PCT System and Its Impact on the Developing Countries

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Protection and enforcement of intellectual property rights (IPR) are major components of international economic trade and scientific cooperation, and the Patent Cooperation Treaty (PCT) has ushered an era of international cooperation in the diverse international property systems with reference to patents. The paper discusses about the benefits of the PCT system under which the filing of one international patent application leads to protection in several countries. Emergence of PCT system and its benefits, e.g. long term gains, availability of best technology, faster industrial progress and development, increase in the foreign direct investment (FDI), and raising the level of patent work in the country, are discussed in detail. The developing and the least developed countries have also benefited from the PCT and account for the majority of the 117 members. Among the developing countries, India has also gained substantially and holds the third position in international filing of patent applications and the Council of Scientific & Industrial Research (CSIR) is second to Biowindow Gene Development Inc from China. The paper also discusses briefly about the PCT reforms and automation to make the system more useful and beneficial.

The demands for remaining innovative and maintaining an edge in international competition require substantial efforts to use IPR regimes as a tool to bring about desired level of technical change and development. In the post TRIPS era, the formulation and adaptation of the right IPR policy is strategic in deriving the optimal benefits offered by the IPR system. In this context, the protection and enforcement of IPR has now become a major and inevitable component of international economic trade and scientific cooperation relations.

Emergence of the Patent Cooperation Treaty

PCT is a facilitating treaty and one of most significant advancement in international cooperation in the field of patents. The principle objective of the PCT is to provide a more effective and more economical means for applying for patent protection in several countries. As per conventional system, an inventor has to file separate applications in each country where he desires to seek protection for his invention. Under the PCT system, the inventor is required to
file a single application (properly known as an international application) in one language having effect in each of the countries party to the PCT by indicating the names of the countries (known as designations) where he desires the protection. This system also provides formal examination of the international application by a single office and also international search on the prior art. The national patent offices are, however, free to examine the application from the perspective of national legislations and charge the fee for the same. Presently, 117 countries are members of the PCT.

PCT, which is a special agreement under the Paris Convention, is largely a treaty for rationalization and cooperation with regard to filing, searching and examination of patent applications and dissemination of technical information. The PCT does not provide for the grant of international patents. The responsibility for grant of patents remains solely with the patent offices of member countries as per their laws.

The PCT essentially sets up a system of patent cooperation whereby filing only one international application with one patent office, the applicant can obtain the effect of regular national filings in any of the designated PCT contracting countries without initially having to furnish a translation of the application or paying national fees. This means that the expenses related to national patent granting procedure are postponed in majority of the cases, by up to 18 months as compared to the traditional patent system. Subsequently, each international application is subjected to an international search carried out by one of the major patent offices acting as an International Searching Authority under the PCT, which gives a report about the relevant prior art. Eighteen months after the priority date, the international application is published by the International Bureau, together with the international search report and any amendments of claims, which might have been made by the applicant, and is transmitted to the applicant and to the designated office. If the applicant requests an international preliminary examination under PCT, it is done by one of the patent offices acting as International Preliminary Examining Authority, setting out whether the claimed invention fulfils the criteria of novelty, inventive study and industrial applicability. The applicant, on receiving the international search report and the international preliminary examination report is in a much better position to decide whether to proceed with the application in the respective designated patent offices or not. In case, the applicant decides to seek patent application in several countries, he can then decide to pay the national fees and prosecute the application in that country. This gives the applicant more time to decide about the need for the patent protection. In view of the availability of the international search report and in many cases, the international preliminary examination report, the PCT applicants can take a well informed decision keeping in mind the increased knowledge of the technological value and commercial
prospects of the invention and its feasibility.

**Benefits of PCT System**

The PCT system offers inventors and industry a better route for obtaining patent protection internationally as by filing one international patent application protection for an invention can be simultaneously sought in 117 countries, which are signatories to the PCT. This system is advantageous both to the applicants and patent offices of the PCT member countries as there is certain uniformity in the formality requirements, the international search and preliminary examination reports and the centralized international publication provided by the PCT system.

While the traditional patent system requires filing of individual patent application in each country where patent protection is sought which involves not only preparation and filing of patent applications in several countries in different languages in different systems but also added cost in terms of payment of fees to the patent offices, expenses on translation, fees to attorneys, etc.

The aims of the PCT are generally to facilitate the attainment of the larger objectives of the patent systems, viz.:

- Making a contribution to the progress of science and technology
- Providing optimum legal protection of inventions
- Simplifying and rendering more economical protection of inventions
- Facilitating and accelerating access by the public to technical information
- Fostering and accelerating the economic development of developing countries

The principal objectives of the PCT specifically are:

- Offer solutions and options for addressing the limitations of the traditional patent system, especially when patenting is desired in many countries
- To simplify (to make more efficient and more economical) the procedure for seeking patent protection for the users of the patent system (applicants and inventors); and patent offices

The PCT is useful as it gives more time and information to the applicant in order to:

- Evaluate and better the chances of protecting the invention before major costs in foreign countries are incurred
- Keep options while investigating its commercial possibilities abroad
- Help obtain more reliable patents abroad.

**Long Term Gains**

Apart from above mentioned advantages, PCT system also helps in: (i) Improving the status of the country in the area of intellectual property worldwide, (ii) Paving the way for generating foreign exchange through exports, (iii) Encouraging filing of applications in other countries, (iv) Efficient patent portfolio management, (v) Allowing staggering of expenses, and (vi) Allowing
additional time for taking more informed decisions.

**Availability of the Best Technology**

The PCT system paves way for more opportunities for technology transfer from foreign countries based on patent protection. In the era of fast rate of technological obsolescence, availability of competitive technology helps in selection of the best technology.

**Faster Industrial Progress and Development**

The developing countries have invariably remained a target area for the big corporate groups to expand their activities. Driven by the availability of large number of scientists, engineers and technical manpower, these groups come forward to invest in the developing countries, which helps in establishment and development of local industries. Creating more local jobs and enhancement in technical skill levels leads to more industrial progress and accelerated development of the national economy.

**Increase in FDI**

The developing countries and the least developed countries require FDI for establishment of vital industrial sectors. The economic liberalization policy is sometimes not enough to attract sufficient FDI. Something more is required to be done to remove the irritants standing in its way. Effective protection of intellectual property would certainly help in garnering more FDI especially in some critical areas of technology like pharmaceuticals, etc.

**Raising the Level of Patent Work in the Country**

More number of applications means more business for the patent agents. The PCT system gives an additional advantage to the patent practitioners. In fact, the advantage available under this system is not only limited to large multinational corporations but is also available to individual applicants and local entrepreneurs. It also helps local applicants to seek patent protection abroad, which would serve as a fillip in increasing the penetration of export markets by local industry. With the increase in local inventive activity and receipt of large number of patent applications from contracting states, the volume of patent work in the receiving country would increase without any doubt.

The enormous benefits brought by the PCT to the patent applicants, designated offices, elected offices and industrial enterprises are testified by the phenomenal growth of international applications filed under the PCT over the years. Realizing the tremendous cost saving potential of filing the patent application through the PCT route, a large number of world’s well-known enterprises have utilized this system and several of them are also from the developing countries. The importance of PCT is evident from the growth in the PCT filings worldwide. From as low a figure of few thousands in the late 70s, it has grown exponentially to a figure of 1,03,947 in 2001. The 2,50,000th international application under the PCT was received in February 1996, 18 years
after the start of PCT operations; it took only four years until March 2000, to receive the next 2,50,000th application.

An analysis of the technical fields for published PCT applications in 2001 showed that almost all fields of technology are utilizing the PCT system with physics accounting for 21%; chemistry, metallurgy 21%; electricity 18%; human necessities 17%; performing operations, transporting 13%; mechanical engineering, lighting, heating, weapons blasting 6%; fixed constructions 3% and textiles, paper 1%.

PCT and Developing Countries

It is heartening to note that more and more companies and individual applicants are using the PCT route for filing applications in various contracting States. The simple reason behind this is that the PCT procedures are being continually revised and refined to make it cost effective, easy, and advantageous to a greater number of applicants. No other IPR system provides such flexibility to suit the needs of the applicants. The PCT union, which commenced in 1978 with 18 members in the beginning, has over the period of twenty-four years gained the membership of 117 States, out of which more than half the members are from developing countries, amply providing the benefits to all stakeholders. Interestingly, the developing countries are striving hard for making inroads for their own products in the global market and are joining such international arrangement in large numbers. This strategic policy not only boosts the investors’ confidence but also adds economic value to promote intellectual property management in their national economies. PCT also offers practical ways of reducing the administrative burden on individual patent offices by facilitating search and examination and eliminating much of the formality of checking, data entry and processing and publication.

From the perspective of developing countries also, the PCT filings have shown a significant growth. In 2001, there was an overall 70.6% increase over the 2000 figures in terms of PCT applications filed in developing countries Contracting States. This high increase is largely due to larger number of applications filed in China (growth of 188.4%), India (102.6%), Republic of Korea (53.1%) and Mexico (50.1%). The total number of international applications originating from developing countries was 5,378, with the highest numbers from Republic of Korea (2,318), China (1,670), South Africa (418), India (316) and Singapore (271). Almost 85.4% of international applications from developing countries originated from the Asia Pacific region in 2001. It is gratifying to see the developing countries making use of the PCT system in an advantageous manner.

India and the PCT

India acceded to the Paris Convention for the Protection of Industrial Property in December 1998 and joined the PCT Union at the same time. The accession to the PCT is a landmark decision in the history of the patent system in India. It has opened the gateway for entry of the advance technology in India. In the year
1999, a beginning was made by posting 61 PCT applications originating from India. Since the joining of the PCT, India has been designated in over 2,50,000 international applications. The entry into the national phase has already commenced from August 2000 and over 13,000 such applications have been received till now.

The importance of PCT applications in India has grown substantially and from a low figure of 3% in 1999-2000 it has grown to almost 50% in 2000-01 and has surpassed the national filing in 2001-02. While there were 4,164 national phase PCT applications against 4,339 normal filings under the Indian Patent law in 2000-01, the PCT filings increased to 6,351 in 2001-02 against the normal filing of 4,241 applications. In the current year, it is expected that the national phase filing under PCT would be as high as 7,500 as compared to normal filing of 4,500 and in the coming years, this trend would become even more pronounced. It is estimated that the PCT filings in 2003-04 would be more than double the national filings and in future years would be almost four to five times of the national filing. Therefore, the importance of PCT can be gauged from the fact that of the total patent applications filed in the country, PCT presently accounts for almost 0.6% and it is estimated to account for more than 85% of the total filings.

The CSIR, India, has filed 101 applications during the period January to June 2002 and it is second to only Biowindow Gene Development Inc. from China, among the developing countries, which has filed 136 applications during the same period. Other important PCT applicant companies from India during the same period are Ranbaxy Laboratories Ltd (27 applications) and Dr Reddy’s Laboratories Ltd (9 applications) during the same period. Other pharmaceutical companies from India like Orchid Chemicals & Pharmaceuticals Ltd, Biocon Ltd, Lupin Lab and Sun Pharmaceutical Industries Ltd, are also using the PCT system fruitfully.

Thus, it is seen that after accession of India to the PCT, Indian inventors have started taking full advantage of the PCT system and a lot of applications from abroad are also being received under the PCT system, accounting for the major proportion of applications received by the patent offices in India.

**PCT—Global Reach with Flexibilities**

The PCT is a treaty of global scope with the purpose of assisting in the filing, searching and examination of patent applications. The binding procedural patent provisions of the PCT are in general agreement with the corresponding binding TRIPS provisions. Hence PCT Contracting States, which are also WTO Members, are not faced with having to comply with two conflicting agreements. The non-binding substantive PCT provisions are not *prima facie* in conflict with corresponding TRIPS provisions.

In view of the flexibilities in the PCT system, the enactment of TRIPS did not necessitate changes in the PCT to bring them in conformity. Applications when received by members would help in processing the increasing number of applications because when the application
enters the national phase, it will be accompanied by a PCT search report, and in the most cases, by a PCT examination report also, to know that the formality and disclosure requirements have been satisfied or not. Nevertheless, the PCT is of rather limited assistance in a manner of speaking since it is more a patent filing procedure with some elements of a patent examination procedure (in the form of a mandatory PCT search and an optional non-binding and preliminary PCT examination) rather than a full and complete search and examination procedure. However, it is this characteristic of PCT which has made it attractive for so many countries to join as it gave them the flexibility of an international filing system without having to compromise on substantive issues of patent law which can at times be difficult and may take time to consider after evolving a suitable consensus. Processing a large number of PCT applications in the national phase, even if accompanied by a PCT search report and examination report, does require considerable administrative efforts by a designated office. Nevertheless, there is a great advantage in having the PCT search report accompanying the PCT applications in the national phase, as it helps the patent office substantially. Furthermore, the case of filing applications through the PCT has the effect that many more applications are filed. Hence, being a PCT Contracting State could in certain situations actually increase the administrative burden. The solution to this would be to further develop the PCT procedure in order to streamline and simplify it.

PCT—Reforms and Automation

As a means for unifying the patent filing procedure, the PCT has been very successful. The PCT is now by far the preferred means if an application is to be filed in a number of states. However, as a means for unifying search and examination procedure, it has been not that successful. The purpose of the mandatory PCT search and the optional PCT examination – minimizing repetition of search and examination efforts in different offices and corresponding efforts by applicants – has only been of limited success. Virtually all-major examining offices normally repeat (if only in a supplementary fashion) the search and examination unless it was the same office, which performed the PCT search and the PCT examination. Many offices require additional proof of patentability – often in the form of patent grants of corresponding application. All attempts to give the PCT wider role have not succeeded so far, mainly because of differences in patent law and practice as well as lack of political will to overcome such differences and to rely on the “work product” of another office.

From a global perspective, there are a few other practical alternatives to the PCT and its further development. Therefore, substantive efforts for the reforms of the PCT are being made and spearheaded by WIPO. Some of the issues relating to duplication of work, special needs for small and medium offices of the developing and least developed countries, balancing of applicant and third party interests, reduction of costs, simplifying and
streamlining of the PCT procedures are being addressed through the PCT reforms process.

India has also submitted specific proposals for the reform of PCT. These proposals cover simplification and streamlining of the procedures, reduction of cost, maintaining of appropriate balance between interest of the applicant, other parties and government, etc. As the importance of PCT to the Indian patent system is growing significantly and as the number of patent applications filed under the PCT is already more than the normal patent applications filed in the country, it is very necessary that information dissemination about the PCT system is given due importance.

Simultaneously, the PC automation through the projects of IMPACT (Information Management for the Patent Cooperation Treaty) is with the objective of streamlining the work procedures and facilitating electronic data exchange between the intellectual property offices in order to provide improved services to PCT applicants and enable reduction of costs. Similarly, the other automation project PCT–EASY (Electronic Application System) software is being used by over 35% international applicants and PCT – SAFE (Secure Applications Filed Electronically) is being developed for enabling electronic filings and processing of PCT applications. This would help greatly in the utilization of the PCT system by the developing and least developed countries and help the patent offices to have an integrated IT enabled patent administration and uniform electronic filing/communication and data exchange standards.

**Conclusion**

Several advantages of the PCT in terms of enabling more applicants from developing and least developed countries to seek patent protection in more contracting States, opportunities arising for technology transfer from foreign countries and in turn stimulating technology related FDI, development of local industries using better and appropriate technologies, upgradation of technical skills and providing a stimulus for economic and technological development etc. are there for all to see. Other than the general economic benefits to the national economy in terms of better technology transfer, creation of jobs, etc., there are several advantages for the Contracting States in terms of strengthening of international cooperation with other Contracting States, as well as with other patent offices, greater awareness and publicity among the applicants about the country’s patent system. Access to PCT for the country’s inventors and industry, facilitates access to more technical knowledge and more inflow of latest technology is certainly beneficial. Therefore, as amply testified by India’s experience in the last four years the PCT has resulted in large number of designations in the international applications followed by national phase applications giving a fillip to inventive activity and greater awareness among the applicants both nationally and internationally and it is expected that with the future PCT development/reforms, the system will prove to be even more useful and beneficial.