of technology, which would, however, mean that the current exclusionary provisions in Europe would have to be deleted. Although the contracting States are understandably loath to revise the European Patent Convention, which they were so happy to conclude in 1973 following such lengthy preparatory work, or to touch the national patent laws that were only recently adapted to the Convention, those factors should not be allowed in the long term to prevent the necessary adaptations to scientific and technical developments. The first priority in the field of plant breeding is that the *prohibition of double protection* should be lifted, that is to say, breeders should at least be afforded a free choice between the specific plant breeders' rights and the general, more extensive protection under patents and, possibly, also the right to rely on both systems.[86] The freedom of choice between a number of parallel forms of protection constitutes an accepted legal tradition in the Federal Republic of Germany; the symbiosis between patent protection and utility model protection represents an internationally recognized and proven model.[87]

The legislator should not force inventors advancing in one of the most promising fields of technology, genetic engineering, to embark upon the thorny path of having to "cheat" their way past exclusionary provisions drafted at the beginning of the 1960s by declaring their inventions as "microbiological" although they are in fact tantamount to macrobiological inventions, simply for fear of difficulties in amending European and national patent and plant variety protection law. Such interpretation of the existing provisions is certainly possible, in part, but the result will differ from country to country and in no way contribute toward rapid legal certainty and legal unity in Europe. The courts can go a long way in their decisions, but they cannot do everything, in particular they cannot ignore clearly worded exclusionary provisions. They will continue in future to have their hands full in adapting patent law to the particularities of genetic engineering inventions. This is assuming, however, that those inventions are to be accepted in the system of patent protection.

28. Two further demands should not remain without mention. They are related to the fact that genetic engineering has taken patent protection far into the field of fundamental scientific research. Twenty percent of all the relevant US applications fall within this area, more than the United Kingdom and Switzerland together file in that field.[88]

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[83] Cf. Beier/Crespi/Straus, *op. cit.*, footnote 7, pp. 28 and 92; Byrne, "Plants, Animals and Industrial Patents," 16 IIC, pp. 1 *et seq.*, 14 *et seq.* (1985); von Pechmann, GRUR, 1985, pp. 718 and 179; Straus, 15 IIC 1984, pp. 436 *et seq.*; by the same author, *Industrial Property Protection of Biotechnological Inventions, op. cit.*, footnote 2, pp. 64 and 65; WIPO document BioT/CE/II/2, paragraph 93 (p. 37).

[84] Cf. von Pechmann, GRUR, 1985, 720, 721, who, however, holds these aspects of variety protection to be positive from the point of view of the plant breeder; Straus, *Industrial Property Protection of Biotechnological Inventions, op. cit.*, footnote 2, p. 64 (paragraph 56), p. 87 (paragraph 91); WIPO document BioT/CE/II/2, p. 7 (paragraph 13).

[85] Thus WIPO document BioT/CE/II/2, p. 17; von Pechmann, GRUR, 1985, 720; Beier/Crespi/Straus, *op. cit.*, footnote 7, pp. 27 and 92; Straus, 15 IIC 1984, pp. 441 *et seq.*; as indeed also Savignon, GRUR Int. 1985, 88; for a different view, Lange, GRUR Int. 1985, 94. It may be added here that the expectations for the possibilities of genetic engineering in the field of plant breeding have not been fulfilled to the extent that was perhaps assumed some years ago; nevertheless, the achievements so far give grounds for reasonable optimism. For instance, the *Financial Times* recently reported, on December 3, 1985 (p. 30), that the firm of Unilever had succeeded, after many years of expensive and intensive research, in breeding, with the aid of somatic cell hybridization, oil palms with an increased yield of some 25%. By the end of 1985, Unilever had bred some 300,000 such plants. This news is of particular significance when one considers that oil palms vary in yield by up to 30% and that the most frequently utilized conventional plant breeding method of crossing was a complete failure in their case. The significance of this report is even greater if one knows that, after soybean oil, palm oil is the most frequently utilized vegetable oil in the world. Only four years ago, Unilever had reported on its research work with great prudence and even somewhat skeptically (see report by Fishlock, "Unilever: Sowing Seed for a Novel Harvest," *Financial Times*, November 6, 1981, p. 7). The American firm Molecular Genetics was further successful in breeding with the help of genetic engineering plants resistant to a specific herbicide (Imidazalin) (cf. *Chemical and Engineering News*, September 2, 1985, p. 8). Originally of no commercial significance, but nevertheless a great success for research, is the breeding of a Nicotiana tobacco plant resistant to the antibiotic Kanamyzin by the Swiss firm CIBA-GEIGY (cf. the report *"Basler Forschern gelang direkter Gen-Transfer in Pflanzen," Basler Zeitung*, January 23, 1985, pp. 41 and 42). For the current status of genetic engineering research in the field of plants, cf. also Marx, "Plant Gene Transfer Becomes a Fertile Field—Gene Transfer Into Dicot Plants Can Generate Varieties With Decreased Herbicide Susceptibility and Can Also Be Used to Study Plant Gene Control," 230 *Science* 1148-1150 (1985).

[86] The demand for the prohibition on double protection to be lifted has been expressed most forcibly by the AIPPI at the meeting of its Executive Committee in May 1985 at Rio de Janeiro. Cf. Resolution on Question 82—Patent Protection for Biotechnological Inventions (reproduced in GRUR Int., 1985, 755; *Industrial Property*, 1985, p. 272) and the report by Kunz-Hallstein/Pagenberg and Straus, GRUR Int., 1985, pp. 747 *et seq.* (748, 749).

[87] Cf. Beier, *"Gebrauchsmusterreform auf halbem Wege: Die überholte Raumform,"* GRUR, 1986, pp. 1 *et seq.*; the U.S. Patent and Trademark Office has also pointed out in the *Ex parte Hibberd* decision already cited, with reference to the decisions of the former CCPA (*In re Yardley*, 493 F.2d 1389) that the overlapping of a number of forms of protection—e.g., copyright protection and industrial design protection—is proper to U.S. law (where not reproduced in 30 PTCJ 628 (1985)).

[88] According to the statistics published by the French National Institute of Industrial Property. See *Les techniques de demain. Quelles seront-elles? D'où viendront-elles?*, No. 4, 1984, pp. 69 and 70.

If the *concept of absolute novelty* introduced throughout Europe as part of the harmonization were to be maintained, meaning that every communication made by a scientist, even an oral one, constitutes prior publication detrimental to novelty,[89] or which turns editorials in scientific journals into assassins of inventiveness,[90] there would be fatal consequences for genetic engineering inventions: either the scientist publishes, as he is accustomed, in order to inform his colleagues throughout the world about the most recent discoveries and to ensure that be is given scientific credit, in which case subsequent patent protection is out of the question and the scientist thus loses the essential basis for attracting funds from industry and for the subsequent economic exploitation of the invention, or the scientist keeps his knowledge secret, locks up his laboratory like a medieval alchemist and does not publish his findings until they have developed into patentable inventions at a much later juncture.[91] A demand must therefore be addressed to patent legislators, particularly from the point of view of genetic engineering, that an *adequately measured period of grace for the inventor's own prior publications* be introduced in the national, the European and the international context.[92]

A further request, to be made to the courts, is the desire for a liberal, *broad interpretation* of the provisions that exempt the *use of patented inventions for experimental purposes* from the effects of patent protection (Section 11, item 2, of the German Patent Law; Article 31(b) of the Community Patent Convention). In view of the fact that the protection under basic patents for genetic engineering is sometimes very extensive, this solution is the only way in which research and development activity can remain unhindered in future.

29. Both the Organisation for Economic Co-operation and Development (OECD) and, more recently, the World Intellectual Property Organization (WIPO)[93] have been discussing the most important of the matters referred to in this paper. We have contributed a small share to setting the international stone rolling and are satisfied to note that, for example, the recommendations of the OECD study on biotechnology and patent protection have been received with great interest in all quarters, that WIPO has begun to examine the overall problem in a most comprehensive and open-minded manner and that the preliminary work on an international treaty providing for the introduction of a period of grace has already reached a quite advanced stage.[94]

If one follows this work more closely, however, one cannot but fear for its outcome. Although both German industry and the Federal Government, after some initial hesitation, support these projects quite vigorously in most respects, this is not the case for a number of Member States of the European Patent Organisation—the Netherlands, France and the Scandinavian countries—and tbere is a general lack, also in the Federal Republic of Germany, of the necessary legal and economic drive and active support by those in industry and politics who could achieve something. We would like to recommend that they look at the legal situation in Europe's two biggest economic competitors, the United States of America and Japan. The protection afforded to genetic engineering inventions in those two countries extends in many respects further than under either European or German patent law.[95] The United States Patent and Trademark Office, for instance, opened up patent protection generally to plant varieties just recently; it tbus overrode the prohibition of double protection contained in the UPOV Convention and did not even hesitate, for this purpose, to invoke the formally defective ratification of that Convention by the United States of America.[96] Both in the United States of America and in Japan, scientist inventors enjoy a suitable period of grace in respect of their own prior publications. It is high time that Europe followed this example. Pride in the achievement of the century, the unification of European patent law, and thc concern not to call again into question that which was so laboriously achieved by undergoing an early revision should not prevent us from correcting misdirected developments. If we wish, as in other fields of high technology, to keep up with the United States of America and with Japan, we cannot afford to live forever with legislative errors of the 1960s, hoping that the courts will deal with the matter one day.

[89] Cf. Beier/Straus, *"Der Schutz wissenschaftlicher Forschungsergebnisse," op. cit.*, footnote 58, pp. 76 *et seq.*, with further references.

[90] As happened in the decision of the United Kindom Patent Court on November 8, 1982, [1983] R.P.C. 255, in which the subject was the patentability of an invention in the field of monoclonal antibodies.

[91] See also Beier/Straus, *"Der Schutz wissenschaftlicher Forschungsergebnisse," op. cit.*, footnote 58, pp. 76 *et seq.*, with further references.

[92] It is interesting that even the *Réunion internationale de Bioéthique, op. cit.*, footnote 4, p. 82, referred to the problem of publication. The final document reads in this respect: "The simplification of the patent laws, education of the public and more rational regulations can significantly reduce the period of time before genetic engineering can be used safely, profitably and on a broad basis. More than in other fields of biology, genetic engineering has led to close relationships between university and industry and also between fundamental research and applied research. This has led to a need for protection of the freedom of research and for the publication of results."

[93] More detail on these activities in the report by Straus, "Patent Protection for Biotechnological Inventions," 16 IIC 1985, pp. 445 *et seq.*

[94] See Loth, *"Erste Sitzung des Sachverständigenausschusses der WIPO zur Neuheitsschonfrist vom 7.-11. Mai 1984 in Genf*, GRUR Int., 1984, pp. 507 *et seq.* In the meantime, WIPO has convened two further meetings of an expanded group, the Committee of Experts on the Harmonization of Certain Provisions in Laws for the Protection of Inventions. Cf., in particular, WIPO document HL/CE/I/2 of May 15, 1985.

[95] This conclusion was drawn in the OECD discussions. Cf. Beier/Crespi/Straus, *op. cit.*, footnote 7, p. 88.

[96] In the decision of the Board of Appeals and Interferences of September 18, 1985—*Ex parte Hibberd* (30 PTCJ 628 (1985)). Cf. in detail Adler, "Can Patents Coexist with Breeders' Rights? Developments in U.S. and International Biotechnology Law," 17 IIC 1986, pp. 195 *et seq.*

The Japan Patent Information Organization

H. SAITO*

Introduction

The purpose of this study is to describe the present status and future plans of the Japan Patent Information Organization (JAPIO).

JAPIO was founded as a non-profit corporation on August 1, 1985, as a result of the reorganization and merger of the Japan Patent Information Center (JAPATIC) and a part of the Japan Institute of Invention and Innovation (JIII) in order to serve the increasing demand for patent information.[1]

JAPIO is closely related to the Japanese Patent Office (JPO). JAPIO is the sole supplier of official gazettes issued by the JPO, and the JPO's data bases are available to the public only through JAPIO.

JAPIO has friendly relations with overseas organizations:

— JAPIO sells the PCT pamphlets published by WIPO and publications of the EPO;

— JAPIO, in conjunction with the JPO, is also helping the Patent Office of China with its computerization project;

— JAPIO is the sole supplier of INPADOC products in Japan and INPADOC is the sole supplier of JAPIO products in Europe;

— JAPIO has contracted with System Development Corporation (SDC) to allow JAPIO's English-language data bases to be accessed worldwide through SDC's online network called ORBIT.

JAPIO's activities can be roughly divided into four parts: the first is the service relating to official gazettes; the second is publication services; the third is the computer-aided and manual search services; and the fourth is the development of electronic files.

Official Gazettes Service

JAPIO is exclusively authorized by the JPO to sell official gazettes. The official gazettes published by the JPO are as follows:

1. Patent Gazettes. These comprise:

(1) Unexamined patent applications *(Kokai Tokkyo Koho)*

All patent applications are published 18 months after the date of filing.

(2) Examined patent applications *(Kokoku Tokkyo Koho)*

Each patent application which has been examined by the official examiner is published if the examiner finds no reason to reject it.

(3) Unexamined utility model applications *(Kokai Jitsuyo Koho)*

(4) Examined utility model applications *(Kokoku Jitsuyo Koho)*

Gazettes of (3) and (4) are similar to (1) and (2), respectively.

2. Design Gazettes

These comprise all design applications which are published after examination and registration.

3. Trademark Gazettes

All trademark applications examined by the official examiner are published if the examiner finds no reasons for rejection.

4. Other JPO Publications

These include the following: trial judgment gazette; official bulletin; official publications relating to the PCT, etc.

5. Japanese Patent Abstracts in English

JAPIO produces and publishes English-language versions of Japanese patent abstracts.

JAPIO also collects patent specifications, official gazettes, abstracts and indexes from other countries and from international organizations and provides them to users on request. For example, JAPIO collects gazettes from European, American and Asian countries, PCT pamphlets and EPO publications.

In addition, JAPIO provides a copy service for Japanese and other patent documents.

Publication Service

JAPIO publishes a wide variety of abstracts, lists, indexes, etc., both in booklet and microfilm forms.

1. The abstracts comprise:

(1) Abstracts of published unexamined patent applications (Abstracts of *Kokai Tokkyo Koho*). These are called *JAPIO Abstracts.*

As already mentioned, patent applications are published 18 months after the date of application. JAPIO makes abstracts from the applications and publishes booklets of these abstracts about 40 days after publication of the applications in the *Kokai Tokkyo Gazettes.* The booklets of abstracts are arranged in the same way as the gazettes, and they contain the bibliographic data of each application, the IPC symbol allotted to it, the purpose and gist of the invention disclosed, and the main drawing(s).

* President, Japan Patent Information Organization.

[1] Patent information here includes information relating to all kinds of industrial property such as patents, utility models, designs and trademarks, etc. The organization chart of JAPIO is shown in Appendix 1, which appears, together with Appendices 2 and 3, at the end of this article.

(2) SDI abstract sheets

SDI abstract sheets contain all the information concerning patent applications that is contained in the *JAPIO Abstracts* and, in addition, tbey contain the claim of the patent application. They are published in the form of sbeets rather tban booklets.

(3) *Patent Abstracts in English*

These Abstracts, which are issued by the JPO, are the English-language versions of the *JAPIO Abstracts*. About 70% of all patent applications are selected for translation by the JPO. However, only applications filed by Japanese nationals are translated. Applications relating to inventions which are deemed to be of a domestic nature are not normally translated.

2. *The indexes comprise:*

(I) Annual indexes of patent and utility models

Indexes of unexamined and examioed patent and utility models are published once a year. The indexes are classified in accordance with the IPC and applicant's name.

(2) Reference lists

JAPIO can provide various kinds of cross-reference lists based on application, publication or registration numbers, etc., as required.

3. *Microfilms of the following are published:*

(I) Patent and utility model gazettes

Unexamined and examined patent and utility model gazettes (*Kokai Tokkyo, Kokoku Tokkyo, Kokai Jitsuyo* and *Kokoku Jitsuyo*) are available in the form of microfilm.

(2) Abstracts

Abstracts of published unexamined patent applications *(JAPIO Abstracts)* are classified in accordance with the gazettes and the IPC.

(3) SDI abstract sheets

(4) Annual indexes of patent and utility models

Microfilms of (3) and (4) are made from the publications.

(5) Patent specifications of the United States of America and the Federal Republic of Germany

Microfilms of patent specifications of the above two countries are classified according to the IPC.

Search Service

The search service provided by JAPIO is mainly carried out by electronic computers, and manual searching plays only a minor role. The success of computer-aided search or retrieval will depend upon the extent of the data base, the efficieocy of the retrieval software system, and the capability of the computer hardware. The quality of communications is also significant in an online service. However, JAPIO does not have control over the communications system, because NTT's network is used.

1. Data Base

Thc quantity of patent information is rapidly increasing. The number of applications filed annually recently reached 650,000 in Japan, and 1,400,000 worldwide. JAPIO has been entering this huge quantity of patcnt information into its data base. Patent information is at present being stored on magnetic media (tapes or discs) and this will continue. However, a new mcdium has recently appeared, namely, optical discs. These will store much larger quantitites of information per unit area than magnetic discs and it is likely that optical discs will gradually replace magnetic discs. This probable change will be described below under JAPIO's future plans.

At present, JAPIO's data bases for search or retrieval are stored on magnetic discs or tapes. The contents of the data bases are shown in Appendix 2.

The total number of entries in these data bases is approximately 25,000,000 and all entries can be utilized for search or retrieval.

In addition to the above-mentioned data bases, JAPIO has data bases of English versions of Japanese patents. These data bases contain bibliographic data of all applications filed in the JPO. There is an English translation of three items (title of invention, applicant's name and inventor's name). Seventy percent of the patent references also have a short summary or abstract as in the *Patent Abstracts in English* described above.

These data bases can be utilized throughout the world (except in Japan) through SDC's online search service.

2. Computer Aided Search: Online and Batch Service

Japanese patent information is of course written in Japanese. This means that JAPIO has a serious problem, because the characters used in Japanese are composed of Chinese pictographs called Kanji and Japanese phonetic symbols called Kana. The total number of Kanji is over 10,000 and that of Kana is 48. Accordingly, computerization of information in Japanese is not easy altbough there are two ways in which it can be done. One way is to code and handle a large number of Kanji directly, and the other way is to change Kanji into Kana. JAPIO has adoptcd both ways, with the result that JAPIO has to exert very considerable efforts at a great cost.

In JAPIO's search system, JAPIO's classification system is used. Searching is carried out by using fixed keywords and free keywords together with the IPC. JAPIO's classification system is a combination of the accepted industry classification, and the classification of high technology which has become publicly accepted. Fixed keywords come from new technologies, and free keywords are technical words selected from abstracts.

JAPIO's classification system is composed of 28 classes and 133 groups and the number of fixed and free keywords is about 120 and 330,000, respectively. Precise and satisfactory searches can be achieved by using JAPIO's classification system, fixed keywords, and free keywords with the IPC.

A remarkable feature of JAPIO's retrieval system is that it is able to obtain drawings on a video terminal in online service. It had been a difficult problem to furnish drawings on an online terminal, but the technical group of JAPIO were successful in solving this problem a few years ago.

Concerning trademarks, JAPIO has its own pictorial classification system according to which pictorial trademarks are classified and can be retrieved.

JAPIO's patent online service is called PATOLIS. A reference service and a retrieval service are available from PATOLIS. The reference service enables the user to find out the content of an application from a number (application number, document number or registration number). The retrieval service enables the user to select necessary data from the data base by combining retrieval keys (IPC, applicant, keyword, etc.) using Boolean logic connectors (AND, OR, NOT). The retrieval keys which can be used in PATOLIS are shown in Appendix 3.

More detailed information can be obtained from the batch service than from PATOLIS.

These services are carried out by 5 CPUs and supplementary machines. The total capability of the CPUs is 58 MIPS as of April 1986, and it will be increased to 77 MIPS at the end of 1986. The total external memory is 98 GB.

Development of Electronic Files

The JPO is continuing to increase the computerization of its operations with the ultimate aim of creating a paperless system. JAPIO is cooperating fully with this plan. Accordingly, JAPIO is performing the input work of patent documents onto optical discs. To achieve a paperless system, all documents required by the JPO must be stored on optical discs. JAPIO established a new department, the optical disc input department, in September 1984 and about 40,000,000 pages of patent information have already been transferred onto about 1,000 optical discs.

As is well known, the density of information held by an optical disc is much greater than that of magnetic media, and the 1,000 optical discs already created cover all publications of Japanese patent and utility models since the start of the Japanese patent system 100 years ago. Concerning designs and trademarks, the input work onto optical discs will be done within a few years.

Although there have been problems in transferring this information onto optical discs, for example, problems of storing both character and image on the same optical disc, and of processing efficiently extremely large volumes of information in a short time, these problems have been overcome technically. Not only information printed on paper but also information carried on microfilms has been transferred to the optical discs. The direct input of microfilm information onto optical discs (direct means not through magnetic tape) had not been carried out anywhere in the world before JAPIO succeeded in this work last year.

The optical discs which have been created are now employed for searches conducted by the JPO examiners.

Future Plans

The JPO's plan to create a paperless system is continuing and consequently JAPIO's plans will depend on the progress made by the JPO. Nevertheless, JAPIO does have some definite policies which are explained below.

Apart from the improvement of services that are already offered, JAPIO's new policy will be towards the further utilization of optoelectronic techniques.

As mentioned before, JAPIO has already carried out JPO patent backfile conversion from paper or microfilm to optical discs. JAPIO plans to make use of these discs on which the full text of patent information is recorded together with drawings. The planned uses of the discs are as follows:

1. Duplication of Optical Discs

All backfiles of patent and utility models have already been transferred onto optical discs, and the conversion of design and trademark information will be done in the near future. JAPIO will duplicate these discs to offer them to the public.

2. Manufacturing of Compact Disc Read-Only Memory (CD-ROM)

An optical disc which stores 40,000 pages of the gazettes contains too great a quantity of information for use in most enterprises. JAPIO is therefore going to produce CD-ROMS from the optical discs. About 12,000 pages may be stored in a CD-ROM and about 100 CD-ROMS are needed for recording one year's *Kokai Tokkyo*. Two sets of CD-ROMS will be prepared, one using the IPC and the other classified in numerical order.

3. Copying Patent Information onto Paper from Optical Discs

JAPIO prepares paper copies of the gazettes by copy machines or by photographic means. These methods will be replaced by printing out from optical discs. Conventional methods of producing the paper copies of gazettes require the original texts, and rely greatly upon human power. However, when using optical discs, retrieval may be carried out by machine and the required copy is easily obtained.

These are JAPIO's plans for the use of optical discs. They are intended to bring about further developments in existing services.

Conclusion

I have tried to give a quick but general overview of what JAPIO has been doing and what it is going to do. As JAPIO's services are provided in Japanese with only one exception—*Patent Abstracts in English* which are available in booklet form and online—I regret that many potential users may not be able to take full advantage of JAPIO's services because of language problems.

However, one of JAPIO's goals is to improve its English-language service in order to provide earlier access to Japan's patent information. The demand for that information has increased considerably as a result of the growing worldwide demand for Japanese technology.

APPENDIX 1

Organization of Japio

Planning Department:	Planning and drafting of activities
General Affairs Department:	Administration, personnel, finance (accounting)
Information Service Department:	Covering all patent information services
Gazette Service Department:	Supply and duplication of patent documents
System Development Department:	System development, computer operation and control
Documentation Department:	Data collection and data base processing
Optical Disc Input Department:	Input of patent information into optical dise
Staff:	Approximately 230
Budget:	Approximately 15 billion yen (1986)

APPENDIX 2

JAPIO's data base (on magnetic disc or magnetic tape) is given in the following table. Current data are also added to these data bases monthly.

Kind of Document	*Data Base (all in Japanese except INPADOC)*		
	Item	*Coverage*	
Japanese Patent	Bibliographic data	January 1955-	
	Keyword (Free & Fixed)	July 1971-	unexamined application
	Short summary	July 1971-	unexamined application
	Abstract	January 1977-	unexamined application
	Drawing	January 1980-	unexamined application
	File history	Application from January 1964-	
Japanese Utility Model	Bibliographic data	January 1961-	
	Fixed keyword	January 1980-	unexamined application
	Short summary	January 1980-	unexamined application
	Drawing	January 1980-	unexamined application
	File history	Application from January 1964-	
Japanese Design	Bibliographic data	January 1965-	
	File history	Application from January 1964-	
Japanese Trademark	Bibliographic data	Application from April 1904-	
	Drawing	July 1909-	
	File history	Application from January 1964-	
PCT Application	Bibliographic data	January 1979-	
	Free keyword	January 1979-	
	Fixed keyword	January 1984-	
	Summary	January 1979-	
Japanese Trial	File history	September 1982-	
Japanese Registration	File history	Existing rights	
Foreign Documents (INPADOC)	Bibliographic data	January 1968-	

Concerning Japanese patent and utility models, another bibliographic file composed of new data only is updated twice a month.

APPENDIX 3

Retrieval in PATOLIS

Item	*Patent & Utility Model*	*Design*	*Trademark*	*INPADOC*
IPC	X			X
National Classification	X			X
Design Classification		X		
Goods Classification			X	
Pictorial Classification			X	
JAPIO Classification	X			
Fixed Keyword	X			
Free Keyword	X			
Applicant's Code	X	X	X	X
Free Word				
Title of Invention				X
Applicant's Name				X

Obituary

Heribert Mast †

The Union created by the International Convention for the Protection of New Varieties of Plants (UPOV) is independent of the Unions administered by the World Intellectual Property Organization. But the cooperation between UPOV and WIPO is a very close one and the headquarters of both organizations are under the same roof in Geneva. These circumstances, as well as the fact that many delegates to WIPO meetings knew Heribert Mast for a long time, justify the announcement, in this periodical of WIPO, of the untimely death, on August 15, 1986, of Heribert Mast, Vice Secretary-General of UPOV for more than 12 years.

It is in order to recall his memory that the words of the Secretary-General of UPOV, Dr. Arpad Bogsch, pronounced to the staff of WIPO and UPOV, shortly after the death of the lamented Heribert Mast, are published hereafter:

"Our dear colleague, Vice Secretary-General, Heribert Mast, is no longer.

"He was operated on in June and died on August 15, 1986, in his home, surrounded by his wife and four children.

"I saw him for the last time a few days before the end. He was perfectly lucid, and not a word of complaint passed his lips, although his physical condition showed that his forces could not last much longer. But he kept his composure perfectly and suffered as a real stoic.

"His passing away fills me and, I am sure, fills all of us, with the deepest sorrow. He was a thoroughly lovable human being. And his passing away is an enormous loss for UPOV. He was an exemplary servant and promoter of the cause for which the International Union for the Protection of New Varieties of Plants was founded and continues to exist.

"He was born in Bochum, in Germany, on October 28, 1925. He studied law in Germany, the United States of America and The Hague, and obtained his doctor's degree at the University of Freiburg. He was in government service, mainly in the Ministry of Justice of the Federal Republic of Germany, until he became, on March 1, 1974, Vice Secretary-General of UPOV.

"During his service in Bonn, he represented the Federal Republic of Germany in many international meetings. I myself met him for the first time in a preparatory commitee of the European patent system. He was an excellent delegate, defending and promoting the policy of his Government with skill, courtesy and tenacity and with a profound knowledge of the subject matter. He was always meticulously prepared for the discussions of each meeting. And he did all this with equal ease in German, French and English.

"When the post of Vice Secretary-General became vacant, it was obvious to me, on the basis of what I had seen from his performance as a German delegate, that he would be the ideal man for Vice Secretary-General. And he was appointed to that post exactly three months after I became Director General of WIPO and Secretary-General of UPOV.

"During his mandate as Vice Secretary-General, which lasted 12 and a half years, he did all and more than could be expected in that important position. He completely identified himself with UPOV and put his brilliant intelligence, solid legal background and exemplary assiduity at work entirely at the disposal of UPOV, at the disposal of international cooperation in the field of the protection of the rights of those who create new plant varieties and thereby constantly improve the food situation or, as far as flowers and other ornamental plants are concerned, thereby beautify the surroundings in which we live.

"The professional erudition of Heribert Mast was exceptional. He was one of the most outstanding, if not the most outstanding, specialists in that field of law. His erudition played a particularly important role when, in 1978, the UPOV Convention was revised since he was also a skillful diplomat, a forger of compromises where the views of the member States differed.

"Heribert Mast saw the number of the member States of UPOV grow by 200% during his tenure. He employed all his powers of persuasion and negotiation to bring about this spectacular result.

"His merits were recognized by the member States, who, on my proposal, in 1982, elevated the rank of the UPOV Vice Secretary-General to the same level as that of an Assistant Secretary-General in the United Nations or Deputy Director General in WIPO.

"The human qualities of Heribert Mast were as excellent as his professional qualities. His relations with his staff were characterized by fairness and understanding. He solved the problems which arose from time to time thanks to that fairness and patience.

"His humor delighted us all. It was a sign of his sense of proportion and of the warmth of his heart.

* * *

"We shall all miss Heribert Mast. He was a warm human being, a fair superior, an efficient public servant. It is a real tragedy that he left us when, normally, he should have directed the Office of UPOV for several years more. It is equally a tragedy for his wife and his children. Our thoughts today are with Mrs. Doris Mast and with Stephan, Cristoph, Isabel and Verena Mast, as well as with Heribert Mast, whom we shall never forget."

Arpad Bogsch

Book Reviews

Unfair Competition and Unfair Trade Practices, by B.W. Pattishall and D.C. Hilliard. Matthew Bender, New York, 1985.—468 pages.

In the foreward to this comprehensive work on unfair competition and unfair trade practices law in the United States of America, the authors point out that they have sought to provide for both students and practitioners in these areas of law an organized guide to the pertinent opinions, treatises, and commentary, as well as a delineation of the principal questions and problems which arise in these areas and a synthesis of the current law.

The book is divided into 11 chapters covering: (1) the principles of trade identity unfair competition law; (2) the creation and maintenance of trade identity rights; (3) the loss of rights (e.g., with respect to trademarks and their goodwill); (4) infringement; (5) special defenses and limitations; (6) the expanding scope of trade identity law; (7) jurisdiction and remedies; (8) principles of unfair trade practices law; (9) federal regulation of unfair trade practices; (10) State and municipal regulation; and (11) private unfair trade practices litigation.

This work will certainly be widely appreciated by all those interested in unfair competition and unfair trade practices law.

HL

News from Industrial Property Offices

CHAD

Head, Industrial Property and Technological Exchanges Division

We have been informed that Mr. André N'Djeboua Nekodjimbaye has been appointed Head of the Industrial Property and Technological Exchanges Division.

COLOMBIA

Superintendent of Industry and Commerce
and
Head, Industrial Property Division

We have been informed that Mrs. Fidelia Villamizar de Pérez has been appointed Superintendent of Industry and Commerce and that Mr. Alvaro Atienze has been appointed Head of the Industrial Property Division.

JORDAN

Registrar of Patents, Designs and Trade Marks

We have been informed that Mr. Iyad Sukhon has been appointed Registrar of Patents, Designs and Trade Marks.

Calendar of Meetings

WIPO Meetings

(Not all WIPO meetings are listed. Dates are subject to possible change.)

1986

November 24 to December 5 (Geneva) — **Permanent Committee on Patent Information (PCPI): Working Group on Search Information**

December 8 to 12 (Geneva) — **Permanent Committee on Patent Information (PCPI): Working Groups on Special Questions and on Planning**

December 16 to 19 (Paris) — **Committee of Governmental Experts on Works of Visual Art** (convened jointly with Unesco)

1987

January 12 (Geneva) — **Information Meeting for Non-Governmental Organizations on Intellectual Property**

January 26 to 31 and February 3 (Geneva) — **Consultative Meeting on the Revision of the Paris Convention (Second Session)**

February 23 to 27 (Geneva) — **Nice Union: Preparatory Working Group**

March 9 to 13 (Geneva) — **Permanent Committee for Development Cooperation Related to Copyright and Neighboring Rights**

March 23 to 27 (Geneva) — **Committee of Experts on the Harmonization of Certain Provisions in Laws for the Protection of Inventions (Third Session)**

March 31 to April 4 (Geneva) — **Permanent Committee on Patent Information (PCPI): Working Group on General Information**

April 6 and 7 (Geneva) — **Permanent Committee on Patent Information (PCPI)**

April 27 to 30 (Geneva) — **Committee of Experts on Intellectual Property in Respect of Integrated Circuits (Third Session)**

May 4 to 19 (Geneva) — **Permanent Committee on Patent Information (PCPI): Working Group on Search Information**

May 5 to 8 (Geneva) — **Permanent Committee for Development Cooperation Related to Industrial Property**

May 11 to 13 (Geneva) — **Vienna Union: Working Group on the International Classification of the Figurative Elements of Marks**

May 11 to 15 (Paris) — **Committee of Governmental Experts on Dramatic, Choreographic and Musical Works** (convened jointly with Unesco)

May 18 to 23 and 26 (Geneva) — **Consultative Meeting on the Revision of the Paris Convention (Third Session)**

May 25 to 29 (Geneva) — **Committee of Experts on the Protection Against Counterfeiting (Second Session)**

June 1 to 4 (Geneva) — **Madrid Union: Working Group on Links Between the Madrid Agreement and the Proposed (European) Community Trade Mark**

June 11 to 19 (Washington) — **Permanent Committee on Patent Information (PCPI): Working Groups on Special Questions and on Planning**

June 22 to 30 (Geneva) — **Berne Union: Executive Committee (Extraordinary Session)** (sitting together, for the discussion of certain items, with the Intergovernmental Committee of the Universal Copyright Convention)

June 29 to July 3 (Geneva) — **Paris Union: Committee of Experts on Biotechnological Inventions and Industrial Property (Third Session)**

July 1 to 3 (Geneva) — **Rome Convention: Intergovernmental Committee (Ordinary Session)** (convened jointly with ILO and Unesco)

July 6 to 8 (Geneva) — **Budapest Union: Assembly (Extraordinary Session)**

September 7 to 11 (Geneva) — **Permanent Committee on Patent Information (PCPI): Working Group on Patent Information for Developing Countries**

September 14 to 19 and 23 (Geneva) (to be confirmed) — **Consultative Meeting on the Revision of the Paris Convention (Fourth Session)**

September 21 to 30 (Geneva) — **Governing Bodies (WIPO General Assembly, Conference and Coordination Committee; Assemblies of the Paris, Madrid, Hague, Nice, Lisboa, Locarno, IPC, PCT, Budapest, TRT, Vienna and Berne Unions; Conferences of Representatives of the Paris, Hague, Nice and Berne Unions; Executive Committees of the Paris and Berne Unions; Committee of Directors of the Madrid Union; Council of the Lisbon Union): Ordinary Sessions**

October 5 to 9 (Geneva) — **Committee of Governmental Experts on Works of Applied Art** (convened jointly with Unesco)

November 2 to 6 (Geneva) — **Committee of Experts on the Harmonization of Certain Provisions in Laws for the Protection of Inventions (Fourth Session)**

December 1 to 4 (Geneva) — **Committee of Governmental Experts on the Printed Word** (convened jointly with Unesco)

UPOV Meetings

1986

December 1 (Paris) — **Consultative Committee**

December 2 and 3 (Paris) — **Council**

Other Meetings Concerned with Industrial Property

1986

December 1 to 5 (Strasbourg) — Center for the International Study of Industrial Property: Seminar on the Drafting of Patent Claims and Appeals

December 1 to 5 (Munich) — European Patent Organisation: Administrative Council

1987

January 26 to 30 (Strasbourg) — Center for the International Study of Industrial Property: Seminar on Legal Problems Concerning the European Patent Convention, the Paris Convention for the Protection of Industrial Property, the Patent Cooperation Treaty and the Community Patent Convention

June 1 to 5 (Vienna) — European Patent Organisation: Administrative Council

July 20 to 22 (Cambridge) — International Association for the Advancement of Teaching and Research in Intellectual Property: Annual Meeting

December 7 to 11 (Munich) — European Patent Organisation: Administrative Council