

## International Patent Cooperation\*

GORDON ASHER  
The Patent Office, Ottawa, Canada

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**Recent developments in international cooperation relating to patents for invention are reviewed and discussed. These include the Patent Cooperation Treaty (PCT), the International Patent Classification system (IPC), the Nordic Patent Law, the Stockholm Revision of the International Convention for the Protection of Industrial Property, the International Patent Institute, the Conventions of the Council of Europe, the proposed European Patent System, and the Afro-Malagasy Industrial Property Union. Cooperative arrangements between individual patent offices are also considered, including the work of ICIREPAT (International Cooperation in Information Retrieval among Examining Patent Offices) and the United International Bureau for the Protection of Intellectual Property.**

It is my intention to discuss the world of intellectual property, the world that deals with proprietary rights in mankind's ideas. More particularly it is my purpose to concentrate upon the growth of international cooperation as it relates to the protection given in the patent system to those new ideas that take the form of inventions.

This is a particularly appropriate time to do so. The most important diplomatic conference since 1883 to concern itself with the protection of intellectual property met in Washington in May and June of 1970. Delegates from 50 countries were invited, including the most industrialized nations in the world—Germany, France, the United Kingdom, the Soviet Union, Italy, Japan, Canada, and the United States were some of those represented. The Patent Cooperation Treaty (PCT) negotiated in Washington at that conference is another step in the international progress being made to reduce and simplify procedures for obtaining patents.

Patents have been with us for a long while—some as far back as 500 B.C. In medieval and Renaissance times Venice, England, and France developed rudimentary patent systems, which our own ancestors brought to colonial North America. Of historical interest to members of the American Chemical Society and the Chemical Institute of Canada are the first patents granted in Canada in 1791, both for two new chemical processes to make potash. An American, Samuel Hopkins, one of those inventors, also took out the first patent issued in the U.S. following the Revolution, for which a grant was signed in 1790 by George Washington and Thomas Jefferson. From such beginnings we reached the 680,000<sup>1</sup>

applications for patents filed throughout the world in 1968 and the 350,000 patents issued annually, protecting some 100,000 different inventions. Today Japan comes first in filings with 97,000 applications, the United States second with 94,000 and Canada ranks seventh at 30,000.

From the start, the patent system has been national, rather than international in scope. (By contrast, copyright protection is international in breadth.) An inventor, or the company to whom he has assigned his invention, has been required to file separately in each country in which he desires patent protection, much the same as corporations wishing to operate in more than one country must seek registration in each country where they wish to do business, and comply with the respective laws of each of those countries. This makes some sense. Various countries are in different states of industrial and economic development and quite properly wish to modify their own patent laws accordingly. Consequently they might desire to specify the type of patent protection available in their country, the conditions under which it is to be granted, and to whom they will grant it. A new country, say in Asia or Africa, might well ask why they should stimulate chemical research in Canada by granting patent monopolies for inventions made in Canada by Canadians. Part of the answer lies in the fact that Canadians, and other countries, accord equal rights to foreign inventors as to their own citizens. Consequently research in other countries receives some stimulus from the patent rights available in Canada to their own inventors. Another part of the answer is that the patent system stimulates not only research but the flow of risk capital and technical know-how—with accompanying industrial growth—into a country that grants patents. In any event, important variations exist between the patent laws of different coun-

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tries. For example, in Italy medicines are not patentable. In Canada they are subject to special restrictions. New chemical compounds that are medicines can only be claimed in terms of the process by which they are made. They are also subject to compulsory licenses. In the U.S. none of these restrictions exist. The term or life of a patent is not uniform throughout the world. What may be patented differs. At one time, as another example, only residents of Canada could take out patents in Canada.

Originally these differences, and the nationalistic character of patent laws, did not matter. Inventors in one country seldom filed in another. Their horizons were limited to their own national boundaries. With the growth of transportation, international trade and finance, global corporations, and the worldwide interest of science this changed, particularly since 1950. Not too many years ago one of the largest chemical companies in the world, E. I. Dupont, filed fewer applications outside of the U.S. than in it.<sup>2</sup> Now it averages 3000 foreign applications for every 1000 filed at home. In some cases Dupont files for the same invention in up to 100 foreign countries. Illustrative of the bonds stretching across the 49th parallel, Americans now send 19,000 applications to Canada alone, more than they file in any country in the world other than their own. With such growth, it is no wonder some patent offices feel they are being swamped with unbearable and what has been termed shockingly-wasteful work loads. Quite evidently the need for international patent cooperation has increased.

#### PARIS UNION

In earlier times the first important response to that need had been the Paris Convention for the Protection of Industrial Property, called the Paris Union. It was originally negotiated in 1883, though there have been several revisions to it. Its principal provisions are that signatory countries agree to treat nationals of other signatory countries the same as they treat their own citizens and that the first filing of an application in a union country is entitled to certain priority rights in other signatory countries. All told some 80 countries, including Canada and the United States, are party to the Union, although not all of these have ratified each revision to it. Consequently only those parts of the convention ratified by any particular country apply to that country.

#### STOCKHOLM ACT

The most recent amendment to the Paris Union is known as the Stockholm Revision of July 14, 1967. A key substantive change brought about at that time was the recognition of inventors' certificates as giving rise to priority rights under the convention. Inventors' certificates are a feature of the patent laws of the Soviet Union and of other Communist countries. They are, in fact, a special form of patent which give inventors a right to awards if their inventions are used by the government, without granting to them an exclusive property right in the invention. This is important under the communist system, where the means of production are in the hands of the government, so that the inventor could not work and market the invention himself.

A second revision made at Stockholm involved organizational changes to the administration of two intellectual property conventions, the Paris Union for patents and the Berne Union for Copyright. Heretofore these unions had been administered by the United International Bureau for the Protection of Intellectual Property, more commonly known as BIRPI, an acronym based upon the French name for the Bureau. BIRPI, which is located in Geneva, operated in the past under the general supervision of the Swiss government. Because nonconvention countries, and in particular the newer developing countries, also have an interest in intellectual property, there was a need for a larger international organization in which nonconvention countries could have a voice. This led to the convention establishing the World Intellectual Property Organization (WIPO), which was also signed at Stockholm on July 14, 1967. Membership in it is open to convention states, to member states of the UN, and to some other countries. Its concern will be intellectual property, including inventions, patents, scientific discoveries, industrial designs, trademarks, copyright in literary, artistic, and scientific works, performing rights, and unfair competition. WIPO will appoint an International Bureau of Intellectual Property as an administrative secretariat, replacing BIRPI. More precisely, there will be a metamorphosis of BIRPI into the new bureau, which will be under the direction of the member states rather than the Swiss government. WIPO will hold regular conferences of all members to consider general matters relating to intellectual property. It also provides for a general assembly of convention members to direct the two unions. It is thus apparent that WIPO is bifurcate, with one branch concerned with the two unions, the other with broader aspects of intellectual property.

WIPO came into being on April 26, 1970. Canada adhered to it and to the organizational clauses of the Stockholm Revision, effective June 26, 1970, and July 7, 1970, respectively. In the U.S. the Senate gave its advice and consent to ratify WIPO and the Stockholm Revision earlier in 1970, and deposition of the ratification is now awaiting necessary amending legislation. By the end of March 1970, 17 countries had joined WIPO, among them the U.S.S.R. and the United Kingdom.

#### A WORLD PATENT

The International Convention has not been the only response to the desires expressed by industry to convert the nationalistic patent systems into an internationalistic system granting, perhaps, a single patent valid throughout the world, or at least a good part of it. Doubtless this would simplify matters for international corporations and those inventors wishing to patent in many countries and reduce their costs in doing so. It would also reduce the duplication of effort in national patent offices whenever an application for the same invention is filed in several countries, with each office otherwise processing it independently. Plans for a world patent had been advanced as far back as 1909 in Germany and for a central European patent in 1920.<sup>3</sup> They were never realized, however, for several reasons. A reluctance to cede national sovereignty

to an international organization is one of them. To be fully effective a world patent system requires a universal uniform patent law, which I have already indicated runs counter to the need for variations tailored to the requirements of individual countries. Language differences present further problems. National security is another. Few countries are prepared to have inventions relating to national defense filed outside their country with an international authority. Another concern is the fear in smaller countries of domination of national industry by foreign interests through an international patent law over which they individually would have little control. Perhaps the loss of patent fees may be another deterrent to a few states.

Nevertheless, on a somewhat lesser scale, some developments have been found possible.

#### INTERNATIONAL PATENT INSTITUTE

In 1947 France and the Benelux countries created the International Patent Institute (Institute International des Brevets, I.I.B.) at The Hague, Netherlands. It was thought this might develop into an inter-European patent office, but so far its main achievement has been the creation of an important searching center where inventions are assessed against earlier patents and technical literature to determine if they are new and sufficiently creative to merit a patent. The Institute has access to the files of the Netherlands Patent Office that, in 1947, at the conclusion of World War II, were perhaps the most important documentation source in continental Europe. Other countries have since joined the agreement governing the Institute, among them Switzerland, Turkey, Monaco, and Morocco, which have searches conducted on some of their patent applications at the Institute. Private clients may also have searches made there.

#### COUNCIL OF EUROPE

Since 1949 the Council of Europe has become involved in patents as a means for improving the economic, scientific, and social progress of its member states. Those 18 states stretch across Europe from the United Kingdom on the west to Greece, Turkey, and Cyprus on the east. France, Scandinavia, Italy, Ireland, Switzerland, Malta, Iceland, Germany, Austria, and the Benelux countries are also included.

An original objective of the Council was the creation of a single European patent office. It eventually concluded that such an advance depended upon the gradual harmonization of the patent legislation of the countries involved.

#### EUROPEAN CONVENTION ON PATENT FORMALITIES, CLASSIFICATION, AND SUBSTANTIVE LAW

One step undertaken in 1953 by the Council toward such harmonization was the European Convention relating to the Formalities required for Patent Applications. It restricts the formal requirements that may be demanded by the contracting parties. This was followed by the European Convention on the International Classification of Patents for Invention (IPC) which came into force

in 1961. It provides a uniform system to classify patents for search purposes. It was the result of six years' work by patent experts, originally by the Dutch, British, German, and French. The U.S., Canada, and others participated later and to a lesser degree. The new classification system is being placed on patents issued by several countries, though it has not gained full acceptance as a working tool in many patent offices, since the compromises necessary to its development resulted in some weaknesses in its effectiveness as a searching tool. Perhaps future modifications will overcome some of these problems.

Another step undertaken by the Council was the Convention on the Unification of Certain Points of Substantive Law on Patents for Invention, concluded in 1963 but not yet ratified by enough states to come into force. The convention covers such matters as what is to be considered patentable and what is to be considered prior art preventing the grant of a patent. Perhaps its most important clauses specify that patents are to be granted only for inventions that are unobvious in the light of prior art (and not merely novel), and that foods, medicines, and agriculture processes are to be patentable. This would be a significant change for some countries.

#### ICIREPAT

Since 1961 the patent offices of the world have banded together in an organization called the Committee for Informal Cooperation in Information Retrieval among Examining Patent Offices (ICIREPAT). It includes leading European offices, the U.S., Japan, Australia, Czechoslovakia, the USSR, and Canada. Its principle object has been to develop automated methods of information retrieval, so as to simplify patent searches. By coordinating their efforts the patent offices have been able to avoid duplication of research efforts and devise operative punched card and computer searching systems. ICIREPAT has also been working toward standardization of patent documentation, a world patent index, microfilm specifications for storing and transmittal of patents, and on similar objectives. Although it began as an informal organization, it recently became a Paris Union committee, with BIRPI taking over its secretarial functions.

#### NORDIC PATENT LAW

If efforts at a world patent law have not yet proven fruitful, the Scandinavian countries—Norway, Sweden, Denmark, and Finland—have shown that something might be done on a smaller scale by countries closely linked in outlook and interests. The result is the formulation of a uniform patent law for all four countries, and a special Nordic patent that could be issued by any of the four contracting states to take effect in all four states. National patents would still remain for those wishing protection in only one of the states. Work on the new law began in 1949, yet it was not until 1970 that some agreement was reached. This illustrates the difficulties inherent in unifying patent laws. Part of the long delay resulted from other international developments and the wish of the Nordic countries to avoid formulating rules that would hinder adherence to broader patent systems being contemplated. Even yet it is highly uncertain whether Norway

and Denmark will ratify the new law, since industry in those countries is opposed to it. Fear of external domination without compensatory advantage is the stumbling block.

#### AFRO-MALAGASY INDUSTRIAL PROPERTY UNION

A successful earlier effort in 1964, based upon a community of interests (in this case geographic affinity and a common language), has been the African and Malagasy Industrial Property Convention. To it adhere 13 African countries, all of which had been under French rule—the Congo, Cameroon, Ivory Coast, Dahomey, Gabon, Upper Volta, Malagasy, Mauritania, Niger, Senegal, Chad, Togo, and the Central African Republic. There is a central patent office in Yaoundé, Cameroon. While there is no single common patent law, the separate national laws in each country are the same. Patents granted by the central office are valid in all states, subject to adjudication before the national courts in each state. This convention permits an applicant to obtain patent protection in all states through a single filing. The provisions on novelty are strict, but there is no examination. Consequently patentees accept grants without any presumption of validity, subject to that determination being made by the courts<sup>1</sup> in any infringement actions they may institute.

#### MODEL LAW FOR DEVELOPING COUNTRIES

In 1964 a committee of experts, at the invitation of BIRPI, prepared a model law for the protection of inventions in developing countries. Its object was to provide a draft law that could be used by developing countries wishing to establish a patent system. To date, Algeria is the only country to utilize this model as a basis of its own patent legislation.<sup>5</sup>

#### EUROPEAN PATENT

For many years proposals for a European patent, and also for a Common Market patent, have been simmering. For awhile, it would appear those proposals were stalled because of the difficulty in agreeing on a common approach. The progress made on the Patent Cooperation Treaty reawakened interests in a European patent.

Seventeen countries in Europe have now come up with a draft convention for a European system for the grant of patents. Under it a single European patent office will be established to grant patents effective throughout all signatory countries. These patents would be the same as national patents in each country designated by the applicant, subject to adjudication before the national courts of each country according to the respective national laws. The site of the European patent office has not been determined, but Munich appears to be favored. The draft treaty appears to have been well received and could conceivably be in operation in 1973 or 1974.

As presently prepared the treaty envisages a first to file system, with the patent going to the first applicant to file (as distinguished from the first applicant to invent). Any prior publication would be a bar to grant of the patent. The languages used in the patents would be restricted to English, French, or German. However an

Italian, for example, could file in Italian (if Italy were a contracting state), provided a translation in one of the three official languages were provided within a specified time. The application would be examined in the European patent office, using results of a search conducted at the IIB. Obviousness would be a reason for rejection. There would be a board of appeal to consider such rejections. Non-Europeans may file for European patents if their own country grants equal rights to Europeans as to their own citizens, but the draft makes it evident Americans could not take out patents under the treaty until such time as the U.S. law is amended to delete what are considered discriminatory clauses in U.S. interference and prior art practice. The scope of patentable subject matter is fairly broad, but commercial, surgical and diagnostic methods are excluded. Other features of the draft include opposition proceedings, provisional protection upon publication of the application, patents of addition, and renewal fees payable both to the European patent office and the national patent office. The proposed European Treaty is drafted so as to mesh into the provisions of the proposed Patent Cooperation Treaty.

#### COMMON MARKET PATENT

The six countries of the European Economic Community (or Common Market) have also been working on a convention leading to a Common Market patent. This would be a single patent covering the Common Market countries. This scheme ties in with the European patent, since the Common Market could form a single subunit within the European patent system. Indeed Article 8 of the draft European patent convention specifies that any group of contracting states (such as the Common Market) may require that they be treated as a unit, and a European patent granted for those states would have a unitary character throughout their territories. Thus the Common Market would be designated collectively as one member within the European Convention. Further discussions on the Common Market patent are continuing.

#### PCT

The final development is the Patent Cooperation Treaty (PCT) negotiated in Washington. It has been hailed as a "giant step forward"<sup>6</sup> on the one hand and as America's new "Treaty of Versailles"<sup>7</sup> on the other. It was conceived by the U.S. and turned over to BIRPI to act as midwife.

Cognizant of the obstacles and opposition to a world patent, BIRPI produced a modified plan designed to reduce duplication both for applicants in the form of multiple filings and for national patent offices in searching. Its two essential features are a single filing, which would be accepted in all signatory countries as equivalent to a national filing, and a single search conducted by one of five central searching authorities for use in all patent offices. The ultimate examination would, in most instances, still be conducted by each country that the applicant designates as a country where he wishes to have a patent, using the result of the PCT search, and separate patents would issue in each designated state. A particular advantage to applicants is that they will have the results of the central search before they need to transmit the

national filings to the national offices. They will also have more time to make such filings than they do under the Paris Union. If the search shows the invention is unpatentable, the applicant will be spared the effort and expense in continuing with the national filings.

Under the present plan, it is anticipated that the searching centers will be in the patent offices at Washington, Munich, Moscow, and Tokyo, and at the IIB in The Hague. Applicants will file with the national patent office of the state where they reside. The application will then be forwarded to the designated searching authority for that state, if it is not itself a searching authority. An American inventor would file in Washington and the U.S. Office would conduct the search. For non-searching states it is anticipated that the IIB would be the searching authority, though conceivably bilateral arrangements might be made by any particular state with one of the other searching authorities. After the applicant receives the result of the search he may proceed to have copies of his application and the search reports transmitted to those countries he designates as states where he wishes a patent. Regular national examination and grant would follow. The effective date of the application in each designated state would be the date of his first filing in his own country.

A second part of the treaty, provides for preliminary examination reports, in addition to the search report, which might be used by nonexamining countries which wish the results of an examination from central examining centers. This would improve the quality and validity of patents in such countries. The United Kingdom may become one of the examining centers.

An international application would have to be drawn in a language that the International Searching Authority concerned could handle—English in Washington, Russian in Moscow, German in Munich, Japanese in Tokyo, and English, French, or German at the IIB. This means that for Canadian applications filed in the French language the IIB could be the only searching authority.

To summarize, the Treaty has three main features: international application, international search, and international preliminary examination.

By the compromises made, infringements upon national sovereignty have been minimized. The problem of inventions useful in national defense has also been avoided, since all applications must first be filed at home and can be screened by national authorities before being advanced to the international stage.

The existing patent system have been criticized as wasteful, slow, and yielding in some countries weak patents of doubtful value. The PCT plan reduces much of the wasteful duplication. Hopefully it will raise the standards of patents granted. There are those who wish the treaty were not so complex, or that it might go further toward a single searching authority, a single examining center, a single world patent. This is not yet feasible. Indeed it is by no means certain that the Treaty will be implemented, but it is a hopeful start toward those goals.

For Canada, at least in its earlier stages, PCT is probably of marginal value. Its law already permits the Canadian patent office to obtain the search results of other patent offices, while the treaty would restrict it to the international search. Relatively few Canadians file abroad and rarely in sufficient countries to warrant taking the PCT route. The costs of an international filing will not be insignificant and those wishing protection only in Canada or a few countries will find it easier and cheaper to make the usual national filings. Much will depend upon how effective and improved the international search proves in practice.

In the United States, one of the features of concern is the effect upon and conflict with present U.S. law. This is one point upon which the whole treaty could flounder. The European countries are concerned about an aspect of the treaty that preserves the substantive features of each national law and what they consider to be discriminatory aspects of the U.S. law. Many Americans are concerned about the regulatory making powers to be delegated to an international assembly, that could leave industrially sophisticated countries unprotected from unfavorable rule changes and impinge upon the constitutional powers of the U.S. Congress.

## CONCLUSION

I have not discussed some of the other efforts at international patent cooperation—the abortive British Commonwealth Patent, the South American Patent Convention, or Australia's new law that accepts U.K. and U.S. Patents without examination for issuance in Australia, nor have I gone into other aspects of intellectual property protection, such as copyrights, industrial designs, or trade marks. But what I have said demonstrates that the winds of change are blowing. We do not know what they will stir up. This new decade, the seventies, shows promise of exciting, and, it may be hoped, of fruitful change.

## LITERATURE CITED

- (1) *Industrial Property*, BIRPI, Geneva, (Dec. 1969).
- (2) Ball, R. W., "International Patent Trends," *Bull. Pat. and Trademark Inst. Canada*, p 3, Ottawa (Dec. 1968).
- (3) Von Holstein, Per, "International Cooperation in the Field of Patent Law," *Bull. Pat. and Trademark Inst. Canada*, p 46, Ottawa (Dec. 1969).
- (4) Grundmann, Hedge, E., "Patent Laws in New African States," *J. Pat. Offi. Soc.*, p 486, Washington, D.C. (July 1968).
- (5) *Ibid.*, p 498-502.
- (6) Brenner, Edward J., "International Commerce," *U.S. Dept. of Commerce Weekly*, Washington, D.C., p 2 (Aug. 5, 1968).
- (7) Meller, Michael, N., "A New Looking Foreign Patent Practice, or a Treaty of Versailles," *J. Pat. Offi. Soc.*, p 689, Washington, D.C. (Nov. 1969).
- (8) "Evolution of the Plan," Memorandum by BIRPI, PCT/III/3, p 3, July 15, 1968.