

THE ADVANTAGE/DISADVANTAGE OF THE HARMONIZATION OF THE
PATENT SYSTEM

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Note- The views expressed in this report are purely of the author, except where the references are cited. The views need not necessarily reflect the official view of the office; the author is working for or the agency that has sponsored the Study-Cum- Research Fellowship Program.

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THE ADVANTAGE/DISADVANTAGE OF THE HARMONIZATION OF THE PATENT SYSTEM

ABSTRACT

This research study focuses on the various aspects of harmonization of patent system. The history of patent system is briefly discussed, subsequently various treaties which bears relevance to patent are discussed. The dissimilarities in the provisions of patent laws which poses difficulties for the user of the patent system are studied . The necessity of the harmonization from different users' perspective discussed and the advantages and disadvantages of the harmonization analyzed. The views of the IP experts and industries on harmonization received through questionnaire and interviews were also considered in this regard. The success achieved so far has also been discussed. The bilateral and multilateral arrangements which are helpful in achieving harmonization or the goal of harmonization has also been discussed. At last in conclusion the path that should be adopted in the direction of harmonization has been recommended.

LIST OF ABBREVIATIONS

ARIPO :African Regional Industrial Property Organization
EPC : European Patent Convention
EPO : European Patent Office
EU : European Union
FDI : Foreign Direct Investment
FTC : Foreign Technology Collaboration
GDP : Gross Domestic Production
GPTO: German Patent and Trademark Office
IPR : Intellectual Property Rights
JIPA : Japan Intellectual Property Association
JPO : Japan Patent Office
KIPO: Korean Intellectual Property Office
MNCs : Multi National Corporations
OAPI: African Intellectual Property Organisation
PCT : Patent Cooperation Treaty
SCP : Standing Committee on the Law of Patents
SIPO : State Intellectual Property Office
SME :Small and medium Enterprises
SSI : Small Scale Industry
TKDL : Traditional Knowledge Digital Library
TRIPS : Trade Related Aspects of Intellectual Property Rights
UNU: United Nation University
WIPO: World Intellectual Property Organization
WTO : World Trade Organization

CHAPTER 1

Background of research

1.1-Introduction:-

Patent is territorial in nature. As businesses often cross the boundaries, they need to protect their invention through patent in the countries where they wish to operate. The patent systems in different countries are not the same, which often create problems for them. They often shy away from the countries where protection is weak or nil for their invention. So neither the business nor the country enjoy the benefit of patent. "There are good reasons behind each country having their own different systems. These include the history of a nation, its social conditions, economic situation and so forth that go beyond merely technical issues, sometimes involving political issues as well. But today, however, when the major part of economic activity has become globalized, different local rules would become a constraint on economic development. A close look at the details of each nation's rules will doubtless reveal differences, but at the same time, many similarities can be found as well. And many of the differences can well be overcome through cooperation and effort."¹

Harmonization is just a journey towards minimization of such differences existing in the patent systems of different countries.

1.2 - Overview of the Patent System:-

The essence of the patent system is that it provides the incentives to the inventor for his invention in lieu of the disclosure of his invention.

In absence of such system for providing the incentive one Chamberlen family in England and later a Dutch physician kept the use of a practical obstetrical forceps considered to be invented by one of the members of the Chamberlen family as a trade secret from 1598 to 1732. For over a century, women around the world had died in childbirth because the Chamberlen family and later the Dutch physician had no effective way of profiting from the family invention except by maintaining it as a trade secret.²

¹ Takeshi ISAYAMA, Commissioner of JPO. Toward Desirable IP Systems ? Taking the Patent System as an Example. Chairman's Note for the Informal Meeting of the Heads of Patent Offices in Developed Nations, May 19-20, 1999. Available at <http://www.eps.nagoya-u.ac.jp/examin/991d/991dej.html> and last visited on 24dec2007.

² History of the United States Patent Office, The Patent Office Pony, A History of the Early Patent Office, Chapter 1 -- Protection of Inventors before America was Involved available at <http://www.myoutbox.net/popch01.htm> last visited on 29-02-2008.

The patent system serves certain purpose. More recently Mazzoleni and Nelson have categorized four broad theories about the purpose patents serve : I) A motive for invention, II) an inducement for development and commercialization of inventions, III) an inducement to disclose inventions, and IV) a means of ensuring orderly development of broad prospects.³ An effective patent system buttressed with economical and industrial measures can propel the growth of economy.

The patent system buttressed with other suitable measures propels the growth of economy.

The Four essential features⁴ of the patent system according to Phillippe Baechtold and Tomoko Miyamoto

1. The patent system must aim to reward only qualified inventions.
2. The invention should be sufficiently disclosed so that the public is in a position to share the knowledge of the inventor.
3. The term of protection must be limited in time.
4. The exclusive rights of the patentee should not extend to certain acts performed by the third parties

Before discussing further about the patent system it is advisable to have a look into the history of patent system. If we look back to the history of patent system, patents can be traced far back into the history. Athenaeus⁵ (third century A.D.) in his book "banquet of the learned" quotes Phylarchus⁶ the historian as saying of the Sybarites- "And if any confectioner or cook invented any peculiar and exclusive dish, no other artist was allowed to make this for a year; but he alone who invented it was entitled to all the profit to be derived from the manufacturer of it for that time, in order that others might be induced to labour at excelling in such pursuits"⁷

³ Robert Pitkethly, The European Patent System : Implementing Patent Law Harmonisation, available at <http://www.oiprc.ox.ac.uk/EJWP1099.pdf>
Last visited on 03-03-2008

⁴ Phillippe Baechtold and Tomoko Miyamoto in their article titled "International Patent Law Harmonization-A Search for the Right Balance"
Journal of intellectual Property rights Vol.10,may 2005,pp177-187

⁵ Athenaeus, of Naucratis in Egypt, Greek rhetorician and grammarian, flourished about the end of the 2nd and beginning of the 3rd century A.D.

Source - <http://en.wikipedia.org/wiki/Athenaeus>

⁶ Phylarchus (lived 3rd century BC) was a Greek historical writer whose works have been lost, but not before having been considerably used by other historians whose works have survived.

Source - <http://en.wikipedia.org/wiki/Phylarchus>

⁷ GOMME, ARTHUR ALLEN, Patents of Inventions -- Origin and Growth of the Patent System in Britain, The British Council (1946),by Longmans, Green and Co.

According to Aristotle in his book Politics, Hippodamos of Miletus was an ancient Greek Architect, Urban Planner, Physician, Mathematician, Meteorologist and Philosopher. The earliest notions of patent law came from Hippodamus. He proposed that "society should reward those individuals who create things useful for society." However Aristotle *criticized the practical utilitarian approach of Hippodamus and implicated the inherent tension in rewarding individuals for doing good; i.e. that by rewarding individuals for doing good, the individuals will do good for the reward over the benefit of the state.* The state could actually suffer because of the allure of individual rewards, since individuals may propose notions that weaken the state. Aristotle essentially foreshadowed the inherent tension between private rewards for social benefits--the potential diversion between individual and societal interests⁸.

In 1474 Venice came up with the first patent statute.⁹ In this Venetian statute all the principal features of the modern Patent system can be found. This statute did not emerge without precedents, but it is the first complete expression of a recognizably modern Patent system¹⁰. The system envisages concepts of novelty, registration of the new device, term of exclusive right, infringement of patents as well as compulsory license.¹¹

With the enactment of the Venetian patent system in the next two centuries the system of patent monopolies had spread across Europe. England being prominent among them developed the system. There are records to suggest that

⁸ Source: <http://en.wikipedia.org/?title=Hippodamus> last visited on 7th January 2008

⁹ "We have among us men of great genius, apt to invent and discover ingenious devices; and in view of the grandeur and virtue of our city, more such men come to us very day from divers parts. Now, if provision were made for the works and devices discovered by such persons, so that others who may see them could not build them and take the inventor's honor away, more men would then apply their genius, would discover, and would build devices of great utility and benefit to our commonwealth. Therefore:

" Be it enacted that, by the authority of this Council, every person who shall build any new and ingenious device in this City, not previously made in our Commonwealth, shall give notice of it to the office of our General Welfare Board when it has been reduced to perfection so that it can be used and operated.

It being forbidden to every other person in any of our territories and towns to make any further device conforming with and similar to said one, without the consent and license of the author, for the term of ten years.

And if anybody builds it in violation hereof, the aforesaid author and inventor shall be entitled to have him summoned before any magistrate the said infringer shall be constrained to pay him [one] hundred ducats; and the device shall be destroyed at once.

It being, however, within the power and discretion of the Government, in its activities, to take and use any such device and instrument, with this condition however that no one but the author shall operate it." —source <http://www.altlawforum.org/PUBLICATIONS/document.2004-12-18.0853561257>

¹⁰ His honour Judge Fysh QC, SC, Ashley Roughton, Trevor Cook and Michel Spence, Modern law of Patents, page 3.

¹¹ <http://www.altlawforum.org/PUBLICATIONS/document.2004-12-18.0853561257>

letters patent existed in England prior to 15th century and the letters patent developed on its without any influence from the system that existed in Venice.¹²

According to ARTHUR ALLEN GOMME, four patents were already recorded prior to the Venetian statute.¹³In 1624, British Parliament passed the Statute of Monopolies. The first U.S. patents act came in 1790 ,Then came the French Patents Act 1791 ,subsequently patent laws enacted in other European Countries between 1800 and 1882.¹⁴

The government of different countries have utilized patent system as an effective tool for their economic and industrial developments from time to time. German was not granting Product patent for substance manufactured by chemical process due to the industrial situation at that time¹⁵ .England has stopped granting patent for chemical substances to protect their chemical industries. Similarly Japan was not granting patent for substances till 1976.India has stopped granting patent for food and drugs from 1970 onward though for a noble cause . As the globalization of trade occurred, there was a need for the applicant to protect the invention in the countries, where the exploitation of his invention likely to occur. With the

¹² <http://www.altlawforum.org/PUBLICATIONS/document.2004-12-18.0853561257>

¹³ On March 2 ,1236 English King Henry III, who was also the ruler of the whole of western France, confirming a grant by the Mayor of Bordeaux to BONAFUSUS de Sancta Columba,citizen of Bordeaux, where by he and his fellows alone in Bordeaux were permitted to make cloths of diverse colours after the manner of the Flemings, the French, or the English ,for a term of fifteen years; at the end of which period is to be at liberty to make any and as many cloths as they please and the said BONAFUSU and his follows are to have no advantage .

On June 19,1421,Filippo Brunelleschi,the great engineer and architect of the cathedral Dome ,The Pallazo Pitti was granted a patent for three years for a method of transferring heavy loads on the Arno and other rivers which would operate at any time and at a lower cost then formerly. "because Brunelleschi did not want to give the invention for public use for fear of being robbed of the reward of his labors the privilege is granted with the express intention not only that the invention may be made useful as well for himself as for the generality but particularly also that he himself may be urged to further exertion ,and stimulated to achieve greater inventions; the Government agrees to protect the inventor against unauthorized working and to grant the author an immediate monopoly for the period stated by prohibiting the use of every form of transport ship not in use at the date of the privilege unless it be built by Brunelleschi himself or with his consent.

On January 21 1444, Antonius Marini de Francia was granted a privilege to construct such waterless mills as will grind sufficient corn to meet needs and convenience of the city.....which no others shall do, nor shall they have waterless mills constructed }in Venice and its territories| for twenty years hence.

On 3rd April 1449,John of Utynam returned of late to England from Flanders at the King[s command ,to live here with his family and to exercise all arts and sciences without hinderance and because his art of making colour glass has never been used in England and john intends to instruct divers lieges of the king in many arts never used in the realm beside said art of making glass,The King grants that no liege of the King learned in such arts shall use them for a term of 20 years against the will and consent of John.

¹⁴ see S K Arya, The Patent Law harmony, available at <http://www.expresspharmaonline.com/20051215/ipcspecial04.shtml> last visited on 11-03-2008.

¹⁵ 1877 German Patent law.

dissimilarities in the laws and procedures, the applicants were put to trouble. So the necessity of the harmonization of the patent system was felt by the user of the patent system.

1.3 - Overview of International Development in the Field of Patent:-

a. Paris Convention

In the development of patent law harmonization perhaps the most important event of the modern era was the Vienna exhibition of 1873. Prior to the exhibition considerable concern was expressed by American commentators about the state of Austrian patent law and its ability to protect exhibitors from plagiarism and piracy.¹⁶

The Vienna exhibition was held in the midst of a cholera epidemic which understandably somewhat reduced the willingness of potential participants to attend. However, despite this drawback and prompted by the concerns about piracy, a congress was organized alongside the Exhibition to discuss the issue of patents and moves to harmonize them.¹⁷

One outcome of the congress was a resolution which, inter alia, stated that : "In consideration of the great inequality of the existing patent legislation, and in consideration of the altered means of international communication of the present time, there is great want of reform, and it is very desirable that the Governments will initiate an international understanding on the patent protection"¹⁸

Then after a series of conferences the Paris Convention for the Protection of Industrial Property(here after referred as Paris Convention), signed in Paris, France, on March 20, 1883. There are 172 members party to Paris Convention(as on 3rd march 2008).¹⁹

The Paris Convention on the Protection of Industrial Property provided a rather flexible framework for the protection of industrial property, including patents²⁰.

¹⁶ Robert Pitkethly ,The European Patent System : Implementing Patent Law Harmonisation,available at <http://www.oiprc.ox.ac.uk/EJWP1099.pdf>
Last visited on 03-03-2008

¹⁷ Robert Pitkethly ,The European Patent System : Implementing Patent Law Harmonisation,available at <http://www.oiprc.ox.ac.uk/EJWP1099.pdf>
Last visited on 03-03-2008

¹⁸ Robert Pitkethly ,The European Patent System : Implementing Patent Law Harmonisation,available at <http://www.oiprc.ox.ac.uk/EJWP1099.pdf>
Last visited on 03-03-2008

¹⁹ Source - http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=2
Last visited on 03-03-2008

²⁰ Carlos M. Correa,University of Buenos Aires, AN AGENDA FOR PATENT REFORM AND HARMONIZATION FOR DEVELOPING COUNTRIES, available at http://www.wipo.int/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf last visited on 03-03-2008.

Paris Convention contains inter alia the provisions of national treatment²¹, right of priority²², independence of patent²³, *mention of the inventor in the patent*.²⁴, *Compulsory Licenses*²⁵ and the concept of an "Open Union"²⁶, with the possibility of revision and the extension of membership.

Although it introduced certain common standards (e.g. independence of patents, priority right, conditions for revocation of patents and compulsory licenses) it left the determination of most aspects of patent law (including patentable subject matter, duration, rights conferred) to national laws.²⁷

The Paris Convention, concluded in 1883, was revised at Brussels in 1900, at Washington in 1911, at The Hague in 1925, at London in 1934, at Lisbon in 1958 and at Stockholm in 1967, and it was amended in 1979.²⁸

The majority of Paris Union countries are now party to the Stockholm Act of 1967. It is the Stockholm Act which is incorporated by reference into the World Trade

²¹ Article 2 and 3 of the Paris Convention available at http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html#P77_5133

²² Article 4 of the Paris Convention available at http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html#P77_5133

²³ Article 4bis of the Paris Convention available at http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html#P77_5133

²⁴ Article 4ter of the Paris Convention available at http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html#P77_5133

²⁵ Article 5 of the Paris Convention available at http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html#P77_5133

²⁶ Dr. Michael Blakeney, Director, Queen Mary Intellectual Property Research Institute, Center for Commercial Law Studies, University of London, London, THE INTERNATIONAL PROTECTION OF INDUSTRIAL PROPERTY: FROM THE PARIS CONVENTION TO THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS (THE TRIPS AGREEMENT) WIPO NATIONAL SEMINAR ON INTELLECTUAL PROPERTY FOR FACULTY MEMBERS AND STUDENTS OF AJMAN UNIVERSITY organized by the World Intellectual Property Organization (WIPO) in cooperation with Ajman University of Science and Technology (AUST), the Association of Arab Universities and the Association of Arab Private Institutions for Higher Education Ajman, May 5 and 6, 2004.

Available at

http://www.wipo.int/edocs/mdocs/arab/en/wipo_ip_uni_dub_04/wipo_ip_uni_dub_04_1.pdf last visited on 3-03-2008

²⁷ Carlos M. Correa, University of Buenos Aires, AN AGENDA FOR PATENT REFORM AND HARMONIZATION FOR DEVELOPING COUNTRIES, available at http://www.wipo.int/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf last visited on 03-03-2008.

²⁸ Source-Summary of the Paris Convention for the Protection of Industrial Property (1883)

available at http://www.wipo.int/treaties/en/ip/paris/summary_paris.html last visited on 3-3-2008

Organization Agreement on Trade Related Aspects of Intellectual Property Rights.²⁹

b.Regional Developments

European Patent Office (EPO)

The European Patent Organization is an intergovernmental organization that was set up on 7 October 1977 on the basis of the European Patent Convention (EPC) signed in Munich in 1973. It has two bodies, the European Patent Office and the Administrative Council, which supervises the Office's activities. The Organisation currently has 34 member states.³⁰ Besides the member states there are some states which recognizes the European Patents such as Albania ,Bosnia and Herzegovina,MK the former Yugoslav Republic of Macedonia and RS Serbia (legal successor of the former State Union of Serbia and Montenegro into the Co-operation and Extension Agreement)³¹

If one ignores the post grant life of a European Patent Application as a set of national patents and distinguishes the European Patent Convention from National Patent Systems in terms of the extra functions and costs the unitary European layer adds to the patent application process; it can be seen that the key benefits reside primarily in cost savings and efficiency but also in issues involving the uniformity and certainty of protection. These are the benefits to be weighed in assessing the worth of harmonization.³²

In one such survey the four most important advantages stressed were that there was a single procedure with a centralized examination, that European wide protection was provided, that the system provided applications which were cheaper than four individual applications and that there was a smooth and simple procedure. This latter point was stressed more by large companies (>500 employees) than smaller ones. The main disadvantage seen by applicants were that the system was too expensive and too slow. In the case of Japanese

²⁹ Dr. Michael Blakeney, Director, Queen Mary Intellectual Property Research Institute, Center for Commercial Law Studies, University of London, London , THE INTERNATIONAL PROTECTION OF INDUSTRIAL PROPERTY: FROM THE PARIS CONVENTION TO THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS (THE TRIPS AGREEMENT) WIPO NATIONAL SEMINAR ON INTELLECTUAL PROPERTY FOR FACULTY MEMBERS AND STUDENTS OF AJMAN UNIVERSITY organized by the World Intellectual Property Organization (WIPO) in cooperation with Ajman University of Science and Technology (AUST), the Association of Arab Universities and the Association of Arab Private Institutions for Higher Education Ajman, May 5 and 6, 2004. Available at http://www.wipo.int/edocs/mdocs/arab/en/wipo_ip_uni_dub_04/wipo_ip_uni_dub_04_1.pdf and last visited on 3-03-2008.

³⁰ Source:- <http://www.epo.org/about-us/epo.html>

³¹ Source:- <http://www.epo.org/about-us/epo.html>

³² Robert Pitkethly ,The European Patent System : Implementing Patent Law Harmonisation,available at <http://www.oiprc.ox.ac.uk/EJWP1099.pdf> Last visited on 03-03-2008

users of the European Patent System a programme of interviews showed that the main benefits are seen to be direct cost savings and the ability to prosecute a single application in English rather than a multitude of applications in a multitude of languages. The potential concentration of risk by using a single application was not seen as significant nor was the loss of variety in patent laws through using a harmonized system.³³

Eurasian Patent Organization (EAPO)

The Eurasian Patent Organization (EAPO) is a regional organization set up by the Eurasian Patent Convention (EAPC). Its task is to grant Eurasian patents. Currently there are 9 member states: Turkmenistan, the Republic of Belarus, the Republic of Tajikistan, Russia, the Azerbaijan Republic, the Republic of Kazakhstan, the Kirghiz Republic, the Republic of Armenia and the Republic of Moldova³⁴.

African Intellectual Property Organization (OAPI)

The OAPI regional system came into being as a result of the Libreville Accord of September 13, 1962 effective 1st January 1964 as revised by the Bangui Accord of 2nd March 1977 and the Regulations made in terms of the revision which were effective the 8th February 1982.³⁵ The Bangui Agreement revising the Libreville Agreement, henceforth legislates patent rights in each of the 16 member states which now make up the OAPI territory. These 16 member states are: Benin ,Burkina Faso ,Cameroon ,Central Africa ,Congo ,Cote d'Ivoire ,Equatorial Guinea ,Gabon ,Guinea ,Guinea Bissau ,Mali ,Mauritania ,Niger ,Senegal ,Chad ,Togo .To date, the OAPI territory covers a surface area of 7.755.967 km square and has about 100 million inhabitants.³⁶

An interesting innovation recently introduced is a provision in terms of which the existing OAPI patent, trademark and design registrations may be extended to new

³³ Robert Pitkethly ,The European Patent System : Implementing Patent Law Harmonisation,available at <http://www.oiprc.ox.ac.uk/EJWP1099.pdf>
Last visited on 03-03-2008

³⁴ Source:- http://en.wikipedia.org/wiki/Eurasian_Patent_Organization

³⁵ Peter JAMES ,REGIONAL PATENT SYSTEMS IN AFRICA available at <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>

³⁶ Website of OAPI,available at <http://www.oapi.wipo.net/en/OAPI/historique.htm> last visited on 03-03-2008.

territories which join the Union. This may be done within 18 months of the date of joining and on payment of an extension fee.³⁷

The provisions furthermore provide for the existing Intellectual Property Rights in new countries joining OAPI to be extended to the other members of the Union.³⁸

An apparently unique feature of OAPI is that the OAPI patent is a single patent which extends to each member country. There is a single Patent Law that is applied by Courts of each country. As such there is no so-called national phase or national patent as is the case of other regional systems.³⁹

The OAPI legislation provides for an action for an infringement of a patent but only where the patentee has exploited the patent in one of the member states within 5 years of the date of Grant unless legitimate reasons for non exploitation can be shown.⁴⁰

African Regional Industrial Property Organization (ARIPO)

ARIPO was mainly established to pool the resources of its member countries in industrial property matters together in order to avoid duplication of financial and human resources.⁴¹

According to Article IV of the Lusaka Agreement, membership to the Organization is open to states members of the United Nations Economic Commission for Africa or the African Union (AU).⁴²

There are currently sixteen states which are party to the Lusaka Agreement and therefore members of ARIPO. These are: Botswana, the Gambia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe (Total: 16 Member States).

The objectives of the Organization, as enshrined in Article III of the Lusaka Agreement, show that, cooperation in industrial property is intended to achieve

³⁷ Peter JAMES ,REGIONAL PATENT SYSTEMS IN AFRICA available at <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>

³⁸ Peter JAMES ,REGIONAL PATENT SYSTEMS IN AFRICA available at <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>

³⁹ Peter JAMES ,REGIONAL PATENT SYSTEMS IN AFRICA available at <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>

⁴⁰ Peter JAMES ,REGIONAL PATENT SYSTEMS IN AFRICA available at <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>

⁴¹ Official website of ARIPO available at <http://www.aripo.org/articles.php?lng=en&pg=12> last visited on 3-3-2008

⁴² Official website of ARIPO available at <http://www.aripo.org/articles.php?lng=en&pg=14> last visited on 3-3-2008

technological advancement for economic and industrial development of the member states.⁴³

An important aspect of the ARIPO system is that at the time of application the applicant must designate which states he wishes the application to extend to.⁴⁴

Contrary to the situation in OAPI in the majority of ARIPO states independent patents are available and hence the ARIPO procedure provides for a National Phase and the granting of National patents is of course similar to some other regional systems such as the European patent system. Swaziland is an exception and it is not possible to apply for an independent application there.⁴⁵

The ARIPO legislation does not provide for infringement proceedings as these are the preserve of the countries in which the patent is operative.⁴⁶

The GCC (Gulf Cooperation Council) Patent Office

The Gulf Cooperation Council (GCC) countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE)) have set up a common patent system.. The Council has set up its Patent Office in Riyadh, Saudi Arabia. The new law came into effect on October 3, 1998.

According to GCC patent regulations once the GCC patent office grants a patent ,all the GCC states recognized that and afford its owner protection.

Infringement rights are subject to a limitation that a GCC patent may not be enforced against anyone, when before the grant of the patent, that person has used the invention or made substantial preparations therefore.

These regional developments simplifies the procedure of obtaining the patent, and provides a cost effective and reliable Patent system to the member countries.

c. Patent Cooperation Treaty (PCT)

⁴³ Official website of ARIPO available at <http://www.aripo.org/articles.php?lng=en&pg=12> last visited on 3-3-2008

⁴⁴ Peter JAMES ,REGIONAL PATENT SYSTEMS IN AFRICA available at <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>

⁴⁵ Peter JAMES ,REGIONAL PATENT SYSTEMS IN AFRICA available at <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>

⁴⁶ Peter JAMES ,REGIONAL PATENT SYSTEMS IN AFRICA available at <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>

Patent is territorial in nature. Patent granted by one country is not recognized by other countries. For protection of invention in a foreign country the application for patent has to be filed and the patent to be granted in that country.

Under the Paris convention route to claim the right of priority the application has to be filed in the foreign country within 12 months from the date of filing in the first country. If the applicant wish to file in multiple countries, he has to do so in all the countries directly within 12 months from the date of first filing. If an applicant files patent applications directly with the foreign patent offices, the applicant will have to prepare patent applications that comply with the particular formalities requirements, (i.e. the size of the paper used, margins requirements, arrangement of the part of the application) of each such office. The formalities requirements can vary from country to country. Accordingly, an applicant wishing to obtain patent protection in a number of different countries may have to prepare different versions of the application for each of those countries. Additionally, the applicant will be required to have the application translated into the other languages if those countries do not accept English as a language of filing. Most foreign patent offices do not allow the applicants to represent themselves during patent prosecution. Therefore, applicants may be required to obtain the services of a patent agent registered to practice before each foreign patent office. As a result, the direct filing of patent applications in multiple countries can be an expensive endeavor.⁴⁷

In order to overcome some of the problems involved in the traditional system, the Executive Committee of the International (Paris) Union for the Protection of Industrial Property invited, in September 1966, BIRPI (the predecessor of WIPO) to undertake urgently a study of solutions to reduce the duplication of the effort both for applicants and national patent Offices. In 1967, a draft of an international treaty was prepared by BIRPI and presented to a Committee of Experts. In the following years, a number of meetings prepared revised drafts and a Diplomatic Conference held in Washington in June 1970 adopted a treaty called the Patent Cooperation Treaty.⁴⁸

ON January 24,1978 the Patent Cooperation Treaty came into force. The number of Contracting States are increasing day by day and had reached one hundred and thirty eight (138) (as on 03-03-2008).⁴⁹

As its name suggests, the Patent Cooperation Treaty is an agreement for international cooperation in the field of patents. It is often spoken of as being the most significant advance in international cooperation in this field since the adoption of the Paris Convention itself. It is, however, largely a treaty for rationalization and cooperation with regard to the filing, searching and examination of patent applications and the dissemination of the technical

⁴⁷ Diana L. Oleksa, *Office of PCT Legal Administration, U.S. Patent & Trademark Office*, THE ADVANTAGES OF USING THE PATENT COOPERATION TREATY available at by http://www.ita.doc.gov/exportamerica/TechnicalAdvice/ta_PCT.pdf last visited on 03-03-2008.

⁴⁸ <http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>

⁴⁹ Come from the website: <http://www.wipo.int/pct/guide/en/gdvol1/annexes/>, 2007-9-14.

information contained therein. The PCT does not provide for the grant of “international patents”: the task of and responsibility for granting patents remains exclusively in the hands of the patent Offices of, or acting for, the countries where protection is sought (the “designated Offices”). The PCT does not compete with but, in fact, complements the Paris Convention. Indeed, it is a special agreement under the Paris Convention open only to States which are also party to the Paris Convention.⁵⁰

Principal objectives of the PCT

1. The principal objective of the PCT is to simplify and to render more effective and more economical—in the interests of the users of the patent system and the Offices which have responsibility for administering it—the previously established means of applying in several countries for protection for inventions.

2 . Patent Cooperation Treaty:

– establishes an international system which enables the filing, with a single patent Office (the “receiving Office”), of a single application (the “international application”) in one language having effect in each of the countries party to the PCT (“designated States”);

-provides for the formal examination of the international application by a single patent Office, the receiving Office;

- subjects each international application to an international search and examination which results in a report citing the relevant prior art (mainly published patent documents relating to previous inventions) which may have to be taken into account in deciding whether the invention is patentable and an opinion as to whether the claimed invention meets certain international criteria of patentability; the report and the opinion are made available first to the applicant and the report is later published;

-provides for centralized international publication of international applications with the related international search reports, as well as their communication to the designated Offices; and

-provides the option of an international preliminary examination of the international application which gives to the Offices that have to decide whether or not to grant a patent, and to the applicant, a report containing an opinion as to whether the claimed invention meets certain international criteria for patentability.

3 . Patent Offices have been struggling for years with heavy work loads (leading to delays) and with questions of how best to allocate resources so as to ensure that the patent system yields the greatest return from the available manpower. Under the PCT system, by the time the international application reaches the designated Office, it has already been examined as to form by the receiving Office, searched by the International Searching Authority and possibly examined by an International Preliminary Examining Authority, thus providing the national patent Offices with the important benefit of reducing their work loads since they have the benefit of these international phase centralized procedures and thus need not duplicate those efforts.

⁵⁰ “Introduction to the PCT System”, available at http://www.wipo.int/pct/en/seminar/basic_1/intro.pdf last visited on 03-03-2008.

4 . Further main objectives of the PCT are to facilitate and accelerate access by industries and other interested sectors to technical information related to inventions and to assist developing countries in gaining access to technology.

The systems of International Search Reports (ISRs) and International Preliminary Examination Reports (IPERs) under the PCT can be considered as part of the efforts towards elimination of duplicate work. The PCT is expected to grow into a more useful system through the reform currently discussed. With the PCT system alone, however, the critical situation that IP Offices are facing in recent years can't be overcome.⁵¹

There are some drawbacks in the PCT system too. PCT requires national phase prosecution, the application has to be processed in each designated/elected states. So the specification has to be amended as per the requirements of the designated /elected states, but PCT allows only one specification with the International application. It does not regulate the substantive aspect of the patent laws. So applications pertaining to one international application are subjected to different substantive test with regard to patentability in different states. The contracting states are not bound by the preliminary examination report of the international preliminary examining authority. So there are duplication of work in the patent offices, which increases unnecessary workload.⁵² Further PCT does not allow multiple or top up searching. There is also no mechanism to control the quality of the international search and international preliminary examination report. A poor search or poor examination can have disastrous consequences for the applicant, and can increase the workload at the national offices, or alternatively, result in the grant of overly broad patents. This is problematic for both the applicant and for third parties. One of the major problems of PCT is the length of time it allows between filing a priority application and commencing national phase processing. This provides a long period of uncertainty for third parties. This problem is exacerbated by the lack of any central searchable database that provides third parties with information regarding national phase entry.

The disadvantages cited above necessitates the substantive harmonization of the Patent systems.

d. Draft Patent Harmonization Treaty 1991

In response to international calls for harmonization of national and regional patent laws, negotiations had started, as early as 1985, on a draft Treaty Supplementing the Paris Convention as far as Patents are Concerned (hereafter referred to as

⁵¹ Shinjiro Ono, deputy commissioner of JPO: "Substantive Patent Harmonization and Japan's Stance", Website: www.law.washington.edu/CASRIP/Symposium/, 2007-5-23.

⁵² See:-Charles Pearson, Director, Office of PCT Legal Administration, United States Patent and Trademark Office, 'The PCT, Patent Law Harmonization, and the Future of International Patenting' available at <http://www.wmitchell.edu/lectures/pct+symposium/resources/Charles+Pearson.pdf> last visited on 4-3-2008 .

“draft Patent Harmonization Treaty 1991”), which was discussed at the first part of a Diplomatic Conference in 1991, but never concluded.⁵³

The draft Patent Harmonization Treaty of 1991 included substantive as well as formal aspects of patent law.

This first failed as a result of many North-South divergences as well as of some key disagreements among developed countries. While developing countries were reluctant to accept treaty rules that would erode their capacity to design national patent regimes, the United States also decisively contributed to the collapse of negotiations. United States was under pressure to give up its ‘first to file’ system. It considered, however, that the negotiating package offered little in exchange for the abandonment of such system. In its view, a ‘balanced package’ would have to include, inter alia, a grace period, generally opposed in Europe.⁵⁴

The failure of the 1980’s WIPO’s substantive harmonization attempt, however, turned out soon into a resonant success for the proponents of higher and more uniform standards of patent law. Some of its provisions, for instance those on patentable subject matter, rights conferred, term of protection and reversal of burden of proof for process patents, were incorporated into the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), concluded in 1994.⁵⁵

Nevertheless, a number of issues in respect of national and regional patent law have neither been addressed by the TRIPS Agreement, nor by any other worldwide international treaty on patent law, in particular not by the recently adopted PLT, which covers only patent formalities. For the sake of completeness, it should be added that important steps in respect of such harmonization have been achieved in the framework of certain regional systems, such as the European Patent Organization (EPO), the Eurasian Patent Organization (EAPO), the African Regional Industrial Property Organization (ARIPO) and the Organization africaine de la propriété intellectuelle (OAPI), as well as through the

⁵³ *Document prepared by the International Bureau, “SUGGESTIONS FOR THE FURTHER DEVELOPMENT OF INTERNATIONAL PATENT LAW”, STANDING COMMITTEE ON THE LAW OF PATENTS, Fourth Session, Geneva, November 6 to 10, 2000* available at http://www.wipo.int/edocs/mdocs/scp/en/scp_4/scp_4_2.pdf last visited on 04-03-2008.

⁵⁴ Carlos M. Correa, University of Buenos Aires, AN AGENDA FOR PATENT REFORM AND HARMONIZATION FOR DEVELOPING COUNTRIES, available at http://www.wipo.int/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf last visited on 04-03-2008.

⁵⁵ *Document prepared by the International Bureau, “SUGGESTIONS FOR THE FURTHER DEVELOPMENT OF INTERNATIONAL PATENT LAW”, STANDING COMMITTEE ON THE LAW OF PATENTS, Fourth Session, Geneva, November 6 to 10, 2000* available at http://www.wipo.int/edocs/mdocs/scp/en/scp_4/scp_4_2.pdf last visited on 04-03-2008.

harmonization of national laws within certain regional systems, as for instance the Andean Pact.⁵⁶

Moreover, soon after the failure of the substantive Treaty initiative, WIPO revived the patent harmonization process, albeit limited to procedures and formalities for patent applications. On June 2, 2000, the Patent Law Treaty (PLT) was signed by 43 countries, with the support of the United States and the European Patent Office.⁵⁷

e.The Trade-Related Aspects of Intellectual Property Rights (TRIPS)

The TRIPS Agreement, which came into effect on 1 January 1995, is to date the most comprehensive multilateral agreement on intellectual property.⁵⁸ TRIPS agreement provides a global frame work for mandatory implementation of minimum standards of intellectual property protection.

The three main features of the Agreement are⁵⁹:

- Standards. TRIPS Agreement sets out the minimum standards of protection to be provided by each Member. Each of the main elements of protection is defined, namely the subject-matter to be protected, the rights to be conferred and permissible exceptions to those rights, and the minimum duration of protection.
- Enforcement. The second main set of provisions deals with domestic procedures and remedies for the enforcement of intellectual property rights.
- Dispute settlement. The Agreement makes disputes between WTO Members about the respect of the TRIPS obligations subject to the WTO's dispute settlement procedures.

In addition to the above features the TRIPS provides certain basic principles which include inter-alia the `principle of national treatment`, `the principle of most favoured nation treatment`, `Protection of Existing Subject Matter`, `non mandatory limited remedies for acts which become infringing as a result of the implementation of the Agreement and which were commenced, or in respect of

⁵⁶ *Document prepared by the International Bureau, "SUGGESTIONS FOR THE FURTHER DEVELOPMENT OF INTERNATIONAL PATENT LAW", STANDING COMMITTEE ON THE LAW OF PATENTS, Fourth Session, Geneva, November 6 to 10, 2000 available at http://www.wipo.int/edocs/mdocs/scp/en/scp_4/scp_4_2.pdf last visited on 04-03-2008.*

⁵⁷ Carlos M. Correa, University of Buenos Aires, AN AGENDA FOR PATENT REFORM AND HARMONIZATION FOR DEVELOPING COUNTRIES, available at http://www.wipo.int/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf last visited on 04-03-2008.

⁵⁸ Overview: the TRIPS Agreement, available at http://www.wto.org/english/tratop_e/TRIPS_e/intel2_e.htm last visited on 04-03-2008.

⁵⁹ *ibid*

which a significant investment was made, before the date of acceptance of the Agreement, no obligation to restore protection to subject matter which has fallen into the public domain and applications for protection of intellectual property rights which are pending on the date of application of the Agreement may be amended to claim any enhanced protection provided under the Agreement, but such amendments may not include new matter⁶⁰

Further it provides some general rules to ensure that procedural difficulties in acquiring or maintaining IPRs do not nullify the substantive benefits that should flow from the Agreement. The obligations under the Agreement will apply equally to all Member countries, but developing countries will have a longer period to phase them in. Special transition arrangements operate in the situation where a developing country does not presently provide product patent protection in the area of pharmaceuticals.⁶¹

The TRIPS Agreement requires Member countries to make patents available for any inventions, whether products or processes, in all fields of technology without discrimination, subject to the normal tests of novelty, inventiveness and industrial applicability. It is also required that patents be available and patent rights enjoyable without discrimination as to the place of invention and whether products are imported or locally produced (Article 27.1).⁶²

However TRIPS does not set the standard or define novelty, inventiveness or industrial applicability. So the definition of above three basic criteria of patentability vary from country to country.

There are flexibilities provided to the member countries to exclude inventions contrary to *ordre public* or morality; which explicitly includes inventions dangerous to human, animal or plant life or health or seriously prejudicial to the environment. The use of this exception is subject to the condition that the commercial exploitation of the invention must also be prevented and this prevention must be necessary for the protection of *ordre public* or morality TRIPS (Article 27.2).⁶³

⁶⁰ Source:-

http://www.wipo.int/edocs/mdocs/arab/en/wipo_ip_uni_dub_04/wipo_ip_uni_dub_04_1.pdf and last visited on 3-03-2008.

⁶¹ Overview: the TRIPS Agreement, available at http://www.wto.org/english/tratop_e/TRIPS_e/intel2_e.htm last visited on 04-03-2008.

⁶² Overview: the TRIPS Agreement, available at http://www.wto.org/english/tratop_e/TRIPS_e/intel2_e.htm last visited on 04-03-2008.

⁶³ Overview: the TRIPS Agreement, available at http://www.wto.org/english/tratop_e/TRIPS_e/intel2_e.htm last visited on 04-03-2008.

There The second exception is that Members may exclude from patentability diagnostic, therapeutic and surgical methods for the treatment of humans or animals (Article 27.3(a)).⁶⁴

The third is that Members may exclude plants and animals other than micro-organisms and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, any country excluding plant varieties from patent protection must provide an effective *sui generis* system of protection. Moreover, the whole provision is subject to review four years after entry into force of the Agreement (Article 27.3(b)).⁶⁵

Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties (Article 30).⁶⁶

f. Standing Committee on the Law of Patents

In the year 1998 the Standing Committee on the Law of Patents (SCP) was created. Since then it has been serving as a forum to discuss issues, facilitate coordination and provide guidance concerning the progressive international development of patent law⁶⁷.

The Committee is composed by all Member States of WIPO and/or of the Paris Union, and, as observers, certain Member States of the UN non-members of WIPO and/or Paris Union, as well as a number of intergovernmental and non-governmental organizations.

Since its establishment, the SCP has been working on the international harmonization of patent law.

The Patent Cooperation Treaty (PCT), which has established a system for the filing of international patent applications having the same effect as national applications filed in each of the PCT Contracting States designated in the

⁶⁴ Overview: the TRIPS Agreement, available at http://www.wto.org/english/tratop_e/TRIPS_e/intel2_e.htm last visited on 04-03-2008.

⁶⁵ Overview: the TRIPS Agreement, available at http://www.wto.org/english/tratop_e/TRIPS_e/intel2_e.htm last visited on 04-03-2008.

⁶⁶ Overview: the TRIPS Agreement, available at http://www.wto.org/english/tratop_e/TRIPS_e/intel2_e.htm last visited on 04-03-2008.

⁶⁷ <http://www.wipo.int/patent-law/en/scp.htm>

international application, contains a number of principles of substantive patent law applicable to the international phase provided under the PCT. However, it may also be noted that PCT Article 27(5) allows a Contracting State to apply any substantive conditions of patentability as it desires during the national phase.

After the adoption by a Diplomatic Conference on June 1, 2000, of the Patent Law Treaty (PLT), which harmonizes and streamlines formal procedures in respect of national and regional patent applications and patents, the need for patent law harmonization going beyond formalities led WIPO's Standing Committee on the Law of Patents (SCP) to decide to initiate work on harmonization of substantive patent law⁶⁸.

g. Patent Law Treaty (PLT)

The main achievement of the SCP in the recent past was the negotiation of the Patent Law Treaty (PLT) and its Regulations on patent formalities and procedures.

The patent law treaty was adopted by a Diplomatic Conference on June 1, 2000.

Patent Law Treaty (PLT) harmonizes and streamlines formal procedures in respect of national and regional patent applications and patents. It makes the formal procedures more user-friendly.

“With the significant exception of the filing date requirements, the PLT provides maximum sets of requirements, which the Office of a Contracting Party may apply. This means that a Contracting Party is free to provide for requirements that are more generous from the viewpoint of applicants and owners, but are mandatory as to the maximum that an Office can require from applicants or owners.”⁶⁹

The Treaty contains, in particular, provisions on the following issues:

- Requirements for obtaining a filing date-

Three absolute requirements were standardized for the applicant to obtain the filing date,

1. an indication that it is an application for a patent for an invention
2. identification that would allow the office to identify or to contact the applicant.; however, a Contracting Party is allowed to require indications on both.
3. a part which appears to be a description,

- A standardized set of formal requirements including the requirements relating to form or contents of international applications under the PCT, including the contents of the PCT request Form and the use of that request

⁶⁸ Retrieved from <http://www.wipo.int/patent-law/en/harmonization.htm>

⁶⁹ Retrieved from http://www.wipo.int/treaties/en/ip/plt/summary_plt.html

Form accompanied by an indication that the application is to be treated as national application. This will eliminate or reduce procedural gaps between national, regional and international patent systems;

- The establishment of standardized Model International Forms was agreed upon, which will have to be accepted by the Offices of all Contracting Parties;
- Simplified procedures before the patent Offices, which will contribute to a reduction of costs for applicants as well as for the Offices.
- The PLT provides procedures for the avoidance of unintentional loss of substantive rights as a result of the failure to comply with formality requirements or time limits. These include the obligation of Offices to notify the applicant or other concerned person, extension of time limits, continued processing, reinstatement of rights and restrictions on revocation / invalidation of a patent for formal defects, where they were not noticed by the Office during the application stage;
- The implementation of electronic filing is facilitated, while ensuring the co-existence of both paper and electronic communications. The PLT provides that Contracting Parties are allowed to exclude paper communications and to fully switch to electronic communications after June 2, 2005. However, even after that date, they will have to accept paper communications for the purpose of obtaining a filing date and for meeting a time limit. In this connection, the Agreed Statement stipulates that industrialized countries will continue to furnish support to developing countries and countries in transition for the introduction of electronic filing.

The PLT was concluded on June 1, 2000, and is open to States members of WIPO and/or States parties to the Paris Convention for the Protection of Industrial Property. It is also open to certain intergovernmental organizations. Instruments of ratification or accession must be deposited with the Director General of WIPO. The PLT entered into force on April 28, 2005. It has come into force in 17 contracting states including UK (as on 4thmarch2008).⁷⁰

Patent law treaty explicitly excludes the substantive provisions.⁷¹ The patent application has to be prosecuted in contracting states according to their substantive requirements for patent.

h.Substantive Patent Law Treaty

⁷⁰ Source:- http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=4

⁷¹ Article 2(2) of the PLT.

In November 2000, the SCP, at its fourth session, agreed that first draft provisions for a future legal instrument should focus initially on a number of issues of direct relevance to the grant of patents, in particular, the definition of prior art, novelty, inventive step/non-obviousness, industrial applicability/utility, the drafting and interpretation of claims and the requirement of sufficient disclosure of the invention. The SCP further agreed that other issues related to substantive patent law harmonization, such as first-to-file versus first-to-invent systems, 18-month publication of applications and a post-grant opposition system, would be considered at a later stage.⁷²

Discussions on the draft Substantive Patent Law Treaty (SPLT) started at the fifth session of the SCP in May 2001.⁷³

The discussions focus on issues of direct relevance to the grant of patents, in particular, the definition of prior art, novelty, inventive step/non-obviousness, industrial applicability/utility, the drafting and interpretation of claims and the requirement of sufficient disclosure of the invention.

The SCP further agreed that other issues related to substantive patent law harmonization, such as first-to-file versus first-to-invent systems, 18-month publication of applications and a post-grant opposition system, would be considered at a later stage.⁷⁴

At its sixth session, in November 2001, the SCP discussed revised draft provisions and agreed on an approach to establishing a seamless interface between the SPLT, the PLT and the Patent Cooperation Treaty (PCT). It also agreed, based on a proposal by the Delegation of the United States of America, to create a Working Group on Multiple Invention Disclosures and Complex Applications. The Working Group received the mandate to address, in particular, issues regarding 'unity of invention'; "the linking of claims", "the number of claims", "the requirement of "clear and concise" claims" and "special procedures to treat complex applications, such as mega-applications or large sequence listings".

The SCP also decided that the Working Group would report the results of its discussions and make suggestions to the SCP. During the seventh and eighth sessions, the Working Group on Multiple Invention Disclosures and Complex Applications continued its discussions on the above mentioned issues.

During the seventh, eighth and ninth sessions of the SCP, held from May 6 to 10 and November 25 to 29, 2002, and May 12 to 16, 2003, further revised drafts of the SPLT were discussed. Following proposals by a number of delegations, the contents of the draft SPLT was progressively broadened. While the SCP agreed in principle on a number of issues, such as the scope of the SPLT, the right to a patent, novelty, inventive step/non-obviousness or the requirement of sufficient disclosure, some provisions, such as patentable subject matter or the exceptions to patentability, raised concerns about the available flexibility in respect of national

⁷² Source-<http://www.wipo.int/patent-law/en/harmonization.htm>

⁷³ <http://www.wipo.int/patent-law/en/scp.htm>

⁷⁴ <http://www.wipo.int/patent-law/en/scp.htm>

policies, recognized under current international treaties. Further, delegations expressed different views with respect to disclosure of the origin of genetic resources and associates traditional knowledge in patent applications where the claimed invention was derived from, or based on, such genetic resources or traditional knowledge.

Following these developments, at the tenth session of the SCP, held from May 10 to 14, 2004, the United States of America, Japan and the European Patent Office submitted a joint proposal designed to focus on an initial package of priority items including the definition of prior art, grace period, novelty and inventive step. According to the proposal, once international agreement was reached on those prior art related issues, discussions in the SCP could then focus on other issues. While this proposal obtained the support of a number of delegations, a number of other delegations opposed it, and emphasized the need to examine all the provisions of the current draft as a whole.

A proposal corresponding, in essence, to the one submitted to the tenth session of the SCP was submitted to the WIPO General Assemblies in September-October 2004 by the United States of America and Japan. In conclusion, the WIPO General Assembly adopted a statement which read as follows:

"(i) The General assembly considered the proposal submitted by the Delegations of Japan and the United States of America (document WO/GA/31/10). No consensus has been reached thereon.

"(ii) It was decided that the date of the next Standing Committee on the Law of Patents (SCP) should be determined by the Director General following informal consultations that he may undertake."

Consequently, the Director General convened informal consultations concerning future sessions of the SCP in Casablanca, Morocco, on February 16, 2005. The consultations were attended by delegates from Brazil, Chile, China, France, Germany, India, Italy, Japan, Malaysia, Mexico, Morocco, Russian Federation, Switzerland, United Kingdom, United States of America, the African Regional Industrial Property Organization (ARIPO), the Eurasian Patent Office (EAPO), the European Patent Office (EPO), the African Intellectual Property Organization (OAPI) and the European Union (EU). At the end of the meeting, the participants, excepting the delegate from Brazil, adopted a statement recommending the Director General to address the following six issues in an accelerated manner within WIPO: prior art, grace period, novelty, inventive step, sufficiency of disclosure and genetic resources. These issues should be addressed in parallel, accelerated process, the first four issues (prior art, grace period, novelty and inventive-step) in the SCP and the other two issues (sufficiency of disclosure and genetic resources) in the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC). The meeting also underlined the importance of the continued active pursuit of discussions and work within WIPO on issues related to development and intellectual property so that a robust, effective and actionable WIPO Development Agenda could emerge.

The Director General submitted this recommendation to the SCP at its eleventh session, held on June 1 and 2, 2005. The Delegation of Brazil, on behalf of the

"Friends of Development," submitted a statement proposing the continuation of negotiations of the draft SPLT on the basis of the draft treaty as a whole and of other issues, such as provisions on the transfer of technology, anti-competitive practices, safeguarding of public interest flexibility as well as specific clauses on principles and objectives. While delegations recognized the importance of the work of the SCP and emphasized that the work on patent law harmonization should progress taking into account the interests of all parties, they did not reach agreement as to the modalities and scope of the future work of the Committee.

1.4 - Diversities in national laws on various aspect of Patenting

a. First-To-File vs. First to Invent

Currently United States of America has the unique system of first to invent system⁷⁵ of filing where as rest of the world follows the first to file system.

The first to file system has the advantages of legal certainty regarding to the right to obtain the patent. Whoever file first for the same invention will get the patent, which makes easy for the patent office to award the patent.

However in case of the First to invent system a cumbersome, time consuming and costly proceeding called "interference proceeding" is required to decide who invented first⁷⁶

Incase of first to file system the prior art is considered to be the disclosure available to the public before the filing date, where as in case of first to invent system the cut off date is the date of invention, which is often decided by the interference proceeding.

However the first to invent system has certain benefit. It has built in within it a grace period of one year from the date of invention to the date of filing of application. This period allows the inventor to work further on the invention for modification or improvement and finding the best method before filing the application for patent. Further during this period the inventor can disclose the invention for technical and financial negotiations without loosing the right to patent.⁷⁷

⁷⁵ At the end of 1997, there were two nations that used the first-to-invent system: the United States and the Philippines. Effective January 1, 1998, under its Republic Act No. 8293, the Philippines adopted a first-to-file system, leaving the United States alone in the world in adhering to a first-to-invent system. Source:- http://papers.ssrn.com/sol3/papers.cfm?abstract_id=841404

⁷⁶ Stephen Albainy-Jenei, in an article, 'United States: Patent Reform: What Does First-To-File Mean To Me?' 20 February 2008 available at <http://mondaq.com/article.asp?articleid=57298&login=true> last visited on 5-3-2008.

⁷⁷ *ibid*

However Section 3 of the Patent Reform Act of 2007 if comes to effect, will bring the first inventor to file system instead of first to invent system. Where in incase of any dispute arises regarding the true inventor, the matter will be resolved through derivation proceeding..

b. Grace Period:

The concept of granting temporary protection to the patentable invention in respect of goods exhibited at official or officially recognized international exhibitions *held in the territory in any of them* found in Article 11 of the Paris Convention.

'The concept of non-prejudicial disclosures has been worked out in many varieties, which can be distinguished in three categories in the case of which national laws grant a so-called "grace period":

a) The first category is that of a display of the invention at an exhibition by the inventor or by a third party with the agreement of the inventor ("non-prejudicial disclosure at an exhibition"). This category got its obligatory enactment by the parties of the Paris Convention.

b) The second category is that of an unlawful disclosure of the invention by a third party, based on lawfully or unlawfully acquired information ("unlawful non-prejudicial disclosure"). This category is frequently called "disclosure in consequence of an abuse." Examples are theft of objects containing information on the invention or violation of a promise to keep the invention secret.

c) The third category is that of a disclosure of the invention by the inventor or lawful disclosure by a third party of a kind not covered by (a) or (b) ("lawful non-prejudicial disclosure other than at an exhibition"). Examples are disclosure by publication in the form of a scientific article or a lecture or by public use (in particular, use made in order to test the invention). The grace period for this category is often referred to as "the general grace period".⁷⁸

In first to invent system as in US, the grace period is inbuilt. However in first to file system the need of grace period is felt. Japan vide section 30 of its patent law provides the grace period for six months (all the 3 types mentioned above). EPO vide EPC article 55 provided the grace period for six months but limited to first two types only.

India provides a grace period of 12 months but limited to first two types only. (refer Annexure 1).

The application of a grace period (admitted in the USA and in many other countries) has raised a significant controversy between the USA and European countries, where such period is not provided for. It expands the scope for patenting, as inventions disclosed during that period would be eligible for

⁷⁸ Jan E.M. Galama, Philips International B.V., Corporate Intellectual Property Eindhoven – NL, EXPERT OPINION ON THE CASE FOR AND AGAINST THE INTRODUCTION OF A GRACE PERIOD IN EUROPEAN PATENT LAW. Submitted on request of the European Patent Organization available at <http://www.european-patent-office.org/news/pressrel/pdf/galama.pdf> last visited on 05-03-2008.

protection, notwithstanding that they would have been deemed in the prior art in accordance with the general rule on novelty. During the harmonization process in the mid 1980's, the resistance to recognize a grace period was one of the main reasons for the US withdrawal of support to the process, and a key trade-off sought by the United States for changing its 'first to invent' rule⁷⁹.

c. Prior art

Prior art consideration is the fundamental to the patent system. The prior art refers to the knowledge available to the public before the filing date/ priority date in case of first to file system and refers to the knowledge available to the public preceding the moment when the invention occurred in the first to invent system. However in case of Japan the word "prior" refers to the time period preceding the moment of filing of the patent application.⁸⁰

The laws regarding the prior art differs from country to country. When EPO and JAPAN follow the absolute standard, which means disclosure any where in any form before the filing date will be considered as prior art, US, China, India and some other countries follow a blended or relative standard, which means written disclosure any where but oral or other form of disclosure within its territory only will be considered as prior art. It simply indicates that the US law does not recognize the traditional/indigenous knowledge as prior art. A herbal composition which might have been in use in India may get a patent in US. Though India adopts a blended standard it limits the scope of patentability of an invention, which is anticipated, in so far as claimed in the complete specification, as there might be knowledge, oral or otherwise, available within any local or indigenous community in India or elsewhere.⁸¹

There is another provision typical to US law. The §102(e) which gives rise to Hilmer doctrine⁸². this doctrine does not give benefit of an earlier filing date to the

⁷⁹ See Carlos M. Correa, University of Buenos Aires, Paper prepared for the Bellagio Dialogue on "Intellectual Property and Sustainable Development: Revising the agenda in a new context", 24 – 28 September 2005, Bellagio, Italy available at http://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf

⁸⁰ Section 29 of the Japan Patent Law

⁸¹ Section 25 (1) (k) and section 64(1)(q) of the *Indian Patent Act*.

⁸² In *Hilmer I*, the CCPA held that a patent's 35 USC 119 foreign priority right does not provide 35 USC 102(e) prior art effect to that patent as of the patent's foreign priority application's filing date. In *In re Hilmer*, 424 F.2d 1108, 165 USPQ 255 (CCPA 1970) (Rich, J.) (hereinafter "*Hilmer II*"), the CCPA held that a 35 USC 119 foreign priority right does not provide 35 USC 102(g) prior art effect to that patent as of the patent's foreign priority application's filing date. Richard A. Neifeld, *Viability of the Hilmer Doctrine*,

available at <http://www.neifeld.com/hilmer.html> last visited on 07-03-2008.

priority date for the application filed in the first country. According to this doctrine the application will have the prior art effect on the date of filing in US only. However if the Patent Reform Bill of 2007 comes in to force the existing inequality in treatment between US applications and foreign applications arising from §102(e) will be abolished.

There is also debate whether the secret prior art or disclosure in pending application will be considered as prior art for assessing inventive step or not. US consider the secret prior art or conflict application for inventive step assessment. The prior art effect of certain applications should not be restricted to novelty, but should apply also to inventive step in order to prevent the granting of multiple patents for inventions which were not patentably distinct.⁸³

While assessing even the novelty some country consider the whole content of the prior application (US,EPO,Japan)and some just compare the claims of later to the claims of earlier to check if the claims are coterminus (India).

There is discussion regarding inclusion of the prior secret commercial use or offer for sale without disclosure of the invention by the applicant or patentee in the prior art. According to US prior secret commercial use and offer for sale by the applicant should be included in prior art, in order to prevent an inventor from extending his exclusive rights by not disclosing his invention.⁸⁴

There is also discussion regarding the inclusion of admissions of prior art by the applicant contained in the application on its filing date into prior art.⁸⁵

There are also some issues regarding consideration of the disclosure of the information on digital media such as internet. Japan has incorporated in its law section 29(1)(iii)⁸⁶to deal with the disclosure over electric telecommunication lines.EPO deals with such type of disclosure in a way similar to oral disclosure. The disclosure of information on digital media is typical due to its volatile or transient nature.The content can be changed easily and it is very difficult to ascertain the date of publication or the date of modification of such information. JPO has a well detailed examiner's guidelines to handle with disclosure of such nature.⁸⁷

⁸³ Source:SCP/10/11,ORIGINAL:English.June 1, 2005, standing committee on the law of patents.Tenth Session, Geneva, May 10 to 14, 2004,available at www.wipo.int

⁸⁴ *ibid*

⁸⁵ *ibid*

⁸⁶ Patent Law Section 29 (1) reads:

“Any person who has made an invention which is industrially applicable may obtain a patent therefore, except in the case of the following inventions:

.....
(iii) inventions which were described in a distributed publication or made available to the public through electric telecommunication lines in Japan or elsewhere prior to the filing of the patent application. Available at http://www.jpo.go.jp/cgi/linke.cgi?url=/quick_e/quick_tokkyo.htm [retrieved on 07-03-2008],

⁸⁷ *ibid*

The definition of prior art is the foundation of our patent system and without common ground and definition on this matter we will not be able to reach a sufficient level of harmonization in other areas⁸⁸.

d. Novelty

TRIPS agreement does not define the standard for novelty, so member countries adopt their own standard. Japan and EPC adopts the universal novelty standard. where as US, China and India adopt a blended or relative standard. New Zealand adopts a local novelty standard. In deciding the novelty what constitutes prior art is important.

Some times the claimed invention is not found *expresis verbis* in a document but may be derived there from. The patent offices have different approaches for the above issue⁸⁹. There are also issues regarding selection patent and inherent disclosure.

It is better for the countries having rich traditional knowledge to adopt universal standard, which may help them to protect their biodiversity and traditional knowledge from misappropriation.

In deciding the novelty the time frame is an interesting issue. According to PCT regulations Rule 34, the minimum documentation with regard to national patent documents includes searches in patent documents issued in a number of countries from 1920 and forward. This time limit is of course a practical measure, but maybe we should consider the possibility of addressing the time limit in a different way. For instance when searching for material regarding novelty to be considered in the field of wind mills the timeframe of 1920 is not sufficient, the same goes for other areas patent activity where the technology used have roots back in time. A different approach to the novelty issue in this regard would also allow or even dictate the inclusion of any traditional knowledge existing in the field of interest.⁹⁰

⁸⁸ Anne Rejnhold Jørgensen in her Speech at the Open Forum Open Forum on the draft Substantive Patent Law Treaty (SPLT) March 1 – 3, 2006 available at http://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_jorgensen.pdf
Downloaded on 12feb2008

⁸⁹ See Carlos M. Correa, University of Buenos Aires, Paper prepared for the Bellagio Dialogue on “Intellectual Property and Sustainable Development: Revising the agenda in a new context”, 24 – 28 September 2005, Bellagio, Italy available at http://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf

⁹⁰ Anne Rejnhold Jørgensen in her Speech at the Open Forum Open Forum on the draft Substantive Patent Law Treaty (SPLT) March 1 – 3, 2006 available at http://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_jorgensen.pdf

Another typical issue which may arise due to first to file system is that when two or more applications relating to same invention is filed on the same date. As per the Japanese patent law section 39(2) only one such applicant agreed upon after mutual consultation among all the applicants, may obtain a patent for the invention. If no agreement is reached or no consultation is possible, none of the applicants shall obtain a patent for the invention.

Further if the claimed subject matter is anticipated by a disclosure made on the date of filing, the provisions in the patent laws of many countries are silent on it and the disputer will be left to the court to decide. However Japan Patent law use the phrase "prior to filing" which takes care of the situation⁹¹. On this issue the time of disclosure will be important. As the patent offices are adopting the e_filing system there are greater probability of such occurring.

e. Inventive Step

The purpose of the inventive step criteria is to prevent the continual development of technology, based on normal skill of the expert or artisan, from being impeded by monopoly rights.⁹²

TRIPS agreement does not also define the standard for inventive step. The member countries are free to have their own standards. One of the main issue in deciding the inventive step is whether the secret prior art (conflict application) should be taken in to consideration or not. US is the only country which consider secret prior art (conflict application) as prior art for deciding the unobviousness. In a patent system one patent should be distinct from the other by inventive step. In my opinion secret prior art or conflicting applications should be considered as prior art in deciding the inventive step.

Though the law concerning inventive step of different countries are similar the methods adopted in assessing the inventive step vary. The US apply the graham approach EPC adopt the "problem-and-solution approach".

Patent protection should only be provided for inventions that are truly innovative inventions and will enrich the present state of the art beyond the obvious. The legal patent requirements which we establish in relation to inventive step play a decisive role. If protection is granted for trivial developments or for inventions where the patent claims are inappropriately broad, such patents would impede rather than support new developments. Such an inflation of industrial property

Last visited on 12feb2008

⁹¹ Japan Patent Law section 29.

⁹² Ian Muir, Mathias Brandi-Dohrn, Stephan Gruber, European Patent Law, Law and Procedure under the EPC and PCT, Second Edition, OXFORD university press, Page.189.

rights will lead to increased research costs and obstruct competition unnecessarily.⁹³

A high standard for inventive step is essential to minimize the patent strategies aimed at blocking real competition and follow on innovation. These strategies can be especially harmful to new and growing economies⁹⁴.

It may be argued that a low inventive step may be a wise policy as it might allow domestic companies to acquire patents. However, there is no justification for detracting knowledge from the public domain whether patents are applied for by domestic or foreign companies. Moreover, while domestic companies may seldom resort to patent protection due, *inter alia*, to high enforcement costs, large foreign companies (e.g. in the pharmaceutical sector) are well prepared not only to patent inventions but eventually to invent patents. Such companies often apply for a large number of patents merely to discourage or prevent competition.⁹⁵ Here is an excerpt from the interview⁹⁶ of Prof. Dr. Goddar⁹⁷ to three JPO examiners who went to EPO for the Examiner Exchange On October 24th, 2006, “Well, I think the following, based on many experiences. My personal belief is that the level for inventive step required by the JPO and the GPTO is similar and it would be on about this level here (Prof. Dr. Goddar was pointing, when saying this, to a level of about 80 – 90 of a scale of 0 – 100, with “100” marking the absolutely highest level of inventiveness) – same requirement for inventiveness by JPO and by GPTO. The European Patent Office (EPO) is probably here (Prof. Dr. Goddar was pointing, when saying this, to a level of about 60 of the aforementioned scale) – a lower degree of inventiveness is probably necessary there. Why this is so, is explained below. The USPTO’s requirements for inventiveness are even lower, however, like here (Prof. Dr. Goddar was pointing, when saying this, to a level of about 40 of the

⁹³ See Carlos M. Correa, University of Buenos Aires, Paper prepared for the Bellagio Dialogue on “Intellectual Property and Sustainable Development: Revising the agenda in a new context”, 24 – 28 September 2005, Bellagio, Italy available at http://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf

⁹⁴ Ibid

⁹⁵ See Carlos M. Correa, University of Buenos Aires, Paper prepared for the Bellagio Dialogue on “Intellectual Property and Sustainable Development: Revising the agenda in a new context”, 24 – 28 September 2005, Bellagio, Italy available at http://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf

⁹⁶ The full interview available at <http://www.tokugikon.jp/gikonshi/245kiko2e.pdf>

⁹⁷ Heinz Goddar

A German Patent Attorney and European Patent and Trademark Attorney. Partner of Boehmert & Boehmert and of Forrester & Boehmert, with his office at Munich. Technical background (as well as PhD degree) in physics and physical chemistry. Before his career as a patent attorney Assistant of Professor at the Polymer Department of the University of Mainz, Germany. The full interview available at <http://www.tokugikon.jp/gikonshi/245kiko2e.pdf>

aforementioned scale). For applicants, wherefore, there is no problem with fulfilling of the inventive step requirements in the United States: Pretty low standard, unfortunately, which means that a lot of junk patents flood the market. Very, very big problem for the industry, particularly for small enterprises, in the United States: It is so difficult and expensive to fight the validity of patents, big problem! In my personal experience, I can say of the USPTO – rather low, EPO - a lot higher, GPTO, probably still higher, and same level, possibly, the JPO.` The above interviews reflect the view of the user of the system regarding the standard of inventive step adopted by US,EPO and JAPAN.

f.Industrial applicability

Though this criteria appears to have a simple interpretation,the meaning of industries are differently interpreted in different countries. Not long ago "industrial application" was generally understood to mean something like "an application in the automated production of material goods". While in the English language the word "industry" has acquired a very broad sense, including the "software industry", the "sex industry" and the "patent industry", in other languages such as French it is still restricted to its traditional meaning, and this has been upheld in court judgements where software was not deemed to be patentable, because it did not constitute the inventive part of an industrial production process (see the Schlumberger case).⁹⁸ In the draft SPLT Article 12(4) the presence of three alternatives indicates the dissimilarities in the mindset of different countries regarding this criteria of patentability.

g. Enabling disclosure

As the patent is a right granted to the inventor or the assignee of the inventor in lieu of the disclosure of the invention, the disclosure should be set forth in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art.

The Japanese Patent Law stipulation about full disclosure of specification is “in a manner sufficiently clear and complete for the invention to be carried out by a person having ordinary skill in the art to which the invention pertains”⁹⁹. It is totally the same as Art 26 subsection 3 of Chinese Patent Law. American Patent Law also has the same stipulation (The 35 U.S.C. 112).¹⁰⁰

⁹⁸ Available at <http://eupat.ffii.org/papri/wipo-splt01/index.en.html>

⁹⁹ See the Japanese Patent Law Article 36(4). Source:- FENG XIAOBING.THE HARMONIZATION OF THE PATENT SYSTEM. A Global patent System Is Possible or Impossible?,available at <http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>

¹⁰⁰ Source:- FENG XIAOBING.THE HARMONIZATION OF THE PATENT SYSTEM.

However The US law require the disclosure of the best mode of operation. Section 10 (4)(of the Indian Patent law requires applicants to declare the source and origin of biological material in the specification,when used in an invention., in international patent applications.....

Article 10 of the draft SPLT stipulates that

(1) [*General Principle*] The application shall disclose the claimed invention in a manner sufficiently clear and complete for that invention to be carried out by a person skilled in the art. The disclosure of the claimed invention shall be considered sufficiently clear and complete if it provides information which is sufficient to allow that invention to be made and used by a person skilled in the art on the filing date, without undue experimentation [as prescribed in the Regulations].

(2) [*Parts of Application to be Taken Into Account for Assessing Disclosure*] For the purposes of assessing sufficiency of disclosure under paragraph (1), the disclosure contained in the description, claims and drawings, as amended and corrected, shall be taken into account.

h.Interpretation of Claims

According to some this particular aspect is related to infringement only.

In some opinion the wording of the claims should provide the primary basis for the interpretation, while the description and the drawings should form a secondary basis for the clarification of ambiguities; the terms in the claims should be interpreted in accordance with their normal meaning, unless they are specifically defined.

There is also debate whether for the purpose of determining the scope of protection conferred by the patent, due account shall be taken of elements which are equivalent to the elements expressed in the claims.

There should be procedures for claim interpretation for special types of claims, such as means-plus-function claims, product-by-process claims, and claims associated with use, should be provided.

Since the different interpretation of claims will lead to the difference in protection scope, so how to interpret claims in practice is always a disputable problem for each country to clarify rights and judge infringement. Especially, whether to interpret claims characterized by functions to get a wider protection scope or a

A Global patent System IS Possible or Impossible?,available at

<http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>

smaller one is always swinging in American examination and law practice. The similar situation also exists in various countries.¹⁰¹

I. Exceptions to Patentability

"Everything under the sun, made by man, is patentable provided it meets the basic requirements of novelty, inventiveness and utility." US has even granted patents on method of playing a bowling game¹⁰² and method of swinging on a swing¹⁰³.

According to TRIPS *Article 27(1)* "patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. "

However according to TRIPS *Article 27(2)* "Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law."

Further According to TRIPS *Article 27(3)* " Members may also exclude from patentability:

(a) diagnostic, therapeutic and surgical methods for the treatment of humans or animals;

(b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement.

Most of the countries are utilizing the above flexibilities provided by the TRIPS.

¹⁰¹ Source:- FENG XIAOBING.THE HARMONIZATION OF THE PATENT SYSTEM.

A Global patent System IS Possible or Impossible?, available at <http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>

¹⁰² US patent no.6,142,880 granted on November 7, 2000 available at <http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=6142880.PN.&OS=PN/6142880&RS=PN/6142880> last visited on 03-03-2008.

¹⁰³ United States Patent 6,368,227 granted on April 9, 2002 available at <http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&co1=AND&d=PTXT&s1=6368227.PN.&OS=PN/6368227&RS=PN/6368227> last visited on 03-03-2008.

These flexibilities are effectively utilized by explicit or implicit provisions in the Patent laws of almost all countries barring US.

As per the TRIPS provision product patents for pharmaceutical products are available in developing countries.

The businesses from developed countries wish that the developing countries should allow the patents for the inventions relating to Business methods , Computer Software and biotechnology. The developing states are at different stages of industrialization. Granting patent to all those leading edge technologies may harm the interest of the developing countries. Such type of invention should be provided protection once the country has some development in those technical fields and have a proper infrastructure for search and examination. Further whether such inventions should be patentable or not that is debatable issue.

Recently The U.S. Court of Appeals for the Federal Circuit has ordered rehearing en banc in *In re Bilski*, No. 2007-1130 (Fed. Cir. Feb. 15, 2008) (order granting rehearing en banc) to determine the extent to which "business methods" are eligible for patent protection under U.S. law. The Federal Circuit's decision in *Bilski* could have significant implications regarding patent-eligible subject matter in the area of business methods. Indeed, the Court has indicated it might reconsider its landmark 1998 decision in *In re Alamy*, 149 F.3d 1368 (Fed. Cir. 1998), wherein the Court held there is no "business method" exception to patentable subject matter.¹⁰⁴

The controversy over the business method patent is also brewing in the US. Recently US has rejected claims directed to a signal that has been encoded in a particular manner.¹⁰⁵

Since technology is reaching new dimension, the incentive to invent should be provided to all fields of technology. Patent system provides incentives to the inventor, there by promotes science and technology .But as it is monopolistic in nature it has also some negative impacts on the society. So a judicious balance between the private rights and the public interest should be maintained.

j.Exemption from Patent:-

- Exemption can be categorized as
- 1 . Research exemption
 - 2 . Bolar exemption

¹⁰⁴ Article by Pavan K. Agarwal, Sharon Barner, Carole E. Handler, David G. Luetttgen , Steven C. Becker, Jeanne M. Gills, Larry L. Shatzer and William T. Ellis - United States: Federal Circuit To Consider "Business Method" Patent Eligibility In En Banc Rehearing ,27 February 2008 available at <http://www.mondaq.com/article.asp?articleid=57550> last visited on 07-03-2008

¹⁰⁵ *ibid*

1. Research exemption

Certain actions which fall within the claims of a granted patent are not patent infringement if they are done for the purposes of research¹⁰⁶. This provision is called the research exemption.

TRIPS article 30 stipulates `Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties`.

Japan patent law section 69 (1): says that the effects of the patent right shall not extend to the working of the patent right for the purposes of experiment or research¹⁰⁷.

Indian Patent Act section 47(3) stipulates that any machine, apparatus or other article in respect of which the patent is granted or any article made by the use of the process in respect of which the patent is granted, may be made or used, and any process in respect of which the patent is granted may be used, by any person, for the purpose merely of experiment or research including the imparting of instructions to pupils.¹⁰⁸

Similar exemptions in different countries are also available which are as given in annexure -2.¹⁰⁹

A research exemption should ensure that a product or process covered by a patent may be freely made or used¹¹⁰:

- to evaluate the validity of the patent by testing:
 - whether the patent description is sufficient.
 - whether the invention performs as stated in the patent
- To carry out research for the purpose of:
 - improving the invention.

¹⁰⁶ See presentation of Elisabeth Thouret-Lematitre, research exemption experimental use, Colloquia on Selected Patent Issues: The Research Exemption (October 11, 2006) available at http://www.wipo.int/meetings/en/2006/patent_colloquia/10/pdf/lemaitre.pdf

last visited on 6-03-2008.

¹⁰⁷ Japan Patent Law

¹⁰⁸ Indian Patent Act, 1970

¹⁰⁹ Source: <http://dnapatents.georgetown.edu/resources/Research%20Exemption%20Table.pdf>
last visited on 7-03-2008.

¹¹⁰ See presentation of Elisabeth Thouret-Lematitre, research exemption experimental use, Colloquia on Selected Patent Issues: The Research Exemption (October 11, 2006) available at http://www.wipo.int/meetings/en/2006/patent_colloquia/10/pdf/lemaitre.pdf

- making an advance over the invention.
- finding an alternative to the invention.

2.Bolar exemption

Clinical trials and other experimental work done to obtain regulatory approval of a generic drug do not infringe the patent for the drug.¹¹¹This provision is called the Bolar exemption.

• USA: art 35 USC 271 (e): « it shall not be an act of infringement to make, use, offer to sell, or sell within the US or import into the US a patented invention (...) solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs or veterinary biological products ».

Section 107A(b) of Indian Patent law stipulates, “ any act of making, constructing, using, selling or importing a patented invention solely for uses reasonably related to development and submission of information required under any law for the time being in force, in India, or in a country other than India, that regulates the manufacture, construction, use, sale or import of any product.”

k.Exhaustion of patent

The doctrine of patent exhaustion (also known as the first sale doctrine) is an affirmative defence, under which the unrestricted sale of a patented product, by or with the patentee’s authority, *exhausts* the patentee’s right to control further sale and use of that product by enforcing the patent under which it was first sold. The doctrine is grounded on the idea that the patent right is exhausted when the patentee is rewarded for disclosing the invention in the market by selling the patented product. The patentee should not be allowed to profit twice (double reward) by re-selling the same product.¹¹² There are three type of Exhaustion.

- 1 . National exhaustion
- 2 . Regional exhaustion
- 3 . International exhaustion

US follows the National exhaustion doctrine (*Jazz Photo Corp v International Trade Commission*) . European union follows the regional exhaustion and Japan follows the International exhaustion Doctrine (*BBS case*) .

Section 107A(b) of the Indian Patent act stipulates “Importation of patented products by any person from a person who is duly authorised under the law to produce and sell or distribute the product, shall not be considered as an infringement of patent rights.”

¹¹¹ Ibid

¹¹² Yoshinari Kishimoto of Sughrue Mion,canon tests patent exhaustion doctrine, managing intellectual property Japan Focus,2006 3rd edition,available at <http://www.managingip.com/Article.aspx?ArticleID=1321336> last visited 07-03-2008.

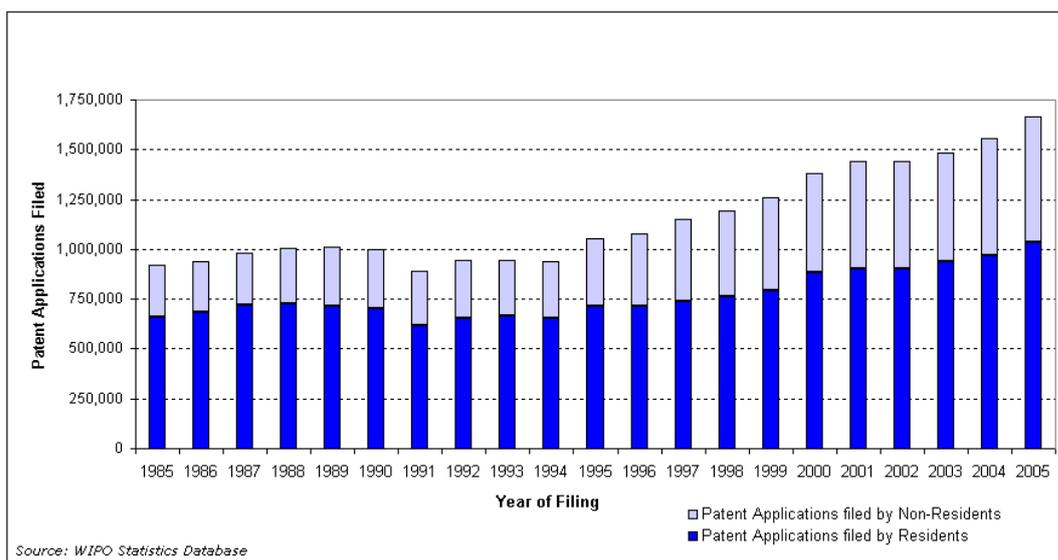
Parallel imports occur when patented medicines produced or sold abroad with the consent of the patent owner are subsequently imported into the domestic market at cheaper prices without the consent of the owner.¹¹³

1.5 Statistics of patent data in developing and developed countries

Due to globalization of trade the number of patent applications filed worldwide is increasing day by day.

The chart-1 below shows the number of patent applications filed by residents and non-residents worldwide by year of filing.

Chart-1¹¹⁴



In 2005, about 1,660,000 patent applications were filed worldwide, which is an increase of 7% over 2004. The average annual rate of increase in total patent filings has been 4.7% since 1995. The Patent filings by residents has increased at an average annual rate of 6.6% and by non-residents at 7.6%¹¹⁵. The non resident filing constitute approximately 40% of the total filing of the year 2005. The increase of world wide patent application shows the growth of science and technology. This increase of patent applications put enormous pressure on the patent offices of different countries. The increase in nonresident applications

¹¹³Prabhu Ram. INDIA'S NEW "TRIPS-COMPLIANT" PATENT REGIME. BETWEEN DRUG PATENTS AND THE RIGHT TO HEALTH. available at <http://jip.kentlaw.edu/art/volume%205/5%20Chi-ent%20J%20Intell%20Prop%20195.pdf> Last visited on 7-3-2008.

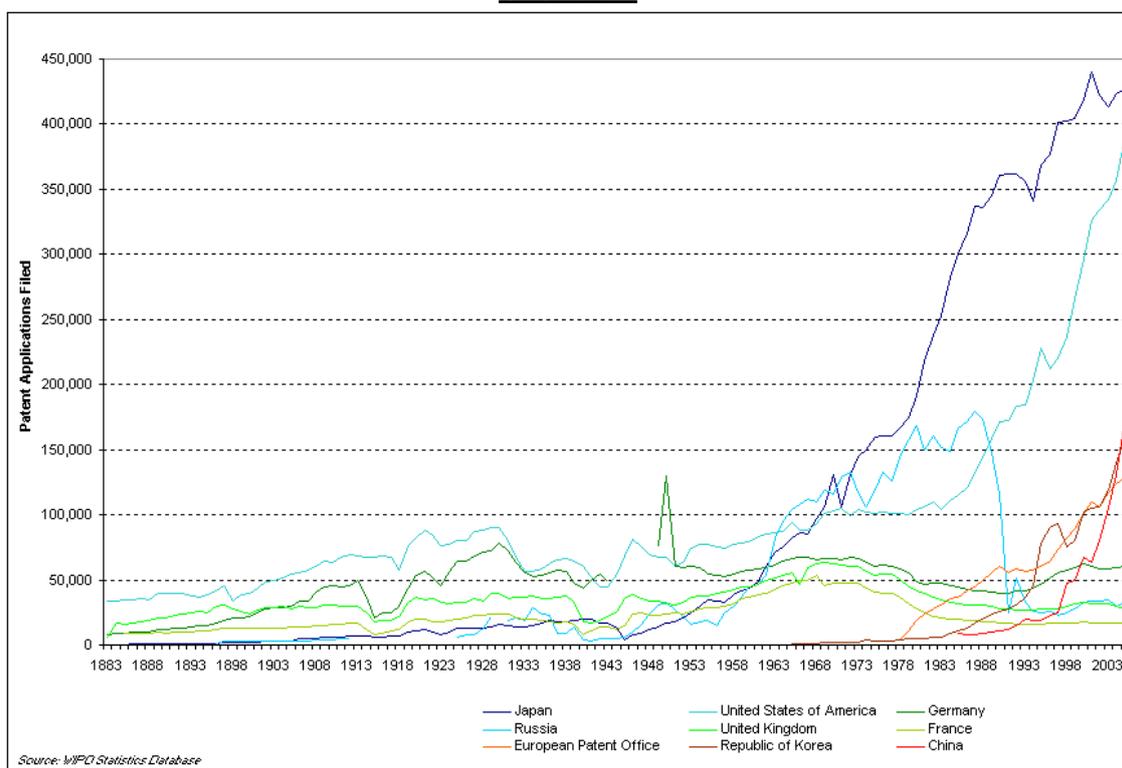
¹¹⁴ Source:-Evolution of Worldwide Patent Filings. Retrieved from http://www.wipo.int/ipstats/en/statistics/patents/patent_report_2007.html#P173_14118

¹¹⁵ Ibid

(most of the applications are filed through convention or pct route) indicates that more and more applications are duplicated. The work load of the offices can be reduced by eliminating the duplicated works. These duplicated works can only be eliminated if harmonization of formal and substantive patent laws occur. Recently president of EPO, Alison Brimelow has rightly pointed “We can’t justify the economics of excessive duplication; duplication is nonsense”¹¹⁶

The chart-2 shows the patent applications filed from the year 1883 to 2005 in nine patent offices.

Chart-2¹¹⁷



From 1883 to 1950 the annual growth rate of patent application was modest 1.99 % and Until 1960 and ,patenting activity was concentrated in four countries - the United States of America, Germany, the United Kingdom and France. From 1960 onward new user from Japan and soviet union participated. Since 1980, the patent offices of the United States of America followed by the European Patent Office, the Republic of Korea and China have all experienced significant growth

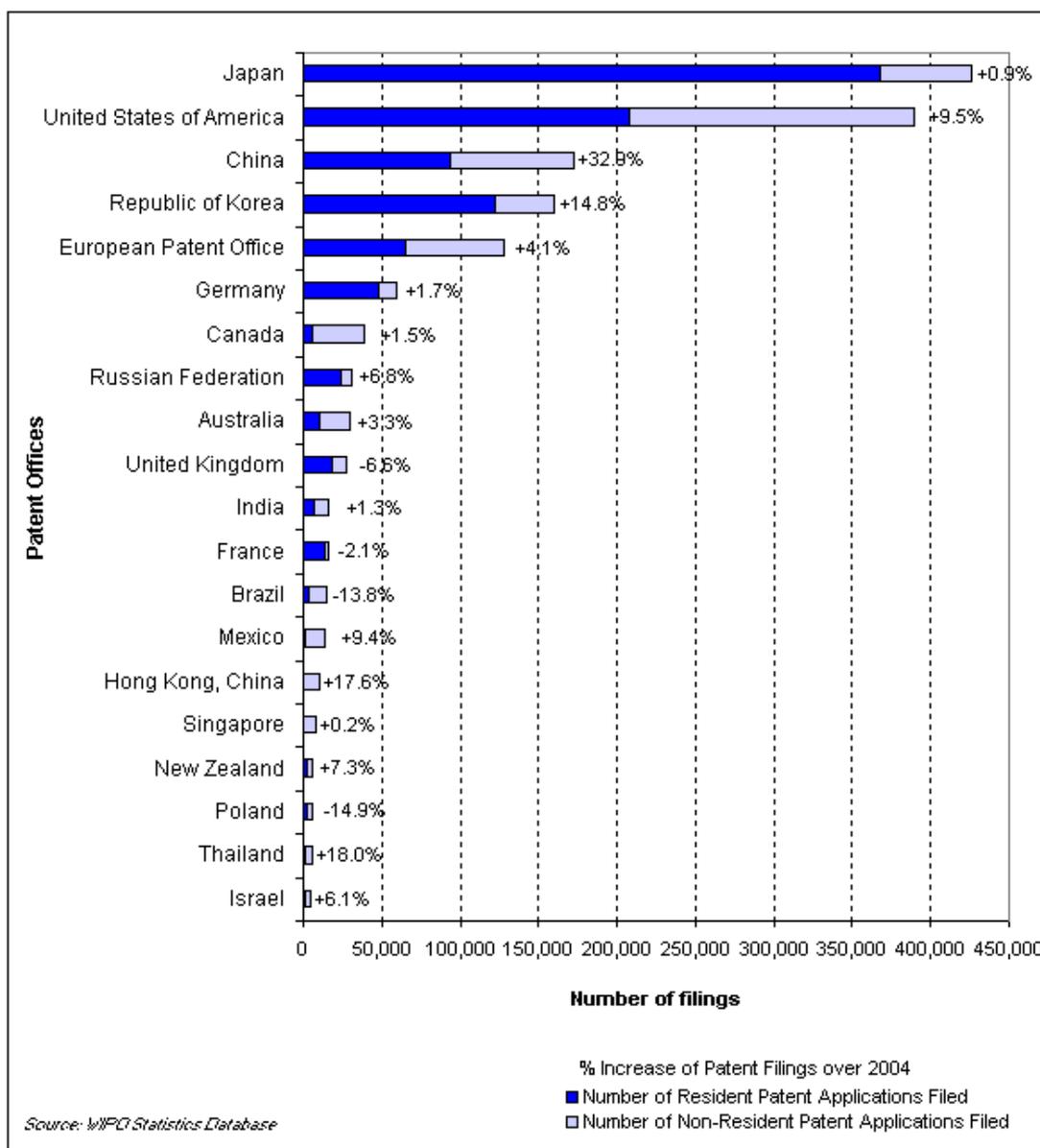
¹¹⁶ Source:- Eileen McDermott, Washington DC, Managaing Ip,December2007/January 2008 Page.15

¹¹⁷ Source:- Wipo website.WIPO Patent Report: Statistics on Worldwide Patent Activity (2007 Edition) available at http://www.wipo.int/ipstats/en/statistics/patents/patent_report_2007.html#P173_14118

rates in filings. At the nine offices shown above, the average annual growth rate from 1960 to 2005 was 3.35%.¹¹⁸

The chart-3 shows the top 20 patent offices according to the total number of patent filings in 2005.

Chart-3¹¹⁹



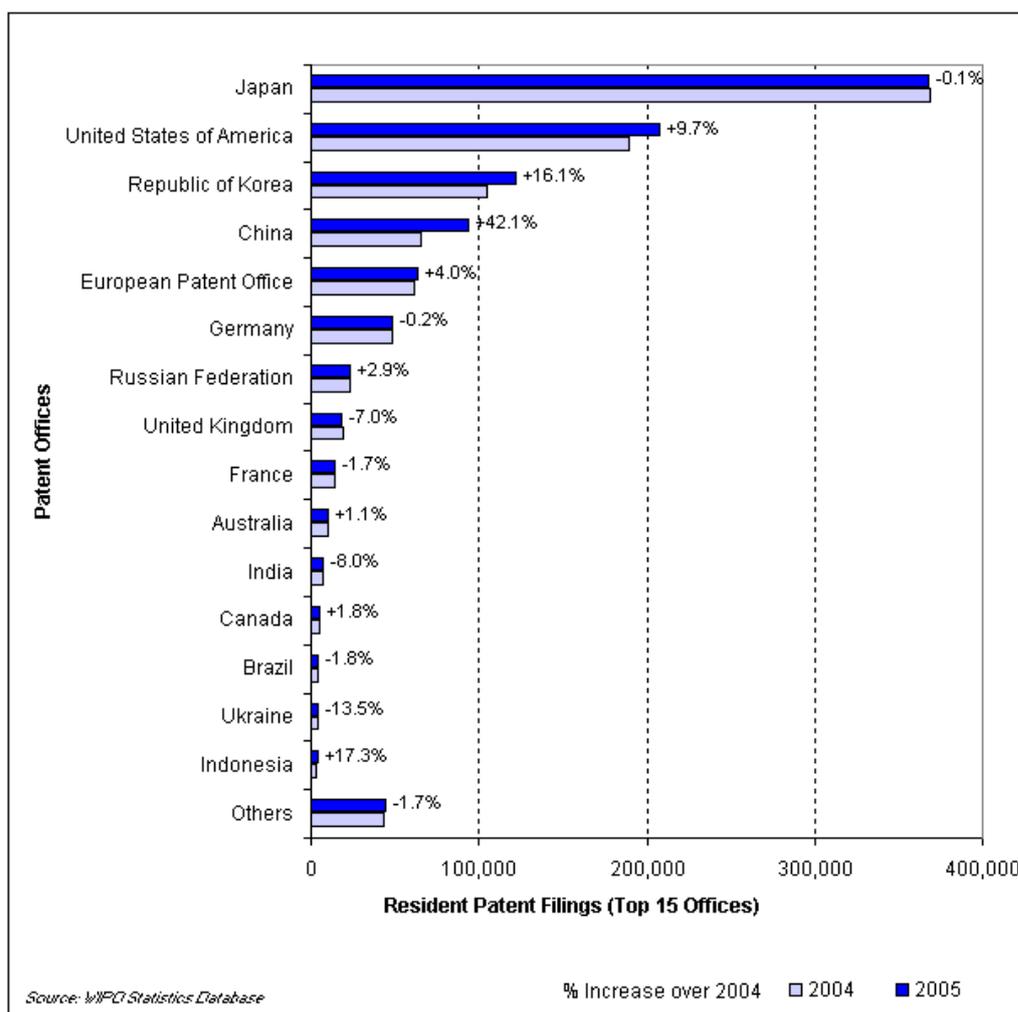
¹¹⁸ Source:-Evolution of Worldwide Patent Filings. Retrieved from E:\statistics\WIPO Patent Report Statistics on Worldwide Patent Activity (2007 Edition).mht

¹¹⁹ Source:- Wipo website.WIPO Patent Report: Statistics on Worldwide Patent Activity (2007 Edition) available at http://www.wipo.int/ipstats/en/statistics/patents/patent_report_2007.html#P173_14118

The patent offices of Japan and the United States of America are the largest recipients of patent filings followed by China, the Republic of Korea and the European Patent Office. These five patent offices account for 77% of all patents filed in 2005, which represents an increase of 2% over 2004 (75%). With an increase of almost 33% over 2004, the patent office of China became the third largest recipient of patent filings (up one place) in 2005.

The chart -4 shows the number of resident patent applications filed at the top 15 patent offices in 2004 and 2005.

Chart -4¹²⁰

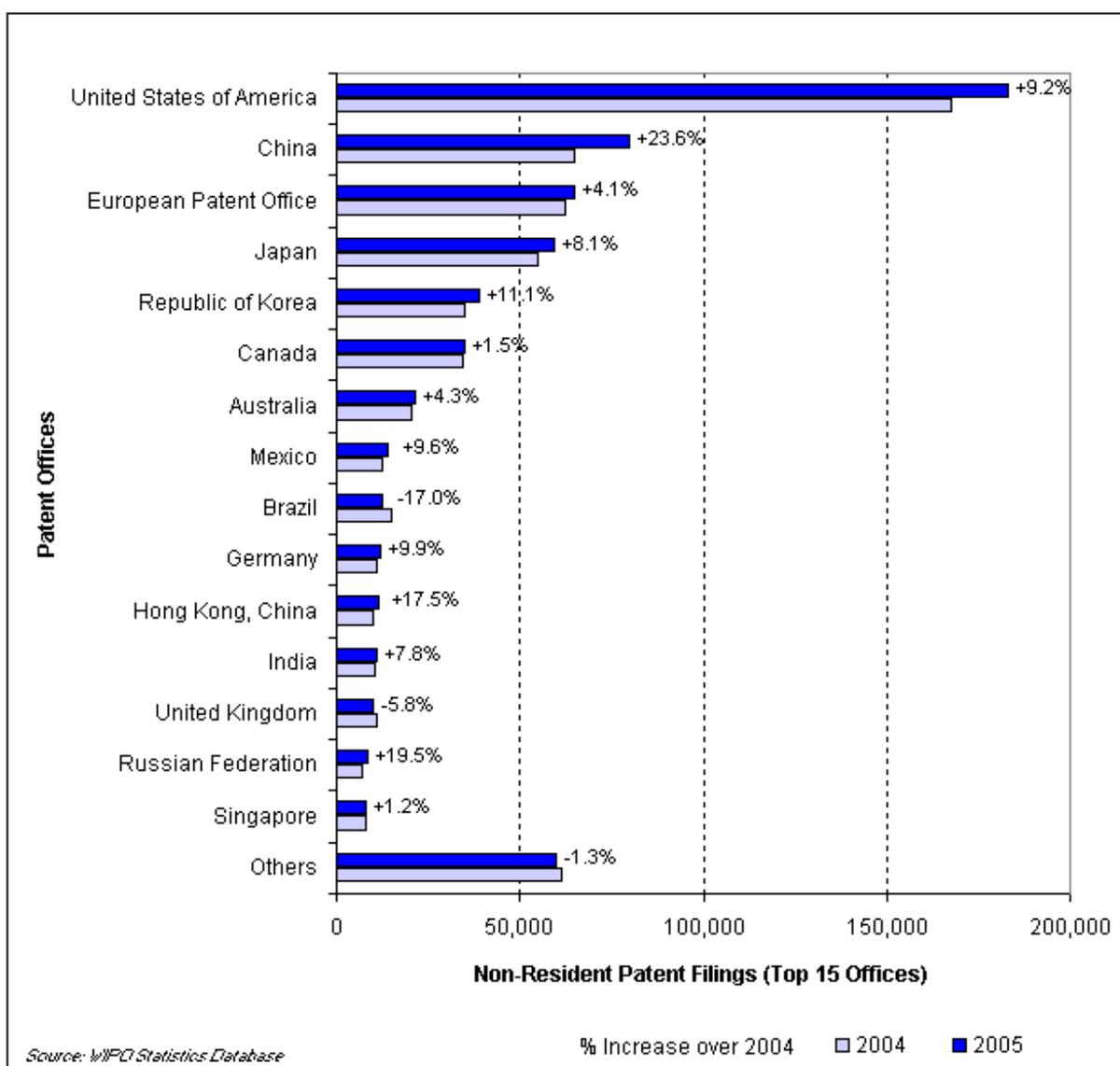


Resident patent filings increased by 6.6% from 2004 to 2005. The number of resident filings in the next 4 offices increased at rates between 42% in China and 4% at the European patent Office. The increase in residential filing can be attributed to the intrinsic growth of the country.

¹²⁰ Source:- Website of Wipo, http://www.wipo.int/ipstats/en/statistics/patents/P173_14118

The chart-5 shows the number of non-resident patent applications filed at the top 15 patent offices in 2004 and 2005.

chart-5¹²¹

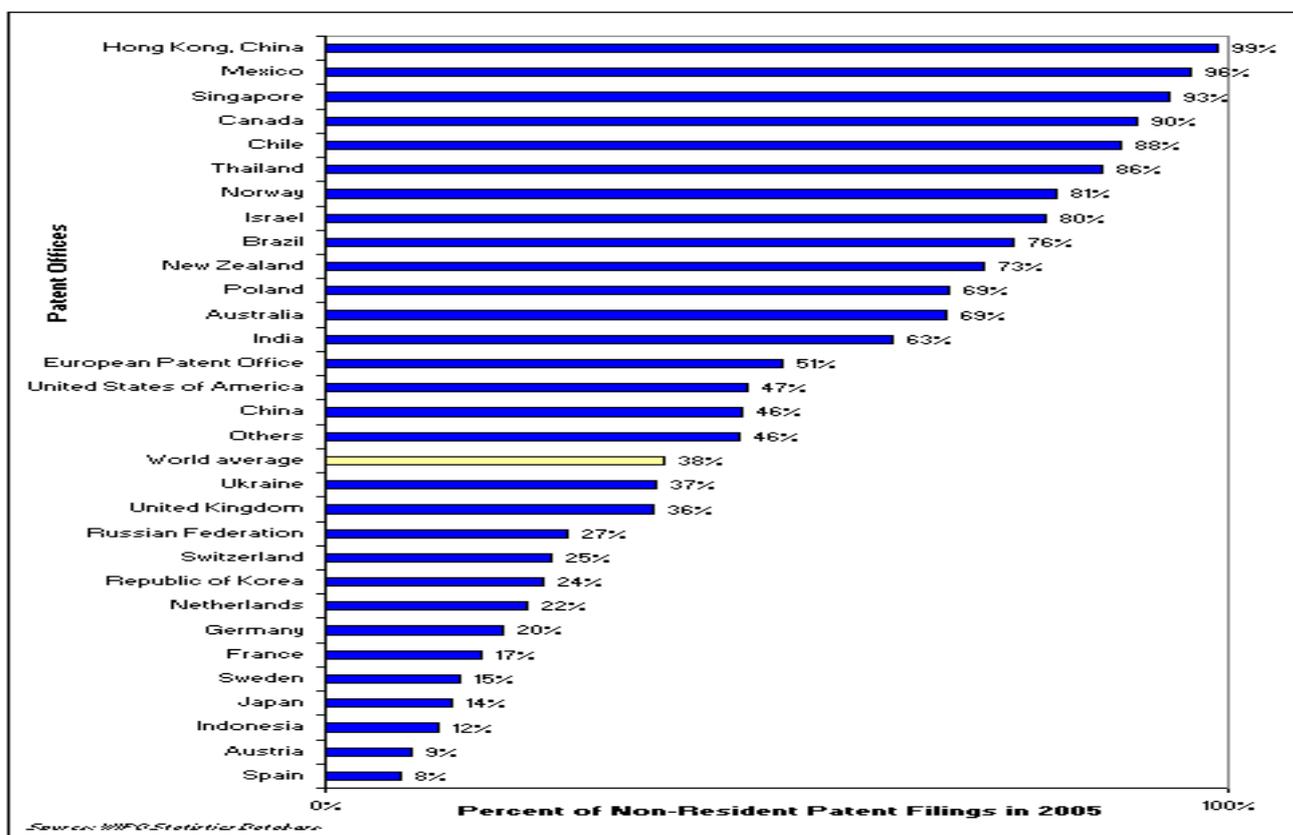


There was an increase in non-resident patenting of 7.6% from 2004 to 2005. The increase in non-residential filing in China indicates that there is a big market for the outsider.

The chart-6 below shows non-resident patent filings as a percentage of total filings by office in 2005. This shows the countries which have the highest proportions of foreign patent applications.

¹²¹ Source:- Website of Wipo, http://www.wipo.int/ipstats/en/statistics/patents/P173_14118

Chart-6¹²²



The rate of non resident filings with ARIPO/OAPI is reported to be about 97%¹²³

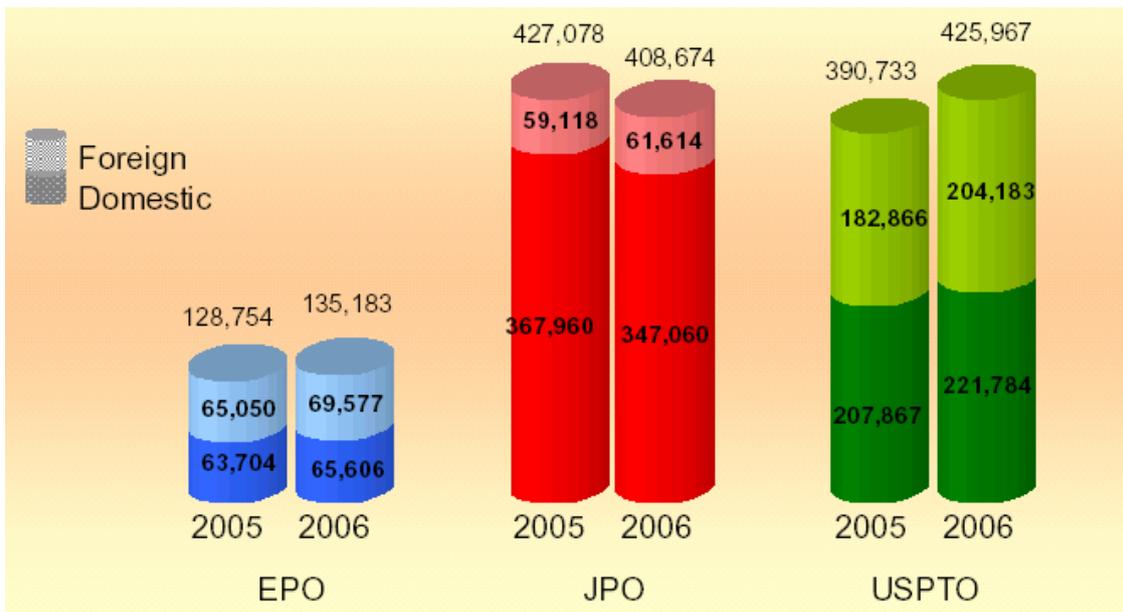
The chart-7 shows the applications filed in EPO, JPO and USPTO in the year 2006.

Chart-7¹²⁴

¹²² Source:- Website of Wipo, http://www.wipo.int/ipstats/en/statistics/patents/P173_14118

¹²³ Source:-Website of JPO, available at http://www.jpo.go.jp/iken_e/pdf/iken_e_innovation_wg/english.pdf

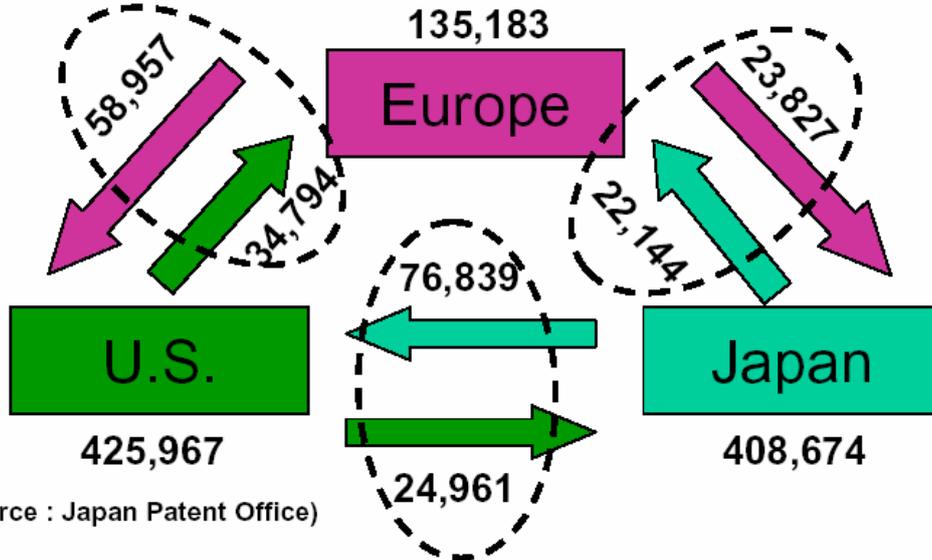
¹²⁴ Source: the website of trilateral cooperation available at http://www.trilateral.net/tsr/tsr_2006/4_tril_off_pat_act_2006.pdf



Source –Website of Trilateral Co-operation

The chart-8 shows the flow of applications between trilateral blocks (year 2006)
 Chart-8¹²⁵

Year 2006 total: 970K



(Source : Japan Patent Office)

Out of the above 970,000 applications, 242,000 applications are duplicated.¹²⁶ This causes enormous procedural and financial burden to the applicant as well as the patent offices.

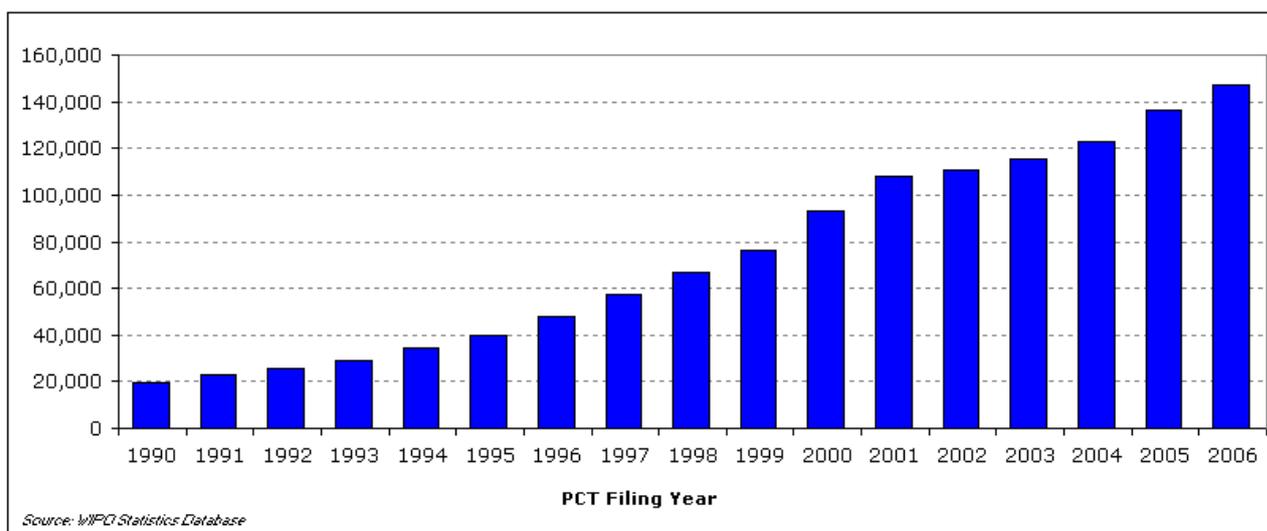
¹²⁵ Source: the website of JIPA, available at <http://www.jipa.or.jp/content/english/topics/append/PRESENTATION.pdf>

¹²⁶ Source: the website of JIPA, available at <http://www.jipa.or.jp/content/english/topics/append/PRESENTATION.pdf>

There were a total of 135,183 patent applications filed with the EPO in 2006, which is a growth of 3.4 percent. The number of patent application filings at the JPO decreased by 4.3 percent to 408,674. USPTO saw 425,967 patent application filings in 2006, a 9.0 percent increase over 2005 levels. The number of pending applications in examination increased at the EPO by 7 percent to about 304,100 in 2006, and the total pendency time in examination increased by 8 percent to about 44 months in 2006. The pendency time to first office action decreased by 9 percent to 23.8 months at the EPO. In the JPO, the number of pending applications increased to 837,887, an increase of almost 11 percent over 2005. JPO's total pendency continues to be stable at 31.8 months. The JPO's pendency time to first office action was 25.6 months. The USPTO number of pending applications continues to increase. In 2006 there were 701,301 applications waiting to be examined, more than 16 percent more than in 2005. Total pendency at the USPTO rose slightly from 30.6 months in 2005 to 31.3 months. USPTO's pendency to first office action was 23.4 months.¹²⁷

The chart-9 shows the total number of PCT international applications filed worldwide from 1990 to 2006. chart-8

Chart-9¹²⁸



- The number of PCT international applications increased by 7.9% from 2005 to 2006.
- The number of PCT international applications increased from 93,237 in 2000 to 147,500 in 2006, an average annual increase of 7.9%.

¹²⁷ Source: Website of Trilateral Co-operation , http://www.trilateral.net/tsr/tsr_2006/4_tril_off_pat_act_2006.pdf

¹²⁸ Source:- Website of Wipo http://www.wipo.int/ipstats/en/statistics/patents/patent_report_2007.html#P442_27839

In 2007 total, a record 156,100 PCT international applications were filed, representing a 4.7% rate of growth over the previous year. For the fourth year running, the most notable growth rates came from countries in north east Asia which accounted for over a quarter (25.8%) of all international applications under the PCT.¹²⁹

PCT APPLICATIONS FILED IN THE YEAR 2007¹³⁰

PCT International Applications Top 15 Countries of Origin							
	2003	2004	2005	2006	2007 estimate	2007 percent	2007 growth
United States of America	41'030	43'350	46'803	50'941	52'280	33.5%	2.6%
Japan	17'414	20'264	24'869	27'033	27'731	17.8%	2.6%
Germany	14'662	15'214	15'984	16'732	18'134	11.6%	8.4%
Republic of Korea	2'949	3'558	4'688	5'944	7'061	4.5%	18.8%
France	5'171	5'184	5'748	6'242	6'370	4.1%	2.1%
United Kingdom	5'206	5'027	5'084	5'090	5'553	3.6%	9.1%
China	1'295	1'706	2'503	3'951	5'456	3.5%	38.1%
Netherlands	4'479	4'284	4'500	4'529	4'186	2.7%	-7.6%
Switzerland	2'861	2'898	3'290	3'577	3'674	2.4%	2.7%
Sweden	2'612	2'851	2'883	3'316	3'533	2.3%	6.5%
Italy	2'163	2'189	2'349	2'716	2'927	1.9%	7.8%
Canada	2'271	2'104	2'318	2'566	2'707	1.7%	5.5%
Australia	1'680	1'837	1'996	2'001	2'054	1.3%	2.6%
Finland	1'557	1'672	1'893	1'845	1'952	1.3%	5.8%
Israel	1'129	1'227	1'454	1'589	1'683	1.1%	5.9%
All Others	8'715	9'245	10'326	11'084	10'800	6.9%	-2.6%
Total	115'194	122'610	136'688	149'156	156'100		4.7%

Source:-WIPO website

The table 1 below shows the number of PCT international applications filed by applicants from certain developing countries. In 2006, filings from developing countries saw a 32% increase as compared to 2005, representing 8.3% of all international applications filed.

¹²⁹Source:- Website of Wipo. http://www.wipo.int/pressroom/en/articles/2008/article_0006.html

¹³⁰ Source:-WIPO available at http://www.wipo.int/pressroom/en/articles/2008/article_0006.html last visited on 04-03-2008.

PCT int. applications filed by applicants from certain developing countries¹³¹

Table-1

Developing Country	2002	2003	2004	2005	2006
Republic of Korea	2,520	2,949	3,558	4,687	5,935
China	1,018	1,295	1,706	2,499	3,910
India	525	764	724	679	780
Singapore	330	282	431	442	453
South Africa	384	357	411	359	420
Brazil	201	219	278	280	328
Mexico	132	131	118	141	176
Malaysia	18	31	45	38	59
Cyprus	23	28	43	30	49
Egypt	1	22	53	51	44
Colombia	36	24	22	23	29
Cuba	11	20	18	11	21
Philippines	20	21	11	26	20
Argentina*	9	15	11	20	19
Kazakhstan	16	7	7	7	17
Viet Nam	2	7	2	0	9
Morocco	10	7	7	9	9
Indonesia	16	2	6	8	8
Mongolia	0	0	0	0	6
Democratic People's Republic of Korea	0	3	3	3	4
Algeria	3	5	6	4	4
Uzbekistan	2	0	0	2	1
Antigua and Barbuda	0	1	1	2	0
Zimbabwe	2	2	3	1	0

Source: WIPCI Statistics Database

The increase in the number of filing of the PCT applications shows the acceptability of the PCT system by the user. Even the applicants from developing countries are actively utilizing the PCT system. There is all probability that a substantial portion of the said applications will enter the national phases of the some of the member countries. So there will be drastic increase of the number of applications in the member countries, which will increase the work load of the patent office. As such there are backlogs in many patent offices. So there is a greater need for harmonization of substantive patent law so as to reduce the workload on the patent offices of the member countries. If the international application enter national phase of atleast one country other than the country of origin, there will be 156000 duplication of application. An examiner can at best examine 100 patent application per year. So just to complete the duplicated work

¹³¹Source:- Website of Wipo, http://www.wipo.int/pct/en/activity/pct_2005.html#P220_6007

1560 (JPO has nearly 1500 examiners)examiners will be needed per year. Where from those examiners will come? Definitely those examiners will come from the field of science and technology. Instead of doing duplicated work, they should rather work for the progress of science and technology,which makes some sense. Chart -10shows the no. of patent applications filed in India from 1970 -2001

Chart -10¹³²

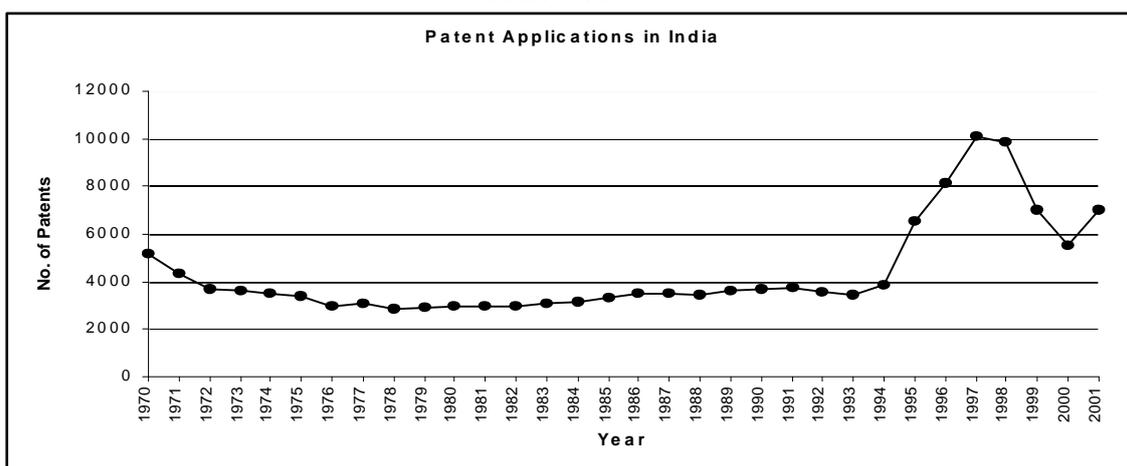
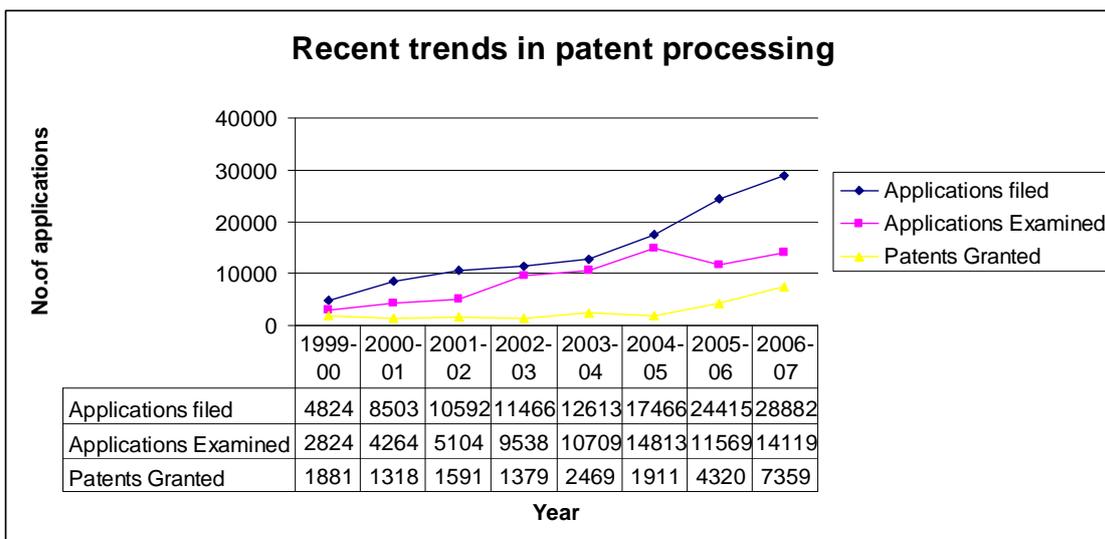


Chart-11 shows the recent trends in patent processing in India.

Chart-11¹³³

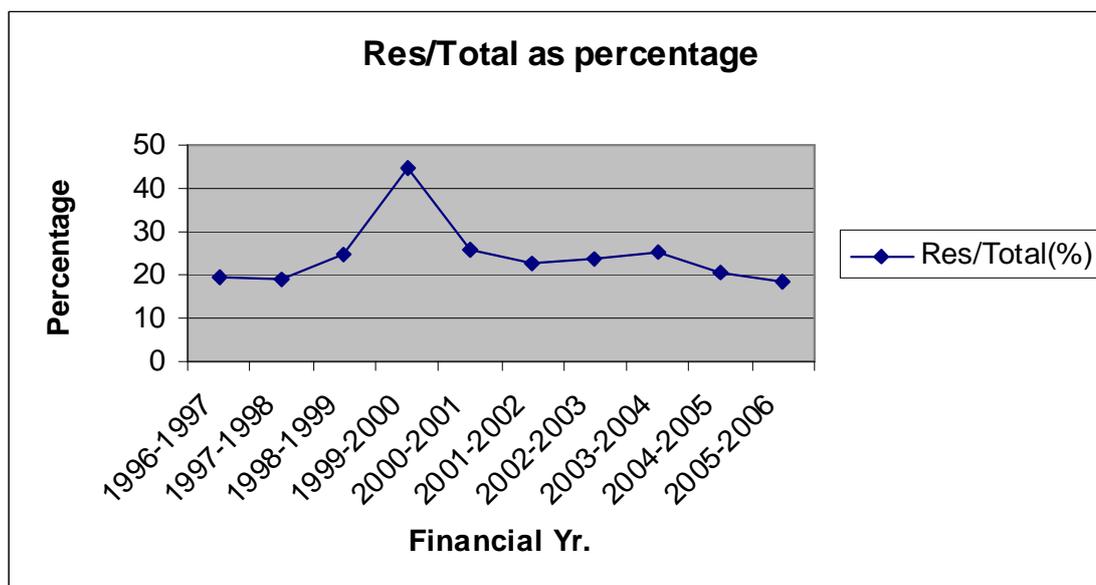
¹³² Source:Dr. Anitha Ramanna ,India’s Patent Policy and Negotiations in TRIPS: Future Options for India and other Developing Countries,Primary Source: Prabuddha Ganguli, Gearing Up for Patents the Indian Scenario(1998),p.21;and for the years 98-2001 from TIFAC (1998 updated 2002),Database on Patent Applications filed in India. retrieved from URL http://www.iprsonline.org/ictsd/docs/ResourcesTRIPSanita_ramanna.doc

¹³³ Annual report ,Office of the Controller General of Patents,Designs,Trade Marks and Registrar of Geographical Indications,



The table 3 shows the percentage of resident filing to total filing

F.Yr.	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Res/Total(%)	19.39	18.96	25	45	25.62	22.38	23.48	25.51	20.78	18.44



The above data shows that the number of resident applications over the above mentioned period are on an average 25% of the total filing. Most of the non residential applications are via Paris convention or PCT routes. These applications are most likely processed in the country of first file and some other countries. In absence of harmonization of patent Law the Examiner in Patent office of India has to carry out the cumbersome job of Search and Examination for the said applications. Such type of duplication of work is not good for any economy. As such the examiners are from science and technology background, they would like

to do something new,innovative,rather than doing the job which has already yielded some result.

1.5.a.India's effort in the direction of harmonization.

India's patent system recently celebrated its 150 the anniversary in the year 2006. India adopted to become contracting party to Paris Convention for the Protection of Industrial Property (Paris Convention) on September 07, 1998 which came into force on December 07, 1998. on the same day India also joined the Patent Cooperation Treaty. PCT came into force on December 07, 1998. India became contracting party to Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure on September 17, 2001 which came into force on December 17, 2001.

India became a party to the TRIPS Agreement in April 1994. TRIPS came in to effect January 1, 1995. For developing countries, like India, the deadline for complying with TRIPS was the year 2000. India amended its patent law and become TRIPS compliant. Further It amended its act in the year 2005 to allow product patent for foods ,drugs and other chemical substances. India is actively participating in the discussion regarding SPLT in the sessions of SCP.

1.6-OBJECTIVES AND METHODOLOGY

1.6.1-Obejectives of the research theme:

The patent systems in different countries developed at different times .The provisions in such systems were according to the social and economic conditions of the country. So a lot of dissimilarities among the provisions of the patent systems of different countries. Due to intense globalization of trade with the help of communication and transport technology, there is a need for internalization of patent system. The inventor needs to protect the invention in the countries of his interest. But often he is frustrated with the complexities and dissimilarities in the provisions of the different patent systems. The patent offices are also bearing huge loads of backlogs of patent applications and there is continuous increase in the number of applications.

The application for one invention is filed in many countries individually for protection. This leads to duplication of work in the patent offices. So to reduce the work load of the patent offices duplicated work should be stopped. As long as there will be dissimilarities in the basic provisions of patentability, there will be such duplication problems.

Business will shy away from those countries where there will be no protection or weak protection for their product and services. So the country will be devoid of technologies as well as investments.

The solution to above problems is harmonization of patent systems. What are the obstacles? why it is not achieved yet? The objective of this study is to find out the advantages of the harmonization of patent system that will be accrued to the user, the patent offices and the public at large. there may be some disadvantages to

some countries due to harmonization of patent system. Another objective of the study is to find out such disadvantages of harmonization of patent system. In the global forum for discussion on patent, the world is divided into two blocks, the developed nations and the developing nation. The interests of both the blocks are different and so is their priority.

The hypothesis for the research theme:-

Though the objective of the patent system is to provide incentive for innovation and dissemination of technology, it has a social impact due to the monopolistic nature of it. There should be right balance between the private right and the interest of the public at large. This social impact will depend upon the social condition and economic situation of the country. A patent system which is effective in developed country may not be effective for developing country. So the effort to harmonize the patent system may be futile. On this back drop the chosen hypothesis is that:-

“Regarding harmonization what is advantageous to the developed countries may be disadvantageous to the developing/least developed countries.”

1.6.2- Methodology:-

In order to achieve the above mentioned objectives and prove my hypothesis the following methodologies were adopted.

1. Study and review of documents and articles:-

A large number of documents relating to the provisions of patent laws of different countries were studied and reviewed. The different international treaties in the field of intellectual properties were studied. The efforts taken in the direction of harmonization have been studied from various books and online publications. The opinion expressed by eminent experts and economists are also reviewed.

2. Visit to organizations and personal interview:-

In order to have a practical look into the matter organizations like JPO, Patent Attorneys' firm, industries and universities were visited. The discussion with the actual user of the patent system were very fruitful. The interview revealed some facts which could have not been obtained through other means. Further informal discussions were held with the participants of short term courses conducted in APIC. As they are either the administrator or the user of the patent system in their countries, their view were valuable. Besides that the views of some of the Indian attorneys were sought through electronic means.

3. Despatch of questionnaire:-

Different set of questionnaires were framed and sent for response from the official of JPO, Patent Attorneys' firm and Industries of Japan. Besides that a set of questionnaire was sent to IP professionals of India. Their responses are very important as they face the difficulties due to lack of harmonization.

CHAPTER-2

Necessity, Advantage and Disadvantage of Harmonization

2.1 The necessity of harmonization of substantive patent law

Invention does not recognize any border, but the patent protection is limited to territory of the state in which it is granted . With the intense globalization of trade due to advancement in transport and communication technology, there is a need to protect the invention in multiple countries. There is as such no global patent granting system. The application has to be processed in all the countries ,where protection is required. A basic frame work for patent protection is in place due to the Paris convention,PCT and TRIPS Agreement. However there are dissimilarities in the formal requirements , substantive requirements and the procedural requirements of the patent laws of different countries.

a. Demand of the user of the patent system¹³⁴

The user of the applicants demands the following.

1. Patent at low cost
2. Quality of examination
3. Timeliness of patent grant

Due to the dissimilarities in the patent systems ,there are many procedures which are duplicated many times by the applicant. Each procedure costs money. Even the forms and formats of different patent offices are different. Several hundred million dollars can be saved annually if a single format is adopted.¹³⁵ Thus there is a necessity for harmonization on forms and formats at least.

Due to dissimilarities in the laws ,procedures and interpretation of laws there is a greater dependency on the attorneys of the country where the application to be processed. Leveraging on that situation the attorneys are also charging fees quite high in comparison to the official processing fee of the application. By harmonizing the requirements this cost can also be minimized and the attorneys can be better utilized for creation of quality IP rights.

The quality of examination can be improved if sufficient time can be given for the study of the application. It also depends very much on the search data base, the search engine used and the capability of the examiner.

¹³⁴ See: The website of JIPA,available at <http://www.jipa.or.jp/content/english/topics/append/PRESENTATION.pdf>

¹³⁵ Source: the website of JIPA,available at <http://www.jipa.or.jp/content/english/topics/append/PRESENTATION.pdf>

However due to workload as mentioned earlier there will be always pressure to dispose off the application at the earliest. So quality of examination is affected by the work load on the patent office. As we have seen from the statistics that the developing countries/least developed countries received more non resident applications. These applications are duplicated in many countries. The work load due to such duplicated applications can be reduced by mutual exploitation of the search and examination results of other countries. But This duplication of work mainly search and examination can be avoided only after harmonization of substantive patent law.

The developed countries have no dearth of scientific personnel to handle the inventions relating to frontier technologies such as Information technology, biotechnology and nano technology. They can recruit those personnel as examiners and get the examination of patent application done. However in developing or least developed countries there may be scarcity of such personnel. The case may be like this in a country there may not be much progress in biotechnology but that country may be receiving a number of applications relating to biotechnology. Even if very resource personnels are available, they should be utilized for creation of intellectual property rather than protecting them. So to have good quality examination too it is essential that there should be harmonization, where the search and examination result of one country can be exploited by other countries. A good patent is one which can be enforceable with certainty. Due to unharmonized patent system a patent may be granted for an invention and may be enforceable, but another patent granted on the same invention in another country may not enforceable.

Timely grant of the patent is one of the major demand of the user of the system. Due to delay in grant of patent the applicant remains in uncertainty. so major decisions regarding commercialization of the invention and follow on researches are also delayed. Third party also remain in uncertainty whether to use that invention or not for commercialization or for further research and development. With current backlogs ,the patent offices are nearly in an impossible situation to grant the patent timely without augmenting there infrastructures.

So two options available

1. harmonization
2. work sharing.

Even work sharing requires harmonization of substantive laws to certain extent.

As pointed out by Shinjiro Ono If substantive harmonization achieved in determination of range of prior art, claim system and claim interpretation at least

the search and examination result of one office can be better used by other office.¹³⁶

b.Demand of the enterprise

In addition to the above mentioned demands the enterprise has continuously demanding patent protection for newer technologies.

1.Broadening the patentable subject matter:

The enterprises which creates innovation always demand that protection should be available for invention in all field of technologies and the protection should be the strong and enforceable one.

As technology is advancing there should be protection available for those new technologies. Particularly inventions relating to information technology and biotechnology are not protected through patents in many countries. In absence of protection the businesses which possess the technology will shy away from the market where the protection is weak or nil.

“Businesses will move out of markets which they consider to be to their disadvantage, and only those markets that are considerate towards business activities will be able to survive. The patent system must be able to support such business activities. As new commercial products and services are developed, the patent system must also broaden its scope to provide appropriate protection to such new products and services. The patent system has an increasingly important role to play as an economic infrastructure to support business activities, which are changing in response to the changing times. “¹³⁷

In one of the example one Brazilian professor Flavio Alterthum and two American academics invented a genetically altered microbe which digests the bio-waste of the sugar harvest to efficiently produce ethanol. They were granted an US patent where as they were not granted a patent in Brazil, as such inventions were not patentable in Brazil at that time. Commercial development of the invention is progressing in the United States and elsewhere, but not in Brazil, where this new technology could bring substantial benefits. The Brazilian co-inventor returned to Brazil and attempted to interest local sugar companies in development of the process, but in the absence of local patent protection at the time he got no response.¹³⁸

¹³⁶ See: Shinjiro Ono, deputy commissioner of JPO: “Substantive Patent Harmonization and Japan’s Stance”, Website: www.law.washington.edu/CASRIP/Symposium/, 2007-5-23.

¹³⁷ Takeshi ISAYAMA, Commissioner of JPO. Toward Desirable IP Systems ? Taking the Patent System as an Example. Chairman’s Note for the Informal Meeting of the Heads of Patent Offices in Developed Nations, May 19-20, 1999. Available at <http://www.eps.nagoya-u.ac.jp/examin/991d/991dej.html> and last visited on 24dec2007.

¹³⁸ Robert M. Sherwood**. HUMAN CREATIVITY FOR ECONOMIC DEVELOPMENT: PATENTS PROPEL TECHNOLOGY* available at

So it is necessary for the countries to broaden their patentable subject matter to have access to new technology ,transfer of technology or investment in new technology.

The flexibilities provision provided in the draft article 12(5) of SPLT indicates that some countries are not willing to give up the flexibilities enjoyed by them.

c.Demand of the patent offices:

There are two main factors from patent office point of view which necessitates the harmonization of patent laws.

(1) Rapid growth of patent applications: ¹³⁹

As can be seen from the statistics of patent applications in developed as well as developing countries, there is a tremendous growth in the number of applications. The growth of pct international applications will also add to the work load of the patent offices in future. As of year 2006,242000 patent applications are duplicated in trilateral offices alone. The increased workload and the pressure to deliver quality output has compelled the patent offices to increase their annual expenditures .The chart – xx shows the annual expenditure for three major Patent offices.

Chart-xx¹⁴⁰

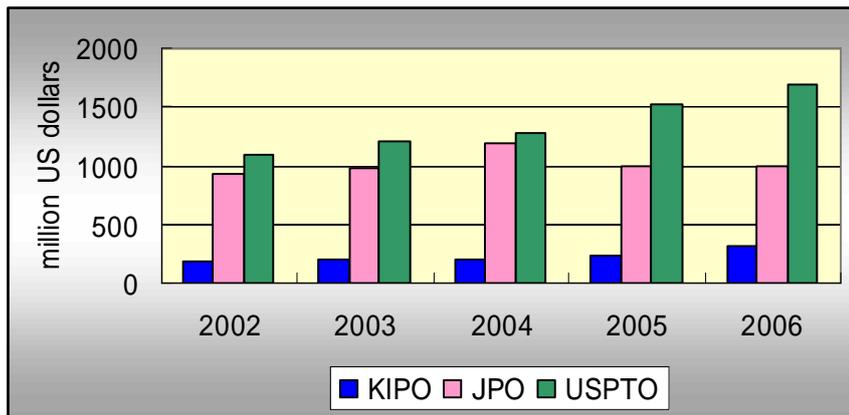
<http://www.uakron.edu/law/lawreview/docs/sherwoodgood333.pdf> last visited on 09-03-2007.

¹³⁹ Shinjiro Ono, deputy commissioner of JPO: “Substantive Patent Harmonization and Japan’s Stance”, Website: www.law.washington.edu/CASRIP/Symposium/, 2007-5-23.

¹⁴⁰ Source:- FENG XIAOBING.THE HARMONIZATION OF THE PATENT SYSTEM.

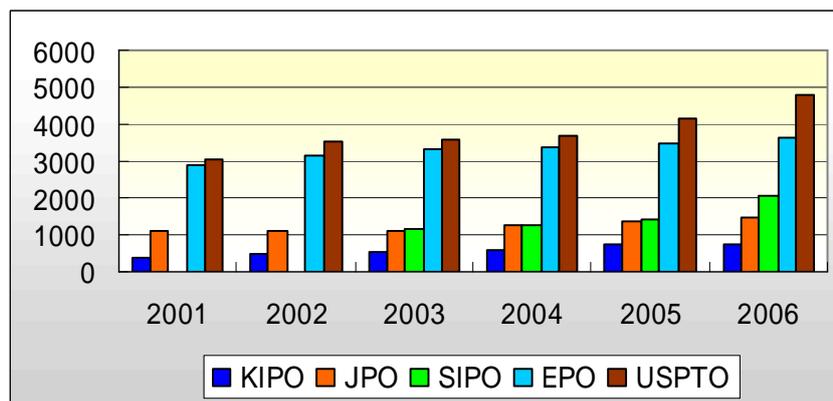
A Global patent System IS Possible or Impossible?,available at

<http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>



The major patent offices have increased the number of examiners to deal with the rapid growth of application. The chart –yy shows the no of examiners in the major 5 patent offices

Chart –yy¹⁴¹



From the above diagram we can see that the number of examiners at the “Big 5” offices is growing year by year, especially that at SIPO and USPTO. Until the end of 2006, the number of examiners at SIPO, USPTO and JPO increased by 43%, 14% and 8% respectively than that of 2005; the number of examiners at EPO and KIPO at the end of 2005 increased by 2% and 30% respectively than that of 2004.¹⁴²

¹⁴¹ Source:- FENG XIAOBING.THE HARMONIZATION OF THE PATENT SYSTEM. A Global patent System IS Possible or Impossible?,available at <http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>

¹⁴² Source:- FENG XIAOBING.THE HARMONIZATION OF THE PATENT SYSTEM.

But to tackle with the growing number of applications, augmenting the infrastructure of patent office is not enough. The patent offices have to mutually recognize the effort (search and examination) of other offices .Mutual exploitation of such results can only be possible after certain degree of harmonization of the substantive patent law.

Further in some developing countries, the number of technical personnel required for the search and examination of patent applications are very less. Those technical resources should be utilized for country's technical development rather than providing the administrative job of a patent office. The patent system which utilizes a number of scientists and engineers thus creates a system for internal brain drain.¹⁴³ It is important to mention that there are some countries which receive more than 90% non resident applications and world wide the percentage of Non resident application is 38%. So these percentage of applications are presumed to be duplicated. By reducing the duplication work the technical resources of developing countries can be better utilized.

(2) Development of advanced technologies:¹⁴⁴

Many applications are filed for the inventions relating to frontier technologies such as information technology, biotechnology and nano technology. To examine these applications, therefore, highly specialized knowledge is needed. Patentability for inventions involving high-technologies can't be appropriately decided under the existing guidelines in many cases, for example, patentability of DNA fragments. Therefore, central IP Offices are now required to respectively issue patentability criteria at an appropriate time and have them harmonized internationally.¹⁴⁵

A Global patent System IS Possible or Impossible?, available at <http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>

¹⁴³ See **Lois E. Boland**.

INTERNATIONAL PATENT REFORM EFFORTS: A UNITED STATES PERSPECTIVE available at

<http://www.law.washington.edu/CASRIP/Symposium/Number7/4-Boland.pdf> last visited on 03-03-2008.

¹⁴⁴ Shinjiro Ono, deputy commissioner of JPO: "Substantive Patent Harmonization and Japan's Stance", Website: www.law.washington.edu/CASRIP/Symposium/, 2007-5-23.

¹⁴⁵ Shinjiro Ono, deputy commissioner of JPO: "Substantive Patent Harmonization and Japan's Stance", Website: www.law.washington.edu/CASRIP/Symposium/, 2007-5-23.

For uniform practice in dealing with the cases related to advanced technology harmonization is required.

2.2 Advantages of Harmonization

The advantages of the harmonization depend upon the degree of harmonization. If we see the harmonization of substantive requirements of patentability the following advantages will accrue.

1. Simplification of the process of obtaining the patent;

Due to dissimilarities in the patentability requirements the applicant follows different processes according to the patentability requirements of the countries. There may be case where the ground of refusal from different countries for the same invention may be different. Then the applicant has to respond to each country differently. This may results in refusal of patent on different ground. Otherwise if accepted for grant of patent with different claims. There may be case when the patent is granted in some countries where not in some other countries. This make the process of getting patent in multiple countries complex. With the harmonization of substantive patent law the ground of refusal from one country will be presumed as the ground of refusal from other countries. This will simplify the process of obtaining patent.¹⁴⁶

2.Reduction of work load of the patent office;-

As we have seen from the statistics(refer page no. chart 1) the average annual rate of increase of nonresidential filing is 7.6% from 1995 to 2005.Where as the average annual rate of increase for the residential application is 6.6%.the increase in nonresidential filings are due to same applications duplicated in other countries. Nearly 242000 applications are duplicated among the trilateral offices(2006 year).These duplicated applications are also subjected to all the steps of granting patent which include search and examination too. This duplication of application cannot be avoided. But the duplication of work can be avoided provided the laws of the countries are harmonized. If the law of the countries will be harmonized, then the search and examination report of one country can be relied by other countries. This will result in substantial work load reduction in the developed as well as developing countries.

If substantive harmonization achieved in determination of range of prior art, claim system and claim interpretation at least the search and examination result of one office can be better used by other office.¹⁴⁷

¹⁴⁶ See: Shinjiro Ono, deputy commissioner of JPO: "Substantive Patent Harmonization and Japan's Stance", Website: www.law.washington.edu/CASRIP/Symposium/, 2007-5-23.

¹⁴⁷ See: Shinjiro Ono, deputy commissioner of JPO: "Substantive Patent Harmonization and Japan's Stance", Website: www.law.washington.edu/CASRIP/Symposium/, 2007-5-23.

3. Broadening of patentable subject matter:

Due to the harmonization of patent system there is every chance that the subject matter of patentability will be broadened. At least patent protection will be available to inventions related to new generation technologies such as information technology, biotechnology and nanotechnology. The TRIPS article 27.1 has limited the "invention" to all fields of technology, however with the harmonization the "invention" belonging to any field may be patented. The requirement of technical effect as in Europe may not be there.

4. Increase the predictability of the patent:

With the harmonization in place if an invention is granted a patent in one country, the probability of getting the patent in other country for the same invention will be high. This will increase the legal certainty and value of the patent.

5. Reduction in cost of Patenting:

Due to simplification of the procedure and unification of the forms and formats the cost of patenting an invention will be reduced. By mutual exploitation of search and examination results of other office, the patent office can also cut expenditures (Japan out source the patent application for search) and pass on the benefits to the applicant.

6. Cuts down on "forum shopping"¹⁴⁸

In multi country litigation process the chance of forum shopping will be less as the provisions of law and implementing guidelines will be harmonized.

7. Expansion of policy space for the developed countries:¹⁴⁹

Through harmonization there is a greater chance that the developed countries' domestic policy will be imposed on other countries and their economic benefits will be safe guarded.

2.3- Disadvantages of Harmonization:

¹⁴⁸ Michael D. Kaminski is a partner at Foley & Lardner, an adjunct professor at American University and George Mason University, and 1999 chair of the ACS Division of Chemistry and The Law. Comments and questions for the author can be addressed to the Editorial Office by e-mail at mdd@acs.org, by fax at 202-776-8166 or by post at 1155 16th Street, NW; Washington, DC 20036. source: <http://pubs.acs.org/subscribe/journals/mdd/v04/i01/html/patents.html>

¹⁴⁹ Source:- FENG XIAOBING. THE HARMONIZATION OF THE PATENT SYSTEM.

A Global patent System IS Possible or Impossible?, available at <http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>

The harmonization of substantive patent laws can have the following disadvantages.

I. Reduce the policy space of the government:

Harmonization will reduce the flexibility of the government to use the patent as a tool to devise economic and industrial policies. Developing countries are used to design their patent system according to their level of industrial development.

“So might it be the case that by depriving developing countries of the freedom to design patent systems according to their level of industrial and technological development, we are, to use the title of a recent book by Cambridge University economist Ha-Joon Chang, "kicking away the ladder" after we in the developed world have scaled it ourselves? Or, to be even more skeptical about harmonization, would "the setting up of a world patent system ... mean the end of patent policy as a tool for national development strategies," as Genetic resources Action International claims?”¹⁵⁰

2. Disadvantages due to strong IPR

Harmonization often regarded as adoption of higher IPR standard. It is often thought that strong IPR brings FDI, technology transfer and promote research and development “ while critics counter that it will lead an unjust transfer of wealth from the poorest countries to the wealthiest ones. The World Bank estimates that Trips represent an annual \$20 billion plus transfer of wealth from the technology-importing countries to the technology exporting countries. (The U.S. got \$36 billion in royalties in 1998 from patents and licenses, globally).¹⁵¹

There is no empirical evidence available to show that strong IPR spurs FDI, technology transfer or domestic innovation.” Evidence from Turkey found that the banning of pharmaceutical patents appeared to have no significant effects on levels of FDI, technology transfers, or domestic innovation. Similarly, a study on

¹⁵⁰ Dutfield, Graham , Does One size fit all? The International Patent regime. Harvard International Review • Summer, 2004 • International Trade, available at <http://www.entrepreneur.com/tradejournals/article/120184959.html> last visited on 01-03-2008

¹⁵¹ Minxin Pei, Carnegie Endowment for International Peace; Intellectual Property Rights: A Survey of the Major Issues, A Report for the Asia Business Council September 2005 available at <http://www.asiabusinesscouncil.org/docs/IntellectualPropertyRights.pdf> last visited on 01-03-2008

Brazil, examining the manufacturing industry as a whole, found no evidence that FDI levels were greatly affected by patent protection.”¹⁵²

In the past the developed countries have taken the benefit of lax IPR rules.” The US provided no copyright protection for foreign authors for most of the 19th century on the ground that it needed the freedom to copy in order to educate the new nation. Switzerland had no patent system for most of the 19th century. Japan brought its IP laws up to Western standards in 1985 while South Korea did so in 1996.”¹⁵³

“There are three interesting anecdotes. It took Japan’s Patent Office 29 years to grant Texas Instrument the patent on integrated circuit (it filed in 1960); Japanese companies were free to read the patent specification 18 months after TI’s filing. They acquired the technology and improved it substantially. Royal Philips Electronics was set up to take advantage of Thomas Edison’s inventions because from 1869 to 1912 Holland had no patent law. Ericsson, founded in 1876 (the same year Bell invented the telephone), produced phones using the same technology. Bell forgot to file a patent in Sweden.”¹⁵⁴The logic which was applicable for a lax IPR then may be applicable for the developing countries or the LDCs of now.

“Strong IPR protection can hinder, rather than nurture, economic development while economies with weak IPR protection can actually gain advantages. The late Linsu Kim, a management professor at Korea University, argued that “strong IP rights protection will hinder rather than facilitate technology transfer and indigenous learning activities in the early stage of industrialization when learning takes place through reverse engineering and duplicative imitation of mature foreign products.” Only after countries have accumulated sufficient indigenous capabilities with extensive science and technology infrastructure to undertake creative imitation in the later stage does IP rights protection become an important element in technology transfer.”¹⁵⁵

¹⁵² Dutfield, Graham , Does One size fit all? The International Patent regime.Harvard International Review • Summer, 2004 • International Trade,available at <http://www.entrepreneur.com/tradejournals/article/120184959.html> last visited on 01-03-2008

¹⁵³ Minxin Pei, Carnegie Endowment for International Peace; Intellectual Property Rights: A Survey of the Major Issues, A Report for the Asia Business Council September 2005 available at <http://www.asiabusinesscouncil.org/docs/IntellectualPropertyRights.pdf> last visited on 01-03-2008

¹⁵⁴ Minxin Pei, Carnegie Endowment for International Peace; Intellectual Property Rights: A Survey of the Major Issues, A Report for the Asia Business Council September 2005 available at <http://www.asiabusinesscouncil.org/docs/IntellectualPropertyRights.pdf> last visited on 01-03-2008

¹⁵⁵ Minxin Pei, Carnegie Endowment for International Peace; Intellectual Property Rights: A Survey of the Major Issues,

“In East Asia (Japan, South Korea and Taiwan), a combination of relatively weak IPR protection and the availability of second-tier IPRs like utility models and design patents encouraged technological learning. The weak IPRs helped by allowing for local absorption of foreign innovations. The second-tier systems encouraged minor adaptations and inventions by local firms. Later on, the IPR systems became stronger partly because local technological capacity was sufficiently advanced to generate a significant amount of innovation, and also as a result of international pressure.”¹⁵⁶

Due to adoption of strong IPR the businesses may like to manufacture the products in the countries offering suitable conditions for them such as low labor cost, capacity to adapt technology, suitable industrial policy and favorable tax regime and export it to the countries having strong IPR. So the Government will lose the tax revenue and may lose opportunity to create employment for the people.

iii. Export of mistakes from one system to other

In an harmonized patent system if a mistake occur in one system then there is rare chance that the mistake will be detected and corrected in another system. For example if the search examiner skipped one particular prior art, there is very rare chance the examiner in other office will find that prior art.

iv. Absence of best practice

Due to harmonization as the provisions of the laws of all the countries will be the same, there is no question of finding any best provision to tackle a particular situation.

v. Lack of diversities

Due to harmonization there will be no diversities in the law so a single cause will affect all the countries equally.

A Report for the Asia Business Council September 2005 available at <http://www.asiabusinesscouncil.org/docs/IntellectualPropertyRights.pdf>
last visited on 01-03-2008.

¹⁵⁶ Nagesh Kumar. Commission on Intellectual Property Rights. Workshop 1: Technology, Development and Intellectual Property Rights. 25th January 2002 available at <http://www.iprcommission.org/papers/word/workshops/workshop1.doc>

However all the above disadvantages can be sidelined, eliminated or bear with if the advantages accrued due to harmonization is quite more.

To make the harmonization effort truly meaningful, countries concerned should select best practices from among various patent systems without adhering to the systems of their own.¹⁵⁷

“Developing countries will be made a great disservice if they were induced, through the WIPO patent harmonization process, technical assistance or other means, to import features of a patent regime that is growingly seen as malfunctioning in developed countries, and often stifling rather than promoting innovation.”¹⁵⁸ The decline in the patentability standards is one of the factors behind the ‘intense pathology of the current [patent] system’ in the United States¹⁵⁹. The United States patent system has become sand rather than lubricant in the wheels of American progress.¹⁶⁰

People need a robust system for handling intellectual property, and world harmonization of IP is extremely desirable. Removing diversity is good for the majority of those seeking patents, by simplifying the process and avoiding duplication in the work of patent offices, so IP professionals will rightly press the case to do so. But it may not be so good for the rest of us, the ultimate users of the results, and may not be good for all patent holders equally. Precisely because the world is diverse, we are not yet in a position to agree easily on the details of the ideal system. Solutions need to be effective overall, not just for the few. We need to seek balances between sometimes conflicting pressures: between developed and less developed countries, discovery and exploitation in science, private and public, free release and monopoly.¹⁶¹

¹⁵⁷ Minxin Pei, Carnegie Endowment for International Peace; Intellectual Property Rights: A Survey of the Major Issues, A Report for the Asia Business Council September 2005 available at <http://www.asiabusinesscouncil.org/docs/IntellectualPropertyRights.pdf> last visited on 01-03-2008

¹⁵⁸ See, e.g., Jaffe, Adam B. and Lerner, Josh (2004), Innovation and Its Discontents : How Our Broken Patent System is Endangering Innovation and Progress, and What to Do About It, Princeton University Press.excerpt from Carlos M. Correa. AN AGENDA FOR PATENT REFORM AND HARMONIZATION FOR DEVELOPING COUNTRIES.Retrieved from

¹⁵⁹ Idem, p. 19

¹⁶⁰ <http://press.princeton.edu/titles/7810.html>

¹⁶¹ John Sulston, International Patent Law Harmonisation, Development and Policy Space for Flexibility ,available at http://www.wipo.int/edocs/mdocs/scp/en/scp_of_ge_06/scp_of_ge_06_inf2.doc last visited on 12-03-2008

2.4-Overview of the success achieved

Though a typical situation in Austria lead to Paris convention. Paris convention can be regarded as the starting point of harmonization of patent system .It establishes certain basic principles of the patent system such as national treatment,recognition of priority right,independence of patent, compulsory licenses,PCT designed an user friendly filing system for patent applications in the contracting states. Besides this PCT establishes an extended international search report and publish the application in WIPO gazette.PCT also provides an optional International Preliminary Examination report on patentability. This report is non binding on the contracting states. These facilities are very much useful for the contracting states having no adequate search facilities.PCT explicitly exclude the substantive provisions.¹⁶² TRIPS defined the minimum standard for the basic frame work of Intellectual property. It sets out the minimum standard of protection to be provided by the member countries. It defines the main elements of the protection, the permissible exceptions to those rights and the term of protection. It also stipulates the domestic procedures and remedies for the protection of IPR. It also speaks about the dispute settlement through WTO's dispute settlement procedures.PLT explicitly exclude the substantive provisions of patent.¹⁶³ It harmonizes procedural requirements and steps: what may be required to obtain a filing date (Article 5), what may be required relating to the form and content of an application (Article 6), representation before a patent office (Article 7), various issues regarding communications (Article 8), what constitutes sufficient notification (Article 9), validity of patents if not in compliance with certain formal requirements (Article 10), relief in respect of time limits (Article 11), reinstatement of rights (Article 12), correction or addition of priority rights (Article 13). The PLT provisions should help to reduce the risk of errors by patent offices, and the time and costs of procedures for patent applicants, thereby facilitating the acquisition of patent rights internationally. The PLT also provides a clear linkage to the PCT for current and any future patent law harmonization (Article 16).¹⁶⁴

Discussions for harmonization of substantive patent law started under the auspice of wipo through SCP.at the tenth session of the SCP, held from May 10 to 14, 2004, the United States of America, Japan and the European Patent Office submitted a joint proposal designed to focus on an initial package of priority items including the definition of prior art, grace period, novelty and inventive step. According to the proposal, once international agreement was reached on those prior art related issues, discussions in the SCP could then focus on other issues. While this proposal obtained the support of a number of delegations, a number of other delegations opposed it, and emphasized the need to examine all the

¹⁶² Article 27(5) of the PCT.

¹⁶³ Article 2(2) of PLT

¹⁶⁴ Carlos M. Correa,University of Buenos Aires, AN AGENDA FOR PATENT REFORM AND HARMONIZATION FOR DEVELOPING COUNTRIES, available at http://www.wipo.int/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf last visited on 03-03-2008.

provisions of the current draft as a whole. India along with other developing nations has expressed his discontentment to this piecemeal approach.

“The Delegation of India noted that it had come prepared to discuss all the issues that had been discussed at earlier sessions. The Delegation observed that it had been stated that the four topics included in the first package proposed in document SCP/10/9 had been chosen because they were considered to be particularly important from the users’ point of view. However, it was necessary in this context to consider what was meant by the term “users”. In the Delegation’s view, the term was not restricted to applicants and third parties, but additionally included the public at large which also had an interest in the grant of patents. The Delegation therefore supported the view expressed by the Delegations of China and Egypt that the term “users” should be given a wide meaning and should, in particular, take into account the provisions of Article 7 of the TRIPS Agreement where the term “user” was used in the context of “users of technical knowledge” as distinct from “producers of technical knowledge” and thus excluded applicants, which are producers of technical knowledge. Although it was sometimes stated that the interest of the public at large was addressed by offices, that was not always the case as evidenced by the fact that, in many countries, separate independent entities, for example, the Federal Trade Commission in the United States of America, had been set up to explicitly address the interest of the public at large in the patent system. In view of this, the Delegation could not support restricting discussion to a limited set of topics which had been identified exclusively from the perspective of “users” in the limited sense of the term.

Although the Delegation agreed that the topics concerned were important, it considered that other issues were also important from the point of view of developing countries. In particular, as had been stated by several delegations in the Working Group on Reform of the PCT at its sixth session, the protection of genetic resources, traditional knowledge and folklore was an important part of the work of the SCP. **In addition, the promotion and transfer of technology were also important issues that should be addressed in the framework of the draft SPLT. The Delegation was therefore of the view that the proposal that the SCP should consider a limited set of topics with a view to concluding an “SPLT 1”, followed by an “SPLT 2” and “SPLT 3” was not in the interest of all countries.** For example, once a first package of topics had been adopted as “SPLT 1”, there was no guarantee that other topics, in particular the protection of genetic resources and traditional knowledge, would be taken up under an “SPLT 2”. Accordingly, although the SCP needed to address the four topics listed by the United States of America, Japan and the EPO, that should not be done with the exclusion of other issues, which were important to other delegations. **Nevertheless, the Delegation might consider a more limited SPLT concluded in a single phase, as it understood had been suggested by the Delegation of Australia, provided that it included topics of particular interest to developing countries, in particular concerning disclosure and other issues connected with genetic resources, traditional knowledge and folklore.”¹⁶⁵**

¹⁶⁵ Wipo website, standing committee on the law of patents, Tenth Session, Geneva, May 10 to 14, 2004, REPORT SCP/10/11

As discussed in the earlier chapter in the eleventh session of SCP, held on June 1 and 2, 2005. The Delegation of Brazil, on behalf of the "Friends of Development"¹⁶⁶, submitted a statement proposing the continuation of negotiations of the draft SPLT on the basis of the draft treaty as a whole and of other issues, such as provisions on the transfer of technology, anti-competitive practices, safeguarding of public interest flexibility as well as specific clauses on principles and objectives. While delegations recognized the importance of the work of the SCP and emphasized that the work on patent law harmonization should progress taking into account the interests of all parties, they did not reach agreement as to the modalities and scope of the future work of the Committee.

Further in a communication dated February 17, 2006, the International Bureau received a proposal from Argentina, on behalf of the Group of Friends of Development, entitled "Establishment of a Development Agenda for WIPO: a framework for achieving concrete and practical results in the near and longer terms", for consideration by Member States at the Provisional Committee on Proposals Related to a WIPO Development Agenda, to be held in Geneva from February 20 to 24, 2006.¹⁶⁷

As for the future work of the standing committee on the law of patents, in the 2007 Assemblies of the Member States of WIPO, Member states agreed to commission a report by WIPO on issues relating to the international patent system covering the different needs and interests of all member states by the end of March 2008 and this report will be a working document for a session of the SCP to be held in the first half of 2008.¹⁶⁸

2.5 - Other development towards harmonization

TRILATERAL CO-OPERATION

The objectives of the trilateral cooperation includes inter alia "harmonizing practices of the three Offices" and "exploiting the full potential of work performed

¹⁶⁶ The Group of Friends of Development (FOD) comprises Argentina, Bolivia, Brazil, Cuba, Dominican Republic, Ecuador, Egypt, Iran, Kenya, Peru, Sierra Leone, South Africa, Tanzania, Uruguay and Venezuela .

¹⁶⁷ Source: http://www.wipo.int/edocs/mdocs/mdocs/en/pcda_1/pcda_1_5.doc

¹⁶⁸ Francois Simon –Vianes, Current Discussion on IP issues in WIPO, Training Course on Industrial Property Administration, WIPO-JAPAN Fund in Trust (FY 2007), held on 17 January 2008.

by the other Trilateral Offices in search, examination, documentation and electronic tools.¹⁶⁹

It speaks about the **Use of work results, exchange of examiners, and comparative studies**. The mutual exploitation of work includes the following:

Bilateral search results exchanges;
Trilateral feedback/gap analysis;
Volume and Availability Study.

A pre-requisite to re-using other Offices' results is harmonisation of procedures. The exchange of examiners has become an important tool to achieve this. The close interaction between examiners working in the same technical areas in different Offices enhances the understanding of working methods and the building of mutual trust.

Some of the projects undertaken under the auspice of Trilateral co-operations are :

FOCUS¹⁷⁰

"Focus" is an EPO proposed approach in which the Trilateral Offices select and identify technical areas where there is a high degree of cross filings between the Offices and concentrate their activities in the selected areas to build synergy between the different Trilateral projects. This approach will enable the Trilateral Offices to evaluate the benefits of the Trilateral Cooperation and its impact on the backlog. In the second stage, the Trilateral projects will be deployed across all technical fields.

Strategic Handling of Applications for Rapid Examination¹⁷¹ - **SHARE**

- Strategic Handling of Applications for Rapid Examination (SHARE) is a USPTO proposed concept in which each office will give priority to examining applications for which it is the office of first filing.

-This arrangement will maximize work sharing by eliminating timing imbalances that currently affect the availability of search and examination results from other offices, in turn reducing redundancy. The Office of Second filing will use the search and examination results from the Office of First Filing " to the maximum extent practicable", a concept endorsed by the Trilateral Offices.

Patent Prosecution Highway (PPH)

The Patent Prosecution Highway (PPH) is a JPO proposal . The purpose of the PPH is to facilitate an applicant's acquisition of a patent at an early stage worldwide and to enhance the utilization of search and examination results

¹⁶⁹ Website of the Trilateral cooperation, <http://www.trilateral.net/objectives/>

¹⁷⁰ Website of the Trilateral cooperation http://www.trilateral.net/projects/use_of_work_results/

¹⁷¹ *ibid*

between the world's major IP Offices so as to reduce the burden of examination and to enhance the quality of examination worldwide.

The PPH enables an application whose claims are determined to be patentable in the Office of First Filing (OFF) to undergo an accelerated examination in the Office of Second Filing (OSF) with a simple procedure according to a request from an applicant.

The PPH just reduces the procedural burden for requesting an accelerated examination and expedites the examination of an application, but the substantive examination is conducted according to the law of the country in the same way as a normal substantive examination.

A PPH pilot program between USPTO and JPO started in started in July 2006. The JPO also started PPH between the KIPO in April 2007, and PPH pilot program between the UK-IPO in July 2007.¹⁷² The JPO and the GPTO agreed at the Commissioners' meeting held in October 2007 to start a PPH pilot program between the two countries. Both offices will collaborate to implement the PPH pilot program in March 2008. The JPO and the UKPO agreed at Commissioner's meeting held in March 2007 to start PPH pilot program.

Based on the results of one and a half years' Eof pilot program, the USPTO and the JPO decided to start implementation of PPH program on full-time basis since January 4th, 2008.

Triway

Triway is a USPTO "search sharing proposal" in which a corresponding application must be filed in each of the Trilateral Offices and each application must be ready for examination (e.g., a request for examination must be filed, if one is necessary). This must include any required request for expedited examination, if appropriate. Searches will be conducted prior to substantive examination and shared among the offices and applicant, who will have an opportunity to amend or withdraw.

The Trilateral Offices plan to conduct a pilot program utilizing this system.

New route

The New Route proposed by the JPO is a new framework for international patent protection. It will deal with applications filed through the Paris Route. Under the New Route, a patent application filed with the Office of First Filing (OFF) will be regarded as being filed on the same date as the filing date in the Office of Second Filing (OSF). The search/examination results obtained in the OFF will be transmitted to the OSF within a certain period of time. At the same time, the New Route gives an applicant sufficient time (30 months from the filing (priority) date)

¹⁷² Website of JPO, url-
http://www.jpo.go.jp/cgi/linke.cgi?url=/torikumi_e/t_torikumi_e/patent_highway_e.htm last visited on 3-3--2008.

to think over whether or not his/her application should undergo an examination in the OSF based on the search/results issued by the OFF.¹⁷³

The New Route reduces the examination workload and increases the examination quality by providing for the mutual utilization of search/examination results on a full scale for Paris-Route applications, while giving an applicant more time to make a decision about whether to file overseas and the payment of accompanying costs.¹⁷⁴

2.6 Challenges before the Harmonization

The measure challenges before the harmonization of the patent law is the diversities found in the patent laws. The other challenge is the unevenness in the economic, social and industrial development of the countries. There is also fear that by joining the treaty the government will lose their ability to use patent as tool for technological and economical policy. There is also concern by some countries about the misappropriation of genetic materials and traditional knowledge by the firms from developed countries. Those countries wish to introduce clauses relating to disclosure of origin, prior consent from the owner and benefit sharing regarding the genetic sources and traditional knowledge in the substantive patent law treaty. Which is not acceptable to the developed nations. Further as per article 7 of the TRIPS article, one of the objectives of TRIPS is technology transfer. So there should be discussions on technology transfer too. So the countries discussing for the harmonization have their own agenda and priorities. This is also one of the major challenge for the Harmonization.

¹⁷³ Source:-http://www.jpo.go.jp/torikumi_e/t_torikumi_e/japan_usa_newroute_e.htm

¹⁷⁴ Source:-http://www.jpo.go.jp/torikumi_e/t_torikumi_e/japan_usa_newroute_e.htm

CHAPTER-3

Questionnaires and interviews

3.1 Questionnaires:-

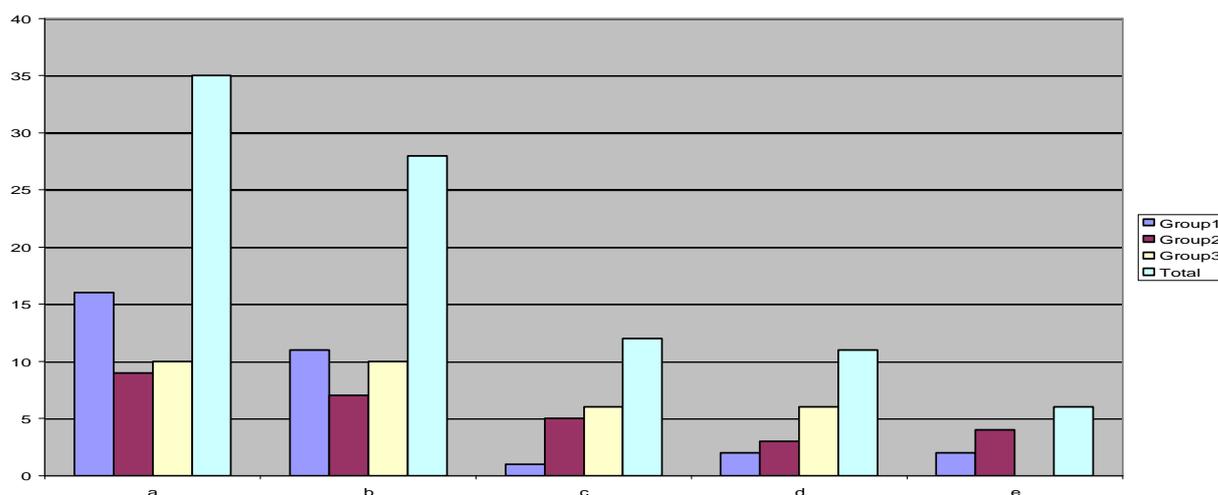
In order to study the advantages and disadvantages of the harmonization of patent systems 3 sets of questionnaires were prepared and were sent to some of the industries of the Japan, Attorneys' firm of Japan and IP professionals (mostly officials of patent office) of India. Some of the industries (Group 1 hereafter -22 nos.), attorney firm (Group 2 here after- 12nos.) and IP professionals (Group 3 here after -12 nos.) responded by answering the questions and writing their valuable comments too.

Most of the industries responded have the IP policy. Most of them are using the facility of PCT. Some of them are using Paris Convention route too for filing patent application in few numbers and for filing in neighboring countries. Half of the industries have the experience in filing the applications in developing countries like India and Brazil. Almost all the attorney's firm responded that they use the PCT system and file in developing countries like India and Brazil. The statistics of some of the responses to my questionnaires are given below.

1. What are the objectives behind filing patent application in developing or least developed countries?

- a. Manufacturing or production;
- b. Export;
- c. Prevention against import;
- d. Technology transfer to other;
- e. Others.

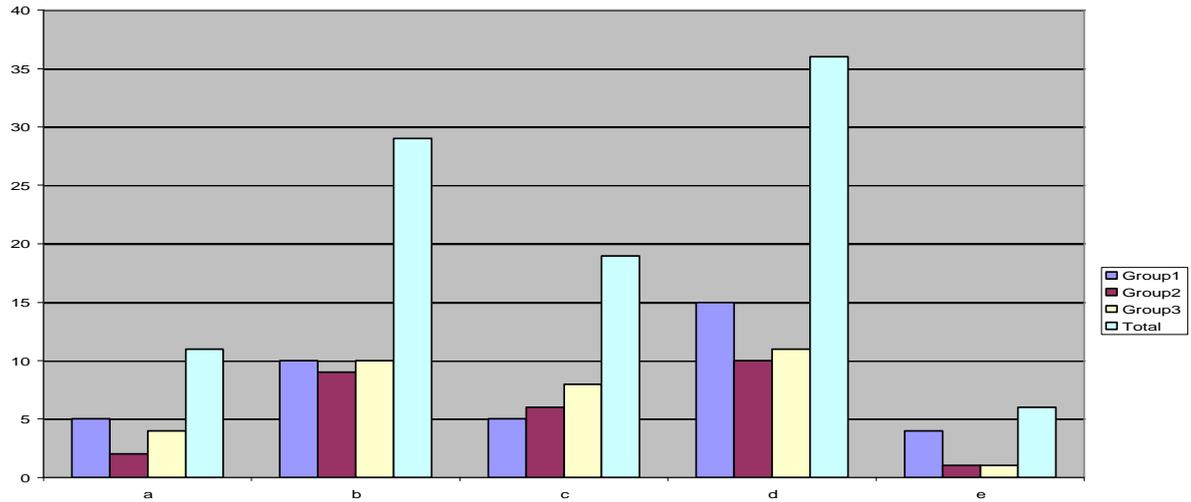
You can choose either of them or multiple, please write down your remarks if any.



2. What are your expectations from the Patent system of developing and least developed countries?

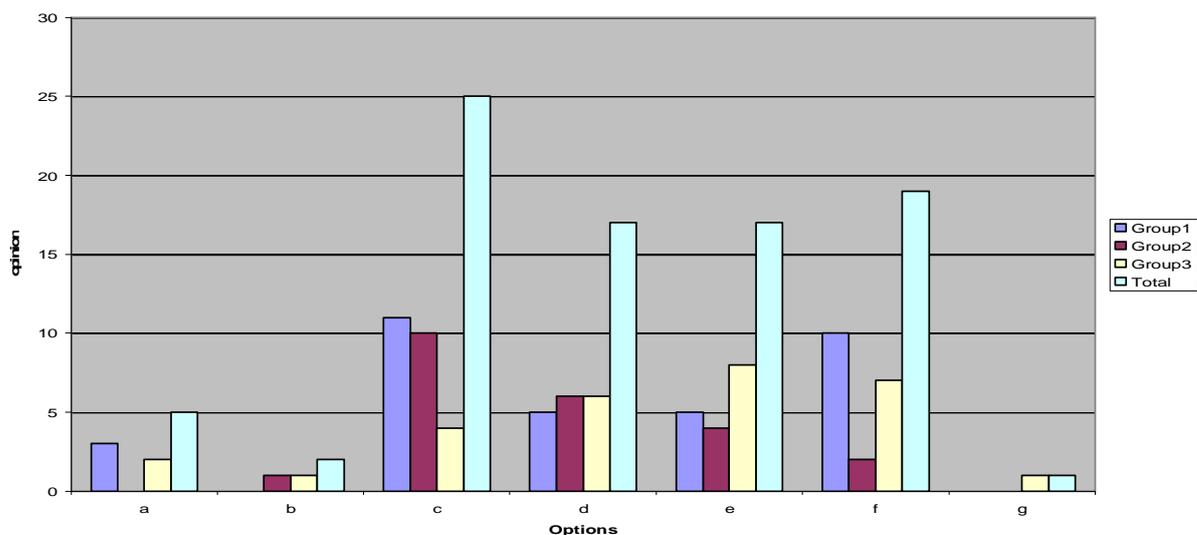
- a. Patent at low cost;
- b. Good quality patent;
- c. Timely grant;
- d. Enforceability;
- e. Others.

You can choose either of them or multiple, please write down your remarks if any.



3. Which of the following are major problems, you find in the patent system of developing or least developed countries?
- a. Complexity of filing procedure;
 - b. Fee structure
 - c. Translation;
 - d. Examination system and examination period
 - e. Diversities in substantive laws;
 - f. Inconsistency in interpretation of claims;
 - g. Application of Doctrine of Equivalence.

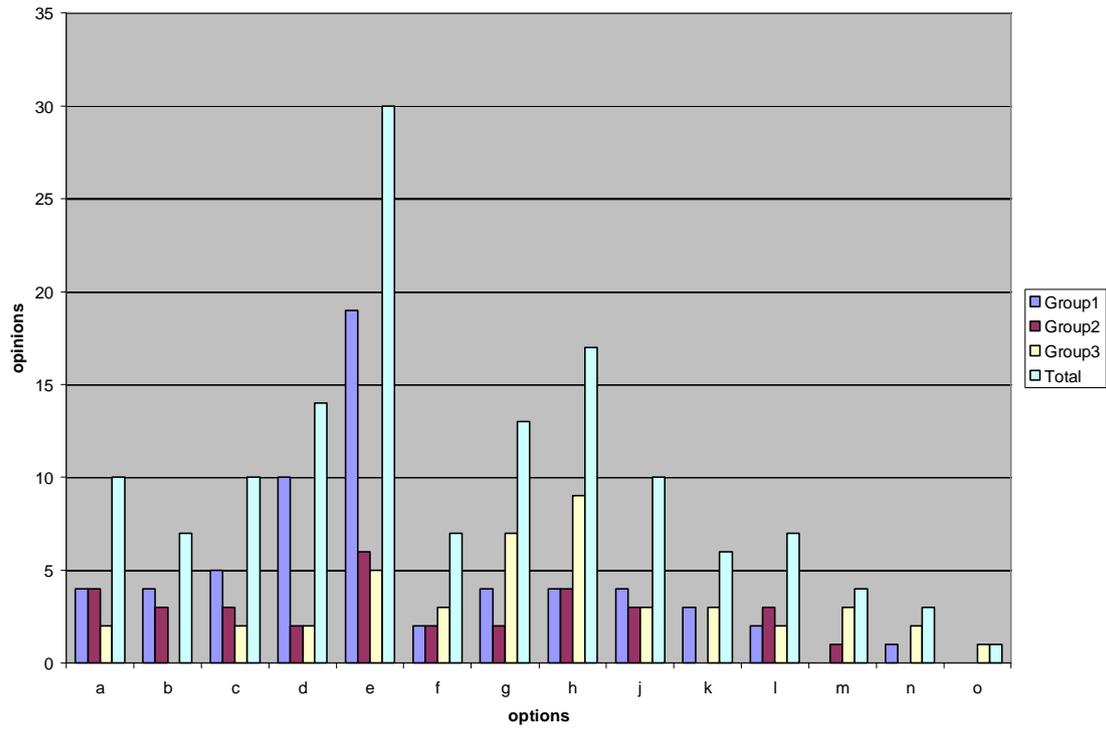
You can choose either of them or multiple, please write down your remarks if any.



4. There are diversities in national laws on various aspect of Patenting as mentioned below, which of the followings is/are the major concern for the industries:

- a. Prior Art
- b. Grace period
- c. Unity of Invention
- d. Novelty
- e. Inventive step
- f. Enabling disclosure
- g. Drafting of claims
- h. Exception to patent
- j. Invalidation or revocation of claims or patent
- k. Right to a patent
- l. Amendment or correction of application
- m. Amendment or correction of Patent
- n. Evidence etc.
- o. Others

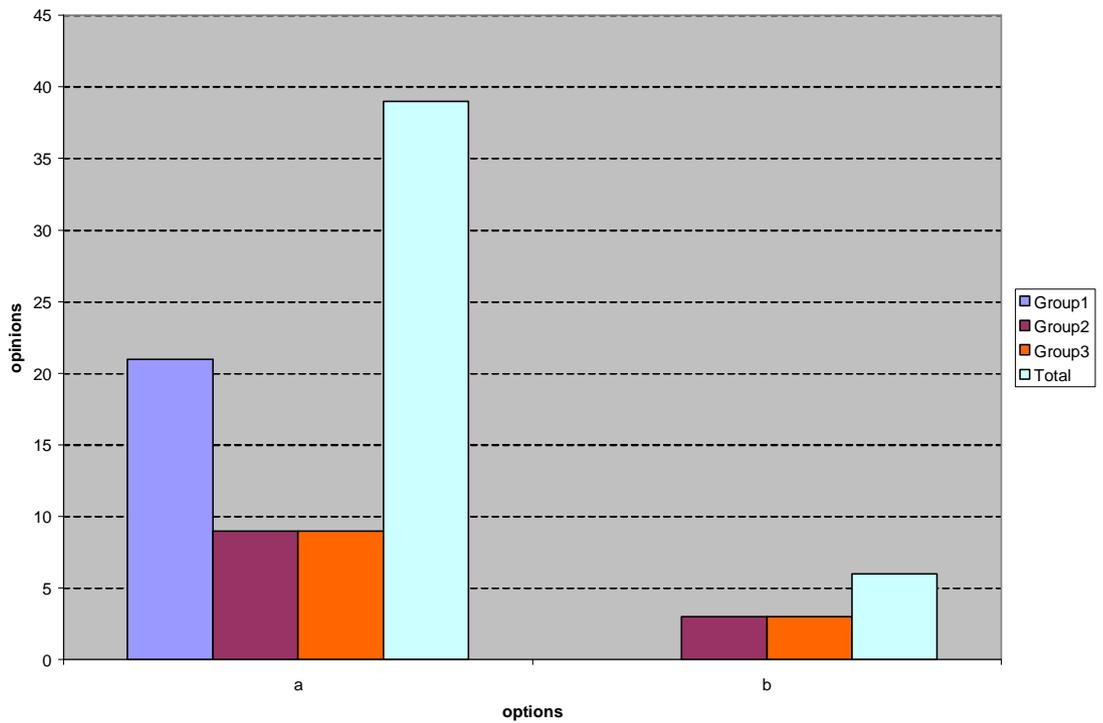
You can rank the above concerns by putting numbers (1,2,3..)against them , please write down your remarks if any.



5.Do you feel a need for harmonization of patent system?

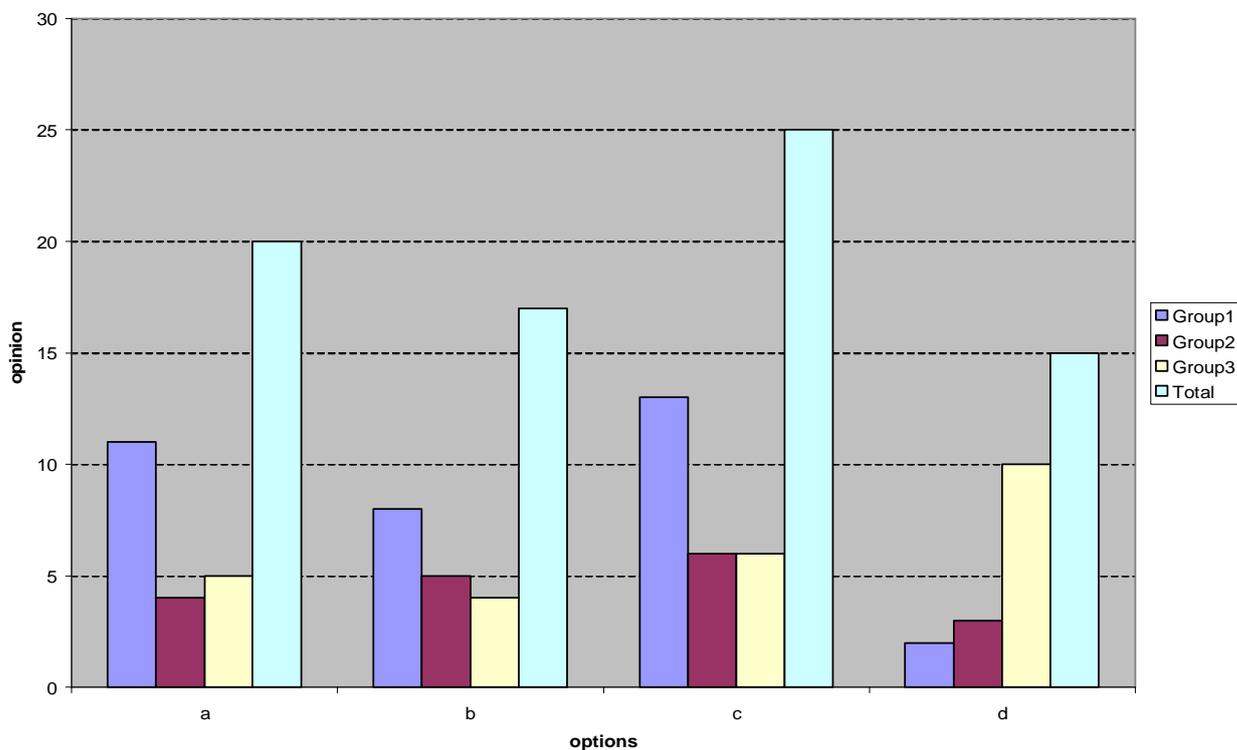
a.Yes

b.No



6. What are the main reasons for the harmonization of international patent system?
- a.Simplification of the procedure;
 - b.Unification of the systems;
 - c.Reliability/predictability of the system;
 - d. Enforceability of the system .

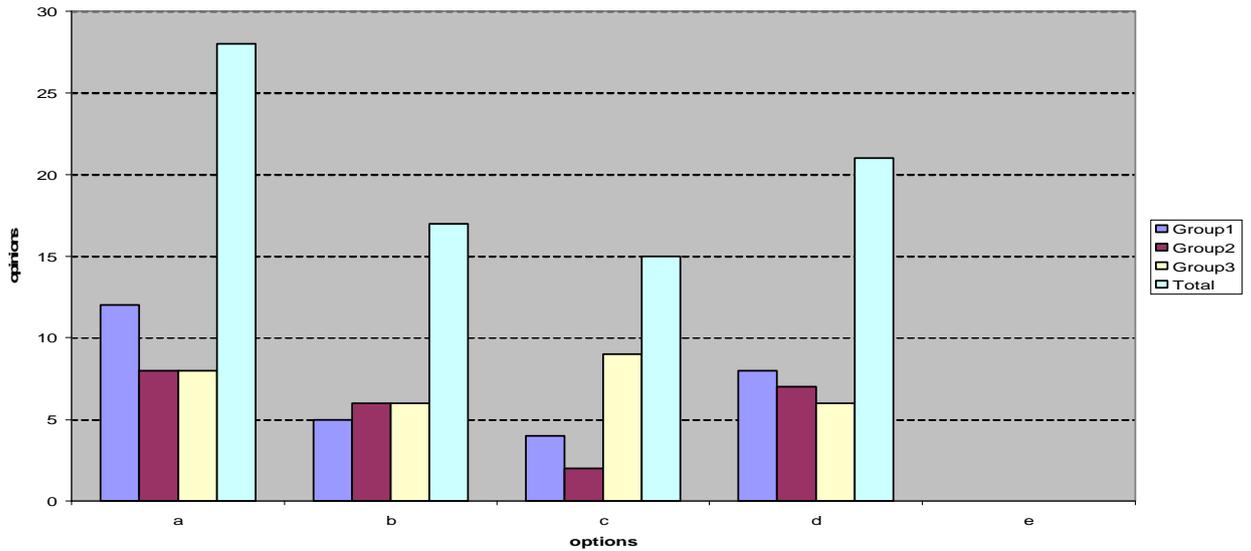
You can choose either of them or multiple, please write down your remarks if any.



7. In the future harmonization of patent system, in your opinion what would be the core principle?

- a.Strengthen the patent right protect;
- b.Accelerate the research and development;
- c.Safeguard the public interest;
- d.Accelerate the economical development;
- e.Others.

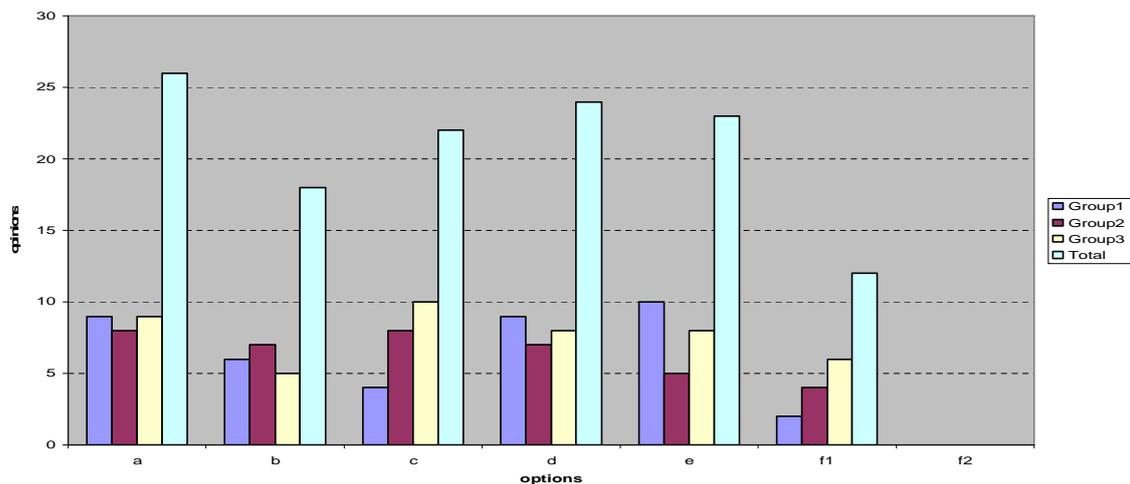
You can choose either of them or multiple, please write down your remarks if any.



8. In your opinion, what would be the advantages for the companies/industries/enterprise in developed countries?

- a. Simplify the patenting process;
- b. Reduce the cost of obtaining the patent right;
- c. Improve the predictability of the patent;
- d. Improve the enforceability;
- e. Create a safe market for exploitation of innovation
- f. Create an environment for technology transfer
- f. Others.

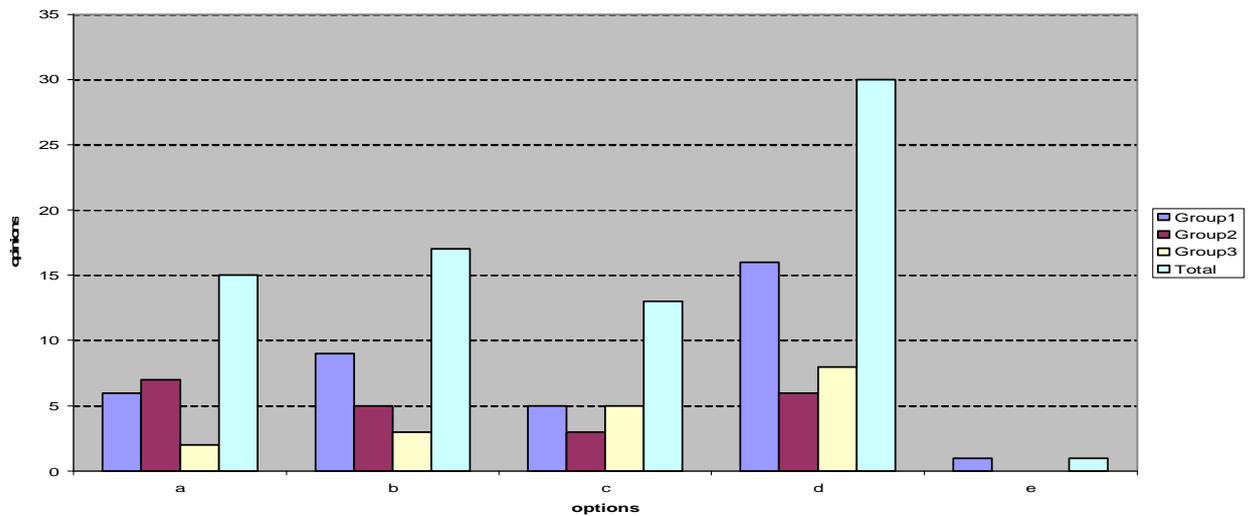
You can choose either of them or multiple, please write down your remarks if any.



9. In your opinion, what would be the disadvantage for the companies/industries/enterprise in developed countries?

- a. Increase the cost of patenting an invention;
- b. Increase the time period for grant of patent; (as the simplification of procedure and unification of system will lead to more application)
- c. Hamper research and development in certain field of technologies (e.g. software, business methods, biotechnology and nano technology)
- d. Increase legal hassles in developing and least developed countries (if their patent system is not strengthened)
- e. Others

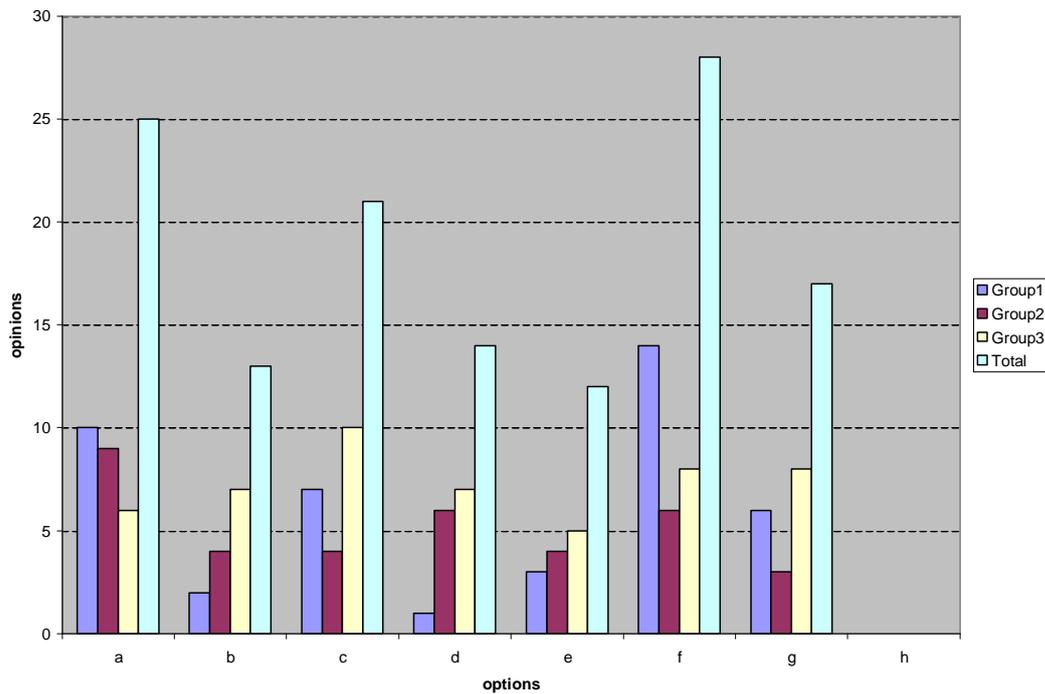
You can choose either of them or multiple, please write down your remarks if any.



10. In your opinion, what would be the advantages for the government in developed countries?

- a. Reduce the workload and duplication of work in patent offices;
- b. Enlarge the policy-space of the government;
- c. Enhance the international influence;
- d. Increase the foreign investment;
- e. Increase the R&D investment;
- f. Improve the IP environment of the countries;
- g. Facilitate technology transfer
- h. Others.

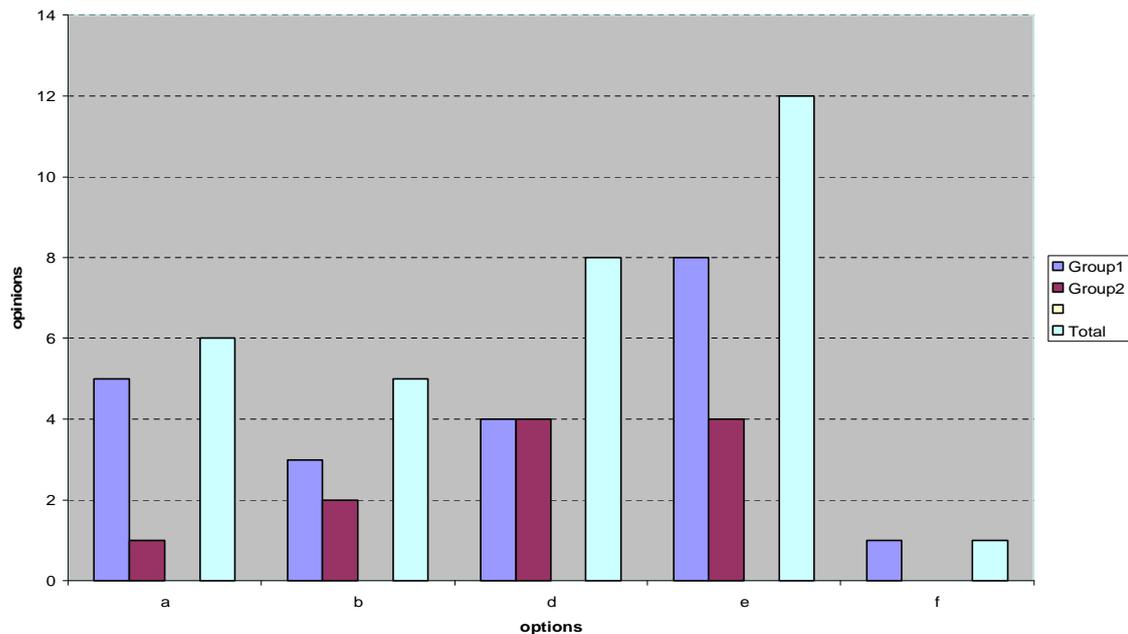
You can choose either of them or multiple, please write down your explanation.



11. In your opinion, what would be the disadvantages for the government in developed countries?

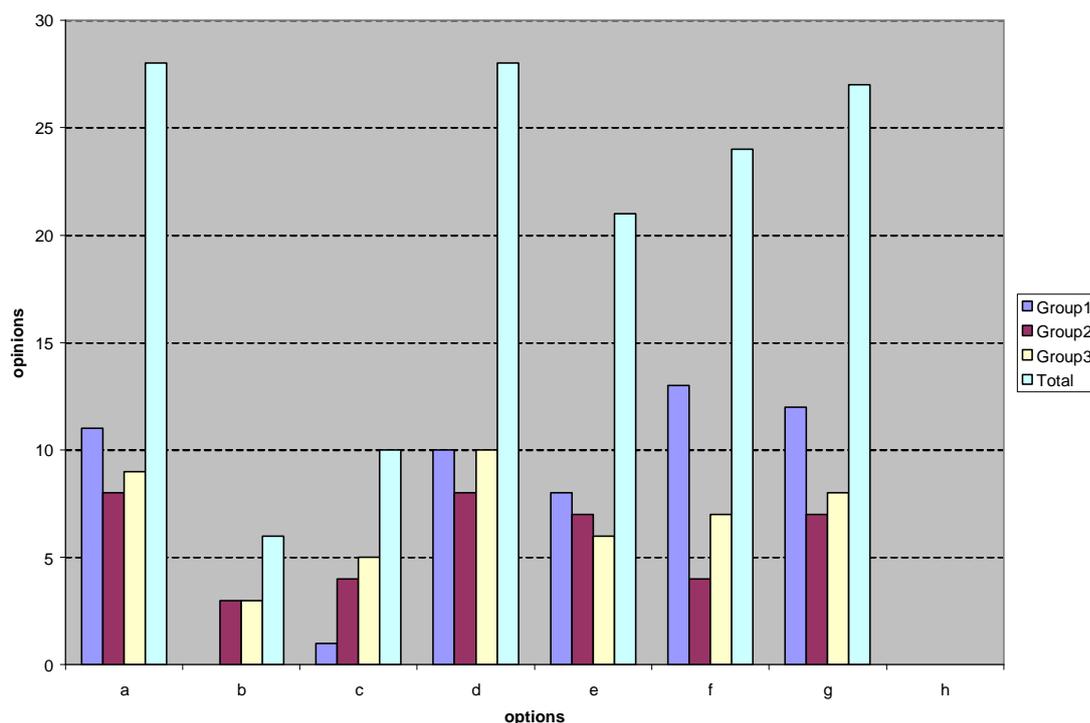
- a. Reduce the policy-space of the government;
- b. Reduce the foreign investment;
- d. Reduce the R&D investment;
- e. Deteriorate the environment of the innovation;
- f. Others.

You can choose either of them or multiple, please write down your explanation.



12. In your opinion, what would be the advantages for the government in developing countries?

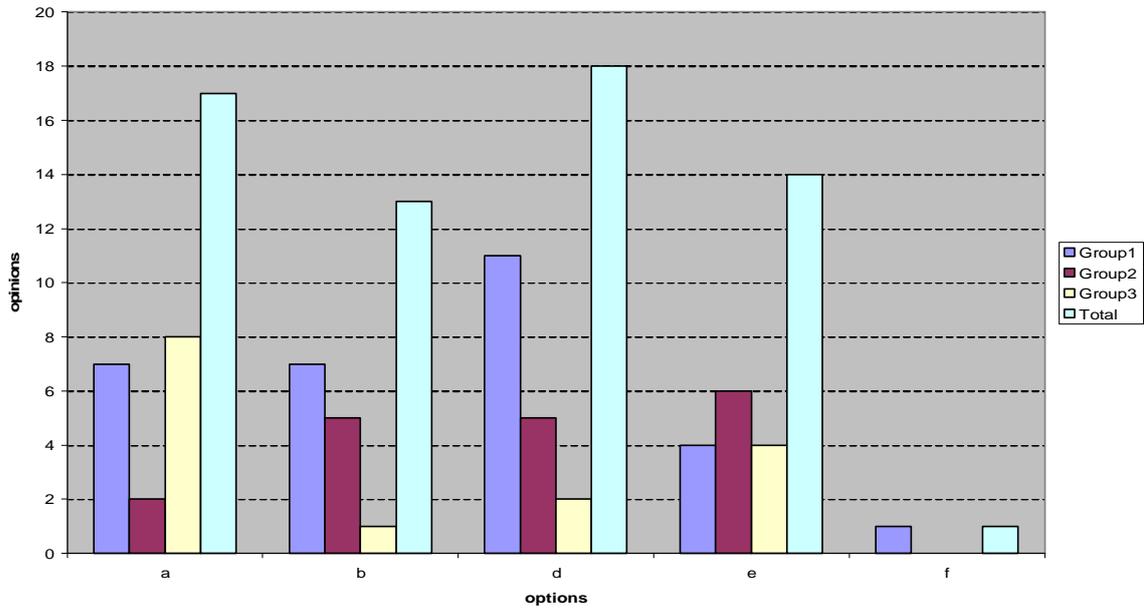
- a. Reduce the workload and duplication of work in patent offices;
- b. Enlarge the policy-space of the government;
- c. Enhance the international influence;
- d. Increase the foreign investment;
- e. Increase the R&D investment;
- f. Improve the IP environment of the countries;
- g. Facilitate technology transfer
- h. Others.



13. In your opinion, what would be the disadvantages for the government in developing countries?

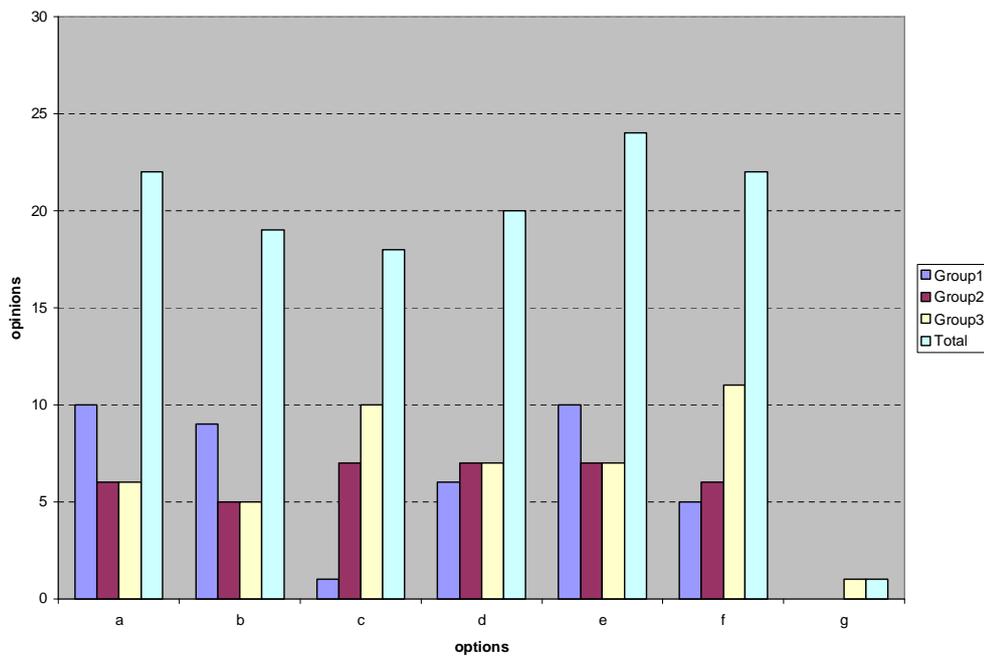
- a. Reduce the policy-space of the government;
- b. Reduce the foreign investment;
- d. Reduce the R&D investment;
- e. Deteriorate the environment of the innovation;
- f. Others.

You can choose either of them or multiple, please write down your explanation.



14. In your opinion, what would be the advantages for the companies/industries/enterprise in developing countries?

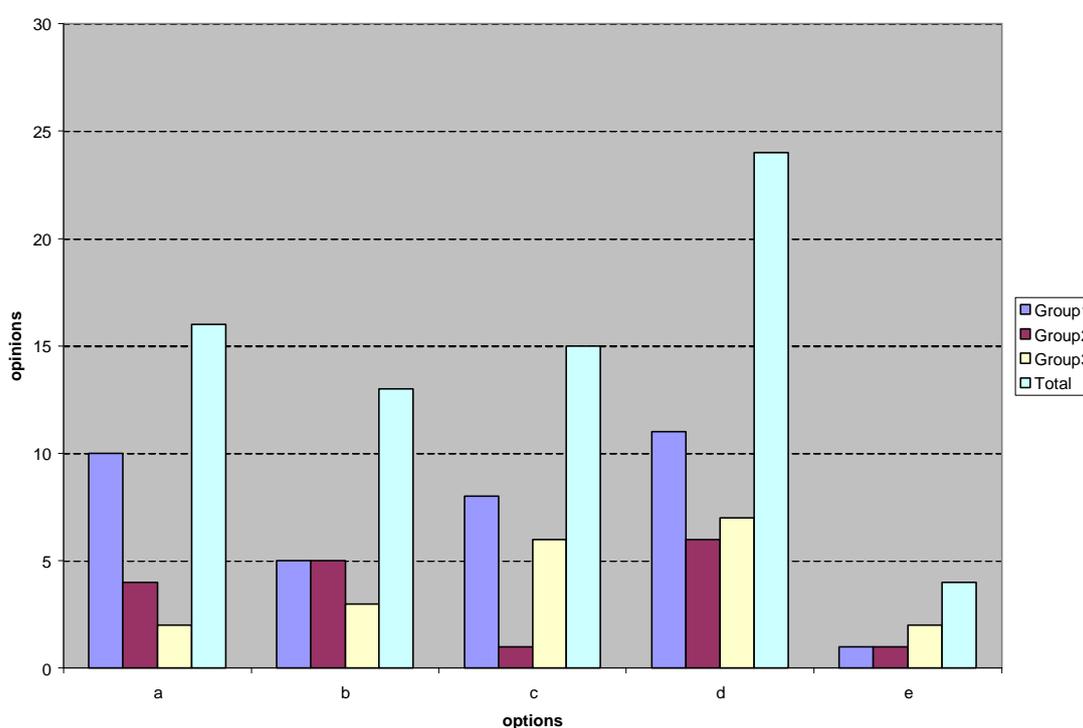
- a. Simplify the patenting process;
- b. Reduce the cost of obtaining the patent right;
- c. Improve the predictability of the patent;
- d. Improve the enforceability;
- e. Create a safe market for exploitation of innovation
- f. Create an environment for technology transfer
- g. Others.



15. In your opinion, what would be the disadvantages for the companies/industries/ enterprise in developing countries?

- a. Increase the cost of patenting an invention;
- b. Increase the time period for grant of patent; (as the simplification of procedure and unification of system will lead to more application)
- c. Hamper research and development in certain field of technologies (e.g. software, business methods, biotechnology and nano technology)
- d. Increase legal hassles in developing and least developed countries (if their patent system is not strengthened)
- e. Others

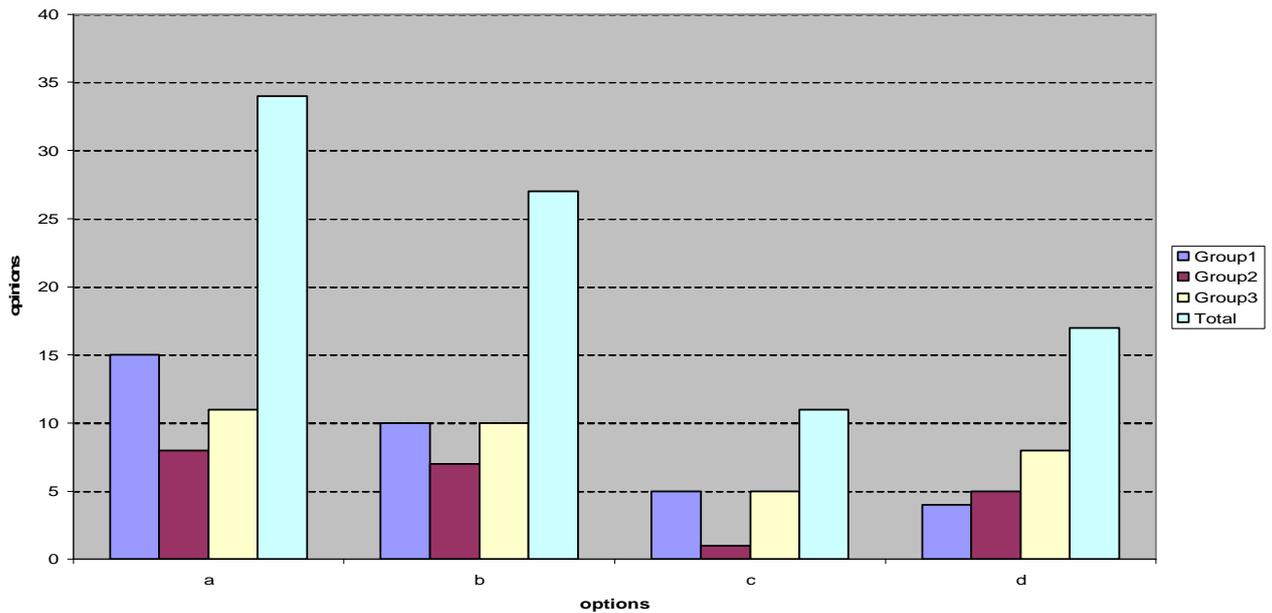
You can choose either of them or multiple, please write down your explanation.



16. What are the major obstacles in the future harmonization of patent systems?

- a. Diversities in national laws on various aspect of Patenting;
- b. Diversities in Socio economic condition in different countries;
- c. Sovereign will loose the ability to use IP policy as tool for technological and economical development;
- d. The diversities in expectations (interests) from harmonization

You can choose either one of them or multiple, please write down your explanation.



17..What kind of strategy expected from JPO or Japanese Government in the field of harmonization of patent systems?

In response to this question following responses were received.

A.JPO should take Leadership for achieving harmonization of patent systems. Some Industries also expect JPO to take leadership for unification of the patent law of each country. **The JPO should take the leadership so that other countries will adapt to the Japanese system.**

B. Some industries even wish the JPO to extend their Patent system to the developing countries.

C. JPO should nurture the examiners of the IP offices in developing countries. This is one of the best ways to achieve harmonization in interpretation of the common provisions of the substantive law.

D. JPO should take steps for **unification of examination standards with other countries, irrespective of technical fields.**

E. Industries further expected the JPO to establish guidance and surveillance system for developing countries not having enough knowledge about IP.

F. Execute special strategy for BRICS economy.

G. cooperation with the developing countries in examination and search and conduction of search and examination for the developing countries.

H. It should promote bilateral and multilateral discussion with developed, developing and least developed countries for better utilisation of patent system.

I. It should Harmonize the system amongst countries party to bilateral and multilateral treaty and then leading the world by example.

J.JPO should take leadership in Establishment of a regional patent system like EPO, where in harmonization can be said to be successful;

K.integrate the database and search system.

18. What are your expectations from the trilateral co-operation amongst EPO,JPO and US in the field of harmonization of patent systems?

The responses were as follow:

A. To provide uniformity of right.

B.simplification of the procedure of obtaining patent right.

C.harmonization of the standard of examination and to use the examination result of other countries.

D.Unification of the standard of patentability and judgment standard of validity.

E. harmonization of the judgment standard to have identical judgment on inventive step between EP, US and Japan.

F.exploration for the option of the grant of a trilateral patent and then for a world patent.

G Decreasing the cost of obtaining a patent.

19. What kind of strategy your companies/industries expect from Government of India in the field of harmonization of patent systems?

The responses were as follow:

A. Reinforcement of patent system,

B.Decrease of work load in examination by using examination result of other country

C.Promulgation of IP strategy taking the progress of innovations into consideration

D.Protection of IP with same level as Japan, US and Europe.

E.Introduction of high way in the patent system.

F.Agreement with other countries as in trilateral cooperation

G. Leadership among bric countries for harmonization

H. Improvement of the quality of Patent attorney

I. Arrangement of patent system which should contribute to the promotion of investment

J. Fair examination

K. Enrichment of the enforcement laws against infringement of patents right

L. In keeping with the drastic development of industrial power in recent years, the construction of an intellectual property system that can join the highway networks established between Japan and the us and eu, between Japan and Korea, between JP and UK etc.

M. Upgradation of india's search system on IPR. Patent gazette and data base will be organized that can be accessed on the internet from other countries.

N. When a new use of known substance is discovered, it is expected that the harmonization of the patent system with other major countries will be promoted in the direction of approving a patent for a use invention.

O. A patent holder is obliged to present a working report on the extent to which a patented invention is worked in India on commercial scale. It expect that this should be abolished in order to realize harmonization with other major countries.

P. Improvement of publication system (arrangement of IPDL)

Q. Patent procedure should be more trust worthy

R. The clarification regarding material patent and medical and pharmaceutical patent

S. Unification of four patent offices

T. Improvement of quality and speed of examination

U. Solution for backlog of patent applications

V. Improvement of system in the patent office

W. Increase the no of examiner

3.2 Interviews;-

With the efficient cooperation of APIC, I got the chance to interview the IP professionals of industries like Toyota Motors and Daikin Industries, attorneys from "A.Aoki, Ishida & Associate" known as Seiwa patent office and IP professionals of Osaka Institute of Technology. Their experiences in IP matters provided some valuable information for my research. The following questions were asked, and very valuable opinions were received,

1) What are the main advantages of harmonization?

The main problems in the patent systems of different countries are the dissimilarities in formal, substantive and procedural provisions. These dissimilarities cause a lot of trouble in patent processing. With the harmonization of the patent system, these dissimilarities will not be there. The process of getting a patent over a number of countries will be simpler and cost-effective. Moreover, the predictability of the patent will be improved. The enforceability of the patent will be improved, and this will create a safe environment for the companies to transfer technology or invest in other countries. With harmonization, the mutual exploitation of the search and examination results of one application can be best utilized by the examiner of another office. So harmonization will help in weeding out the duplication of work, thus helping in reducing the work load of the patent offices.

2) What are the disadvantages of harmonization for the developed countries?

It all depends on the level of harmonization. Developed countries always seek for a higher standard for patentability. If the harmonization is towards a higher standard, then there will be no disadvantages for the developed countries.

3) What are the disadvantages of harmonization for the developing countries?

Eventually, all the developing countries have to harmonize their patent systems. If they do not do so, they will not have access to technology, and there may not be FDI. Their technological standard will not improve. By harmonizing the laws for stronger IP, the competitive power of the developing countries may be down for the short term, but in the long term, it will be better.

4) Don't you think that the developing countries should have flexibilities in deciding the patentable subject matter?

TRIPS has already provided the flexibilities. If they wish to encourage inventions having very small improvements, they should adopt the utility model, as the utility model system has worked well in Japan.

5) Don't you think that the companies of developed countries will be more beneficial, they will form the patent network to block others from using the technology?

There are provisions available in the legislation to deal with such type of such type of abuse of patents.

6)What are your expectations from the Bilateral or trilateral arrangement of JPO with other countries?

Harmonization upto the level of examination atleast. So that mutual exploitation of search and examination result can be best utilized.

3.3 Considerations on Questionnaires and Interviews :-

From the analysis of the responses to the questionnaires and the interviews the following facts were found:-

1. Patent applications are filed for manufacturing, export, prevention against import, technology transfer and foreign direct investment. From the answers it was also found that patent applications are also filed to block the competitor from the technology and from imitating. Recent trends in filing also shows that certain applications are filed as a competitive measure. Patent is used in both positive and negative manner. The question was directed to know the intention behind filing the patent application and the answers received seems to be honest.
2. As far as user's expectations from the patent system of developing countries are concerned, the enforceability of the patent is most important followed by good quality of patent and timely grant. An effective examination system is also one of the expectations. The quality of examination varies among the examiners, which can be overcome by training.
3. The major problems in the patent system of developing countries came out to be the translation followed by the inconsistency in interpretation of claims. The selection of a patent agent is also an important issue as there are lack of information and difficulty in judging the quality. Again the inconsistency in the interpretation of claims is there among the examiners and the judges, which can be overcome by the guidelines and trainings.
4. The major concern for the applicant as far as diversities in the substantive patent law is concerned is the inventive step. The judgment regarding inventive step varying from country to country. Though the provisions regarding inventive step is almost similar in most of the countries the approach taken by the offices are different. This also holds goods regarding claim interpretation. This necessitates the harmonization of not only laws but also the practices among the offices. The exceptions to patentability comes next as one of the concern for industries. Inventions relating to Software and business methods are not patentable many countries. Similarly inventions related to biotechnological field are also examined critically for patent.

5. Though number wise many respondent are for harmonization of the patent system ,if I analyze the segment wise answer, I find the industries are very much keen for harmonization, where as there are some attorneys and IP professionals who are not for the harmonization. Those who are not for the harmonization doubt about the level of harmonization and the preparedness of the country economically, socially or technically to adopt the harmonized law. Some even consider that harmonization of patent law will be beneficial for the companies of developed countries only as they are in an advanced stage. In the views of some the patent rights are granted as per socio-economical conditions of the each country and as per independent national law of sovereign government. It can't be harmonized fully as every country has its own concern. It can be harmonized up to certain extent but not completely. National/public interest and development of country should be kept in mind when discussing for harmonization of patent system, as the harmonized patent system will help to more to developed countries than developing countries and their players.

6. The main reason for the harmonization came out to be the reliability / predictability of the system. Then follow the simplification of the system, unification of the system and at last came the enforceability of the patent. It reflects the trend in patenting, as very few patents are successfully enforced. Enforceability is not the major concern for the industries and the attorneys. However the IP officials consider it as the major concern.

7. According to the responses the core principle for harmonization will be strengthening of the patent right, followed by the acceleration of economic development, acceleration of the research and development and at last the safe guard of public interest. Here I think the industries and the attorneys of Japan are prejudiced that TRIPS agreement has provided enough safe guards for public interests. However the IP officials of India consider safeguard of public interest should be the core principle for harmonization.

8. Regarding the advantages of the harmonization of patent systems for the industries of the developed countries, the industries do not feel strongly that it will create an environment for technology transfer. The attorneys also think in the same way. There are also no empirical evidence in the literature that the strong IP system will spur technology transfer.

9. Regarding the disadvantages of the harmonization of patent systems for the industries of the developed countries from the response it seems the legal hassle in developing and the least developed countries will be increased provided that the patent system is not strengthened. From the interviews however it seems that the industries find no disadvantages from the harmonization of patent system.

10. Regarding the advantages of the harmonization of patent systems for the government in developed countries it will improve the IP environment of the countries, Reduce the workload and duplication of work in patent offices, enhance the international influence and Enlarge the policy-space of the government.

11. According to the responses the advantages for the developing countries are reduction of the backlog, increase if FDI, technology transfer and over all creation of an IP environment.

12. The main disadvantages of the harmonization for the developing country will be the Reduction in the R&D investment, reduction of policy space for the government, Deteriorate the environment of the innovation; Reduction in the foreign investment. However the IP officials of India feel that the major disadvantage will be the reduction of policy space for the government. Patent is a sovereign issue. The liberty should be with the government to use patent as a tool to frame economic and industrial policies. The industries of Japan feels that TRIPS had provided enough flexibilities.

13. Through harmonization a safe market can be created for the companies of developing countries. Also harmonization of patent system will create an environment for technology transfer and simplify the process too. Whether strong IP system creates an environment for technology transfer is yet to be verified. With a less chance of imitation or infringement the owner of the patent right may tend to monopolize the market fully without transferring the technology.

14. The major disadvantages for the companies of the developing countries will be increase the legal hassle. The cost of patenting will be high and the research and development may be badly impacted. With a strong Ip system The risk of weakening of a suit motivates the participants to acquire multiple patents, hoping that with enough potential counterclaims, they can fend off or negotiate their way out of difficulty. The result is a vicious cycle: thickets of rights that are expensive to clear, requiring an ever larger arsenal of defensive protection.¹⁷⁵

15. Regarding the expectation from JPO. There is a high demand that JPO should take the leadership in the direction of harmonization and lead by example.

16. There are some suggesting also for creation of an Asian patent office with the leadership of JPO.

17. Regarding the expectations from India, many wish Indian patent system to improve. There is no searchable electronic database. Though the applications are published not searchable. There is a demand for creation of IPDL. some also wish India to lead the BRIC economy. There is also severe discontentment regarding the quality of patent attorney in India.

¹⁷⁵ Excerpt from JEROME H. REICHMAN and ROCHELLE COOPER DREYFUSS.
**HARMONIZATION WITHOUT CONSENSUS: CRITICAL REFLECTIONS ON DRAFTING A
SUBSTANTIVE PATENT LAW TREATY**

CHAPTER- 4

Summary, Conclusion and Recommendation

4.1 Summary

Since the enactment of the Venetian statute in 1474, patent laws have been developed in many countries taking into consideration the social, economic and industrial condition of the country. The patent law is territorial in nature. But trade is extraterritorial in nature. With the help of modern transport and communication facility the trade has reached the new zenith. The producer of the technology wish to protect their technology in the countries of their interests. The invention is same but subjected to different procedures and different provisions of law relating to patent. This causes discontentment in the user of the patent system. Besides the discontentment the number of applications for patent are rising. The average annual rate of increase in world wide total patent filings has been 4.7% since 1995. The no. of non resident applications world wide stands at 38%. It can be seen that there are some countries where more than 90% of the applications are nonresident applications. There is a great probability that these 38% non resident applications are due to filing of the applications for same invention in multiple countries. Due to absent of a global patent system such duplication occurs. The workload on the patent offices are increasing and the user is bearing the cost as well as facing the difficulties in processing of patent application. The workload of the office cannot be simply reduced by augmenting the resources for search and examination. The concept of work sharing should be adopted. This concept of work sharing can only be fully successful if the laws regarding the patentability become the same.

It is sometimes very difficult to invent a thing. But once it is invented, it may be very easy to imitate or duplicate. So the creator of new technology need protection. Protection in all the field of activities is necessary. But some countries prohibit patents for certain category of inventions depending upon various conditions. So those countries become a no no area for the creator of the new technologies. So the creation of new technology wish that the country's law should allow the patent for his kind of invention.

So the harmonization of the patent system is essential. The harmonization of patent system inter-alia simplify the patenting process; reduce the cost of obtaining the patent right; Improve the predictability of the patent; Improve the enforceability; create a safe market for exploitation of innovation and create an environment for technology transfer. Further for the government it reduce the workload and duplication of work in patent offices; enlarge the policy-space in case of developed countries; enhance the international influence; increase the foreign investment; increase the R&D investment; Improve the IP environment of the countries and facilitate technology transfer.

After harmonization of the patent system the government can not use the patent system as a tool for deciding the social, economical and industrial policy. The policy space of the government will be restricted.

Harmonization of patent system often presumed to be the harmonization to a strong IP standard. If this is the case it will have certain negative impact. Strong IPR protection can hinder, rather than nurture, economic development, while economies with weak IPR protection can actually gain advantages. The industries can follow the path from imitation to innovation over a period of time. With the help of no Patent law in Holland, Phillips become the MNC. Many countries which are developed now have followed the path of imitation to innovation in the past.

In an harmonized patent system if a mistake occur in one system then there is very little chance that the mistake will be detected and corrected in another system. For example if the search examiner skipped one particular prior art, there is very rare chance that the examiner in other office will find that prior art.

Due to harmonization as the provisions of the laws of all the countries will be the same, there is no question of finding any best provision to tackle a particular situation which may arise.

However all the above disadvantages can be overcome or bear with if the advantages accrued due to harmonization is quite more.

With the Paris convention, PCT, TRIPS and PLT in place, the basic infrastructure of the patent system is ready and the formal aspects to some extent are harmonized. Only the substantive aspects need to be harmonized. The harmonization process under the auspice of WIPO came to a de facto suspension when at the tenth session of the SCP, held from May 10 to 14, 2004, the United States of America, Japan and the European Patent Office submitted a joint proposal designed to focus on an initial package of priority items including the definition of prior art, grace period, novelty and inventive step. A number of countries including India and Brazil did not support the proposal and the discussion on harmonization remain suspended. At the eleventh session of SCP, held on June 1 and 2, 2005. The Delegation of Brazil, on behalf of the "Friends of Development," submitted a statement proposing the continuation of negotiations of the draft SPLT on the basis of the draft treaty as a whole and of other issues, such as provisions on the transfer of technology, anti-competitive practices, safeguarding of public interest flexibility as well as specific clauses on principles and objectives. While delegations recognized the importance of the work of the SCP and emphasized that the work on patent law harmonization should progress taking into account the interests of all parties, they did not reach agreement as to the modalities and scope of the future work of the Committee.

After accession to TRIPS, the impact of stronger patent system on the developing countries are not much studied. There should be clear cut study regarding the

effect of strong Patent system on GDP, FDI, Technology transfer and research and development. Mere counting of application no and then relating it to economical parameter does not solve the purpose. The surge in application number may be the out come of the economical development due to other factors.

Some of the countries just started allowing the product patent for substances. The Impact of this on public health should also be studied. So time should be taken for implementation of any of the future harmonized law.

WIPO is not the only organization through which efforts for harmonization can be thought of. The EPO, JPO and USPTO through their Trilateral cooperation have started the PPH. Through this way the search and examination of one office is utilized by the examiner of other offices. However for better work sharing, there should be some harmonization on the limited provisions of the patent law which affects the patentability and the scope of patent.

4.2 Conclusion

Harmonization process which has been started with the Paris convention has reached a long way, from where it can go ahead only. The progress in the WIPO forum has been suspended temporarily but efforts for harmonization has not yet stopped.

There are advantages and disadvantages of the harmonization of the patent system. The developed countries are in an advantageous level in economy and technology. Most of the developing countries are certainly economically and technologically at lower level. So one size will not fit all. So the provisions of formal and substantive laws have to be harmonized to some extent which will suit the interest of both developing and developed countries.

The main concerns regarding the dissimilarities in the substantive patent law are the inventive step determination and exceptions to patentability. The developed countries are obviously pressing for higher standard of inventive step. The out come of R&D from the developing countries may not meet that standard and cannot get patent protection. This will discourage the innovation. However other system of recognizing or awarding the invention may be thought of. One such system is utility model. The system has proven its credentials in Japan.

For both the developed and developing countries the advantages of harmonization will be in reduction in workload and duplication of work in patent offices and improve the IP environment .

The core principle of harmonization of patent system came out to be strengthening of patent right. If the patent law is harmonized towards the stronger patent system, then it is assumed that there will be increase in technology transfer and foreign direct investment. This is also reflected from the responses to questionnaires and interviews. However there is no empirical study to provide concrete evidence that strengthening patent right will spur technology transfer and foreign direct investment. In absence of any risk of being imitated and infringed

the patent owner will not wish to transfer the technology. The patent owner will like to have market monopoly.

Many countries have adopted the path from imitation to innovation with the support of weak patent protection in the past. The same path should also be available for the developing countries too. The developing countries should be given time, so that their industries should learn and gather enough expertise to innovate. If the patent right is strengthened due to harmonization, it may be advantageous for the developed countries but may be disadvantageous for the developing countries.

There should be some flexibilities in this regard. The developing countries should press for such flexibilities in any discussion for harmonization.

It is also assumed that strong IPR will spur economic growth and growth in R & D. The responses to the questionnaire and interview affirm this. However, very few patents are commercialized. In absence of commercialization it is quite speculative to say that it will spur growth in economy. In absence of indigenous development of technology the country may pay a lot for importation of technology. Further study regarding the link of economic growth to strong patent system is required.

Further lack of awareness about patent among the industries and researchers is also an issue. Due to lack of awareness a strong patent system may create a fear among the researchers about infringing any patent. The industries from developed countries also form patent thicket to dissuade others from entering the vicinity of the field of the patented invention. The researchers should also be made aware about the scope of the patent and the exemptions available for research.

The major disadvantages for the developing countries will be the reduction in policy space. In the past many governments have used patent system as a tool for designing the economic and industrial policy. All most all the developed countries have utilized it in the past. So this facility should also be available for the developing countries to use the patent system for the interest of their public. TRIPS has provided some flexibilities in this regard. There should not be any effort to curtail these flexibilities further.

So what should be the approach?. The first stage should be the harmonization of the formal laws, next the harmonization of the substantive laws. There may be some differences in interpretation of the substantive laws. The next stage should address that and at the last there should be a single grant which will be valid over all the countries. (is not it possible?)

Regarding the harmonization of formal aspect of patent, PCT and subsequently PLT have paved the way for standardization and unification.

The obstacle is there in the next stage where harmonization of substantive patent laws will be considered. So it is essential first to achieve harmonization upto that

level where both the developing and the developed countries will be in advantages. So to reduce the work load and duplication of work in patent offices the effort should be made to harmonize the laws relating to prior art, grace period, novelty and inventive step. This will help in work sharing. the mutual exploitation of search and examination results can be best utilized.

4.3 Recommendation

The harmonization of patent system has both advantageous and disadvantageous effect. It all depends upon up to which level the laws are harmonized. As pointed out in the preceding chapters adopting a strong patent system may not be beneficial to the developing countries. India being a developing country may have the same concern. India has a fully TRIPS compliant patent law since 1st January 2005. The impact of TRIPS on the economy is not yet studied or understood. But due to increasing number of applications and demand from the user harmonization have become inevitable. So India should gear up for harmonization of the patent laws. The main disadvantages of the harmonization will be due to the lack of infrastructure and lack of awareness towards Patent.

The Government should do the followings for the better result from the future harmonization.

- The Government should try the best to bring our research and development level to that of the developed countries.
- The Government should encourage the industries for research and development and creation of intellectual properties (patent).
- The patent system should be improved. The patent office should not limit its function to administer the patent rights but it should act for the awareness of patent among the industrialists, researchers, students and general public at large.
- The patent documents should be made available to the public on electronic media like internet for dissemination of technical information contained there in.
- The Government should promote awareness programmes relating to IP.
- The Universities should be utilized as the centre for innovative activities. Act similar to Bayh-Dole act should be promulgated to encourage inventive activities in the universities.

- During the discussion for harmonization the Government of India should not compromise with the provisions for compulsory licensing in order to safe guard from possible abuse of patent.
- The government of India should not compromise with the research exemptions, bolar provision and parallel import.
- Before broadening the patentable subject matter the condition of the related industries ,the impact of allowing patents on those industries and general public should be studied and analyzed.
- The Government of India should try to protect the genetic resources and traditional knowledge from being misappropriated.
- The government may adopt the utility model protection system to promote low level IP activities by the individual inventors and SMEs.

The harmonization of patent system is not a goal by itself. However it is a long journey. In the first few steps by harmonizing the provisions related to Prior art, grace period ,novelty and inventive step, India can get the benefit of mutual exploitation of search and examination results of other countries. There by reduce the backlog and duplication of work. There by reducing the cost of patenting.

References

I. Laws, Regulations, Treaties and Conventions-

- Paris Convention for the Protection of Industrial Property
- Patent Cooperation Treaty
- TRIPS Agreement
- Japanese Patent Law(as amended in2005)
- Examination Guidelines for Patent and Utility Model
- Indian Patents Act 1970
- Draft SPLT

II Books and article:-

- FENG XIAOBING.THE HARMONIZATION OF THE PATENT SYSTEM. A Global patent System Is Possible or Impossible?
- Francois Simon –Vianes,Current Discussion on IP issues in WIPO,Training Course on Industrial Property Administration,WIPO-JAPAN Fund in Trust(FY 2007),held on 17january 2008.
- Ian Muir,Mathias Brandi-Dohrn,Stephan Gruber, European Patent Law, Law and Procedure under the EPC and PCT,Second Edition, OXFORD university press
- “International Patent Law Harmonization-A Search for the Right Balance”
 - Journal of intellectual Property rights Vol.10,may 2005,pp177-187
- GOMME, ARTHUR ALLEN, Patents of Inventions -- Origin and Growth of the Patent System in Britain, The British Council (1946),by Longmans, Green and Co.
- His honour Judge Fysh QC,SC,Ashley Roughton,Trevor Cook and Michel Spence ,Modern law of Patents
- Robert Pitkethly ,The European Patent System : Implementing Patent Law Harmonization,
- Carlos M. Correa,University of Buenos Aires, AN AGENDA FOR PATENT REFORM AND HARMONIZATION FOR DEVELOPING COUNTRIES

- *Dr. Michael Blakeney, Director, Queen Mary Intellectual Property Research Institute, Center for Commercial Law Studies, University of London, London* , THE INTERNATIONAL PROTECTION OF INDUSTRIAL PROPERTY: FROM THE PARIS CONVENTION TO THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS (THE TRIPS AGREEMENT)
- Diana L. Oleksa, *Office of PCT Legal Administration, U.S. Patent & Trademark Office*, THE ADVANTAGES OF USING THE PATENT COOPERATION TREATY
- Shinjiro Ono, deputy commissioner of JPO: "Substantive Patent Harmonization and Japan's Stance", Website: www.law.washington.edu/CASRIP/Symposium/, 2007-5-23.
- *Charles Pearson, Director, Office of PCT Legal Administration, United States Patent and Trademark Office, The PCT, Patent Law Harmonization, and the Future of International Patenting`*
- Jan E.M. Galama, EXPERT OPINION ON THE CASE FOR AND AGAINST THE INTRODUCTION OF A GRACE PERIOD IN EUROPEAN PATENT LAW
- *Document prepared by the International Bureau, "SUGGESTIONS FOR THE FURTHER DEVELOPMENT OF INTERNATIONAL PATENT LAW", STANDING COMMITTEE ON THE LAW OF PATENTS, Fourth Session, Geneva, November 6 to 10, 2000*
- Stephen Albainy-Jenei, in an article, 'United States: Patent Reform: What Does First-To-File Mean To Me?' 20 February 2008 available at <http://mondaq.com/article.asp?articleid=57298&login=true> last visited on 5-3-2008.
- Richard A. Neifeld , Viability of the Hilmer Doctrine,
- Anne Rejnhold Jørgensen in her Speech at the Open Forum Open Forum on the draft Substantive Patent Law Treaty (SPLT) March 1 – 3, 2006
- Article by Pavan K. Agarwal, Sharon Barner, Carole E. Handler, David G. Luetzgen, Steven C. Becker, Jeanne M. Gills, Larry L. Shatzer and William T. Ellis - `United States: Federal Circuit To Consider "Business Method" Patent Eligibility In En Banc Rehearing` ,27 February 2008 available at modaq news letter.
- Yoshinari Kishimoto of Sughrue Mion, Canon tests patent exhaustion doctrine, managing intellectual property Japan Focus, 2006 3rd edition,

- Prabhu Ram. INDIA'S NEW "TRIPS-COMPLIANT" PATENT REGIME.BETWEEN DRUG PATENTS AND THE RIGHT TO HEALTH.
- Anitha Ramanna ,India's Patent Policy and Negotiations in TRIPS: Future Options for India and other Developing Countries
- **Elisabeth Thouret-Lematitre,research exemption experimental use, Colloquia on Selected Patent Issues: The Research Exemption (October 11, 2006)**
- Takeshi ISAYAMA,Commissioner of JPO. Toward Desirable IP Systems ? Taking the Patent System as an Example. Chairman's Note for the Informal Meeting of the Heads of Patent Offices in Developed Nations, May 19-20, 1999.
- Robert M. Sherwood**.HUMAN CREATIVITY FOR ECONOMIC DEVELOPMENT: PATENTS PROPEL TECHNOLOGY*
- Dutfield, Graham , Does One size fit all? The International Patent regime.Harvard International Review • Summer, 2004 • International Trade,
- Minxin Pei, Carnegie Endowment for International Peace;
- Intellectual Property Rights: A Survey of the Major Issues, A Report for the Asia Business Council September 2005

III-Annual Reports, Surveys and other publications

- WIPO Patent Report, 2007 Edition
- ANNUAL REPORT INDIA
- JPO Annual Report
- Annual report ,Office of the Controller General of Patents,Designs,Trade Marks and Registrar of Geographical Indications,

IV-Websites

- **USPTO website -www.uspto.gov**
- WTO website - <http://www.wto.org/english>
- **WIPO Website-<http://www.wipo.int/>**
- **UNCTAD Website-<http://www.unctad.org/>**
- **Japan Patent Office website www.jpo.go.jp**
- **Asia Pacific Intellectual Property Centre website <http://www.apic.jiii.or.jp/>**
- European Commission-<http://ec.europa.eu/>
- State Intellectual Property Office (SIPO),http://www.sipo.gov.cn/sipo_English/
- National Institute of Industrial Property (INPI) of Brazil

- <http://www.inpi.gov.br/>
- JIPA website- <http://www.jipa.or.jp>
- Trilateral Co-operation Website - <http://www.trilateral.net>
- European Patent Office- <http://www.epo.org>
- OAPI Website - <http://www.oapi.wipo.net/en/>
- ARIPO website -<http://www.aripo.org/>
- Indian Intellectual Property Office (CGPDTM) <http://www.ipindia.nic.in/>
- Intellectual Property Office Philippines ,<http://www.ipophil.gov.ph/>
- <http://en.wikipedia.org/wiki/economic>
- <http://www.eps.nagoya-u.ac.jp/examin/991d/991dej.html>
- <http://www.myoutbox.net/popch01.htm> last visited on 29-02-2008.
- <http://www.oiprc.ox.ac.uk/EJWP1099.pdf>
- <http://en.wikipedia.org/wiki/Athenaeus>
- <http://en.wikipedia.org/?title=Hippodamus> last visited on 7th January 2008
- <http://www.altlawforum.org/PUBLICATIONS/document.2004-12-18.0853561257>
- <http://www.expresspharmaonline.com>
- <http://www.oiprc.ox.ac.uk/EJWP1099.pdf>
- <http://www.ficpi.org/library/montecarlo99/patentsafrica.html>
- http://www.ita.doc.gov/exportamerica/TechnicalAdvice/ta_PCT.pdf
- www.law.washington.edu/CASRIP/Symposium/
- <http://www.wmitchell.edu/lectures/pct+symposium/resources/Charles+Pearson.pdf>
- http://papers.ssrn.com/sol3/papers.cfm?abstract_id=841404
- <http://mondaq.com/article.asp?articleid=57298&login=true>
- <http://www.european-patent-office.org/news/pressrel/pdf/galama.pdf>
- <http://www.neifeld.com/hilmer.html>
- <http://www.tokugikon.jp/gikonshi/245kiko2e.pdf>
- <http://eupat.ffii.org/papri/wipo-splt01/index.en.html>

- <http://www.mondaq.com>
- <http://dnapatents.georgetown.edu/resources/Research%20Exemption%20Table.pdf>
- <http://jip.kentlaw.edu/art/volume%205/5%20Chi-ent%20J%20Intell%20Prop%20195.pdf>
- <http://www.uakron.edu/law/lawreview/docs/sherwoodgood333.pdf>
- <http://www.entrepreneur.com/tradejournals/article/120184959.html>
- <http://www.asiabusinesscouncil.org/docs/IntellectualPropertyRights.pdf>
- <http://press.princeton.edu/titles/7810.html>
- http://www.trilateral.net/projects/use_of_work_results/

Table-1
The Substantive Standard For Invention
In Some Developed Countries

	Japan	U.S .	Germany	United Kingdom	EPO
Filing system	First-to-File	First-to - Invent	First-to-File	First-to-File	First-to-File
Grace period	6 months	12months	6 months		6 months
Publication	18 months	18 months ¹⁷⁶	18 months	18 months	18 months
Publicly use at home/abroad	at home and abroad	Complex	at home and abroad	at home and abroad	at home and abroad
Inventive step	Yes	Yes	Yes	Yes	Yes
Practical application	Yes	Yes	Yes	yes	Yes
Specification Requirement	Sufficiently clear and complete	Sufficiently clear and complete	Sufficiently clear and complete	Sufficiently clear and complete	Sufficiently clear and complete
Claim Explanation	Description and drawings	Description and drawings	Description and drawings	Description and drawings	Description and drawings
Pre- and Post-granted procedure	6 months of publication of the grant;	Re-examination; Invalidation	3 months of publication of the grant;	Revoke	9 months of publication of the grant;

¹⁷⁶ An application shall not be published if that application is (i) no longer pending ;(ii) subject to a secrecy order; (iii) a provisional application; or (iv) an application for a design patent.

Term of Patent	Invalidation		Revoke and Invalidation		Invalidation
	20 years	20 years	20 years	20 years	20 years

Source: FENG XIAOBING¹⁷⁷.
Table-2

The Substantive Standard For Invention In Some Asia Countries

	China	Korea	India	Thailand	Philippines	Malaysia	Viet Nam
Filing system	First-to-File	First-to-File	First-to-File	First-to-File	First-to-File	First-to-File	First-to-File
Grace period	6 months	6 months	12 months ¹⁷⁸	12 months	None	12 months	12 months
Publication	18 months	18 months	18 months	? months ¹⁷⁹	18 months	No	19months
Publicly use at home/abroad	At home ¹⁸⁰	At home and abroad	At home ¹⁸¹	At home and abroad	At home and abroad	At home and abroad	At home and abroad
Inventive step	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Practical application	Yes	Yes	Yes	Yes	Yes	Yes	Yes

¹⁷⁷ FENG XIAOBING.THE HARMONIZATION OF THE PATENT SYSTEM. A Global patent System Is Possible or Impossible?,available at <http://www.apic.jiii.or.jp/en/modules/tinyd5/index.php?id=24>

¹⁷⁸ Subjected to conditions.

¹⁷⁹ Depend on the applicant and examiner.

¹⁸⁰ This information modified by the author

¹⁸¹ This information modified by the author

Specification Requirement	Sufficiently clear and complete						
Claim Explanation	Description and drawings						
Pre-granted Opposition	No	No	Yes	Yes	No	No	Yes
Post-granted Revoke or Invalidation	Yes						
Term of Patent	20 years	20 years	20 years	20 years	20years	20years	20years

Source: FENG XIAOBING

Table-3

	Statutory	Research Exemption Common Law
Argentina	Section 36(a) of the Argentine Patent Law provides a limited experimental use exception: "The right conferred by a patent shall have no effect against... a) Any third party who, within the private or academic field and with no commercial purposes, carries out activities of purely scientific or technological research, test or teaching, and for this manufactures or employs a product or uses a process the same as that which has been patented."	
Australia	Currently there is no statutory experimental use exemption in the Patent Act of 1990 (Cth). Currently, the Australian Law Reform Commission and the Advisory Council on Intellectual Property are examining this situation and will likely recommend a statutory research exemption.	It is generally accepted that there is an exemption to some degree at common law.
Belgium	Article 28, Section 1 of the Belgium Patent Act stipulates that the rights of a patent holder do not extend to acts carried out for scientific purposes on or with the subject matter of the invention.	In the case <i>Science Union and Servier v. Corbiere and Bellon</i> (CA Paris, 4 e ch, 27 November 1984, P.I.D.B. 1985.III.118), the Court of Appeal of Paris focused on the existence of a commercial purpose as the determining factor for whether an act fell outside the reach of the exception.
Brazil	Experimental research on or with a patented tool	
Canada	Currently there is no statutory experimental use exemption in the Patent Act of 1985.	An experimental use exemption is established by case law and is available when experimentation is 'not for profit'.
China	Article 63 of the MPL states that the following shall not be deemed an infringement of a patent right: "Where any person uses the patent concerned solely for the purposes of scientific research and experimentation."	
Denmark	Experimental research on a patented tool	
Finland	Experimental research on a patented tool	
France	The French Intellectual Property Code, Section L-613-5 states: "The rights afforded by the patent shall not extend to acts done for experimental purposes relating to the subject matter of the patented invention."	
Germany	Section 11.2 of the German Patent Act states: "The effects of the patent shall not extend to acts done for experimental purposes which are related to the subject matter of the patented invention."	The Court in <i>Clinical Trials I</i> (Fed. Sup. Ct. of Germany 1995) and <i>Clinical Trials II</i> (Fed. Sup. Ct. of Germany 1998) held that trials having a regulatory and scientific aim and that the exception covers tests intended to yield knowledge on the subject matter of the patent, regardless of a possible commercial objective.
Hungary	Experimental research on a patented tool	
Iceland	Section 3(3) of the Patents Act 1993 states: "The following are excepted from the (patentee's) exclusive right...use of the invention for experiments which relate to the invention itself..."	
India	Section 47 of the Patents Act states that "The grant of a patent under this Act shall be subject to the condition that any article...or...any process in respect of which a patent is granted may be used, by an person for the purpose merely of experiment or research."	
Israel	Experimental research on or with a patented tool	
Italy	Experimental research on a patented tool	
Japan	Section 69 (1) of the Patent Law states: "The effects of the patent right shall not extend to the working of the patent right for the purposes of experiment or research."	The Japanese Supreme Court in <i>Ono Pharmaceuticals</i> stated that the breadth of Section 69(1) should allow beneficial experimental uses such as investigating the patentability of an invention, analyzing the function of an invention and developing and improving on an invention.

	Article 22 of the Industrial Property Law states: "The right conferred by a patent shall not have any effect against: (l) a third party who, in the private or academic sphere and for non-commercial purposes, engages in scientific or technological research activities for purely experimental, testing or teaching purposes, and to that end manufactures or uses a product or a process identical to the one patented..."	
Mexico		
Netherlands	Experimental research on or with a patented tool	
New Zealand	Currently there is no statutory experimental use exemption in the Patent Act of 1953.	An experimental use exemption is established by case law.
Norway	Section 3 of the Patents Act states: "...The exclusive right shall not include:...(3) Exploitation by experiment relating to the subject matter of the invention..."	
Romania		
South Africa	Experimental on or with a patented tool	
South Korea	Section 96(1) of the Patent Law states: "The effects of the patent right shall not extend to the following: (i) working of the patented invention for the purpose of research or experiment..."	
Spain	Experimental research on a patented tool	
Sweden	Experimental research on a patented tool	
Switzerland	Currently there is no statutory experimental use exemption in the Patents Law.	The Swiss Law is currently undergoing revision.
Turkey	Section 75 of the Patents Decree-Law: "The following acts shall remain outside the scope of the rights conferred by the patent:...(b) acts involving the use of the patented invention for experimental purposes..."	
Switzerland	Article 9 of the Patent Law provides general research exemptions, for example: 9-1a (private use for noncommercial purposes), 9-1b (research and trials where the invention is the object of research), 9-1c (use of the invention for teaching purposes)	
United Kingdom	Section 60(5) of the Patent Act states that exempt from constituting infringement are: acts done privately for non-commercial purposes and for experimental purposes.	In <i>Frearson v. Loe</i> , the Court held that if a patented product was made only for bona fide experiment, without any intention to sell or use it, but with the view of improving upon the invention or with a view of seeing whether an improvement can be made or not, would not amount to patent right infringement. Subsequently, however, judicial attitudes have changed. (<i>Monsanto v. Stauffer</i> - some types of testing in field trials have been held to be infringement)
USA	Currently there is no statutory experimental use exemption under US statutory law.	Case law indicates that the exemption at common law is very narrow. First created in <i>Whitmore v. Cutter</i> , the exemption was virtually eliminated in the cases <i>Embrex, Inc. v. Service Engineering Corp</i> and <i>Madey v. Duke University</i> .
Uruguay	Experimental research on or with a patented tool	