INTELLECTUAL PROPERTY RIGHTS IN CYBER SPACE

Series Editor

Dr. V.C. Vivekanandan

MHRD IP Chair Professor & Coordinator

NALSAR Proximate Education

Prof. Srividhya Raghavan

Associate Professor of Law

University of Oklahoma College of Law

Cyber Law Modules - Series Editor

V.C. Vivekanandan
Faculty- NALSAR University of Law, Hyderabad
Coordinator - NALSAR Proximate Education

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Nalsar University of Law, Hyderabad

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AN OVERIVEW OF INTELLECTUAL PROPERTY SYSTEM

INTRODUCTION

Intellectual Property (IP) can be defined as the property created with the use of intellect or the creations of the mind.[1] Though it is a creation of the intellect of the mind or intellect, such creations are equated to property because it has monetary or commercial value like that of the physical property and its base for creating wealth. As a branch of Law, the Intellectual Property law is of very recent origin and yet has assumed significance with the expansion of trade and commerce in an era of globalization. Intellectual Property Rights is thus a bundle of rights protected by the Intellectual Property Laws.

Intellectual Property Rights has become a crucial issue in the current scenario of 'knowledge based industries' which has become the moving force of commerce and trade like Information Technology, Biotechnology and a synergy of both –the emerging field of Bio-informatics. The subject of Intellectual Property Rights has assumed sharp battle lines with the advent of 'Trade Related Intellectual Property Services' (TRIPS) included in the World Trade Agreement (WTO). Universally 'software' as a subject is treated under the segment of 'copyright' in Intellectual Property system and yet is also protected under 'patents' segment in certain conditions.

1 http://www.wipo.int/about-wipo/en/index.html

The Intellectual Property Rights has also faced a new challenge with the advent of the Internet and its exponential growth. With the phenomenal growth of Internet, protection of information, protection of identities of organizations and enterprises by the 'trademark' rights of IP is facing new challenges. The Internet has made 'copying' of literature, music, designs and drawings a simple 'click and download' task. Added to this the information technology itself is under severe stress, where 'software' which comes under the 'copyright' and 'patents' regime finds itself a potential victim of the power it unleashed through 'Internet'.

All along IP regimes of various countries are territorial in their construct in spite of being party to universal conventions. In that sense the IP rights were easier to protect if the enforcement agencies were willing to do so. But with the 'cyber revolution' taking place in a terrain, which is not physical but virtual, the enforcement of IP relating to 'software' as well as other 'information' has become increasingly tough. Thus the IP votaries demanding separate sets of Laws to tackle the IP issues in Internet and Information Technology as territories have become redundant and technology is complex and enforcement is tough. On the other hand as there were strong opposition to the IP regimes in 'physical' space, there are arguments to keep the new revolution of 'cyber space' free from the encroachment of IP domain. This chapter will deal with an overview of the IPR system-, which will deal with the 1) History of IPR, 2) IPR evolution in Indian context 3) Segments of IP system

1.1 HISTORY OF INTELLECTUAL PROPERY SYSTEM

As a modern legal construct, IPR can be tracked to the British legislation of 1624 –the Statute of Monopolies attempted to regulate the Patents monopoly, which was a prerogative of the royal grants.[2] The Copyright Act 1709 was another beginning of the legal regime of IPR in the British context. Later on the American IP system developed which has a dominant run in the current context. If IP system as it is prevalent today grew in the capitalist quest for protection of information and invention, there were

2 W.R. Cornish, Intellectual Property : Patents, Copyright, Trade Marks and Allied Rights, 1997, Universal Law Publishing Co. Pvt. Ltd., New Delhi

also socialist attempts of protecting IP in the form of 'Inventor Certificate System'. With collapse of the Soviet Union, the European and American IP systems dominate the foundations of IP regime in different legal regimes in the world.

The origin of some semblance of the modern IP regimes dates back to the Roman Empire. Copyright as one form of IP regime existed during the Roman empire, where the law gave the right of a writing to the owner of a paper or parchment and in the same breadth it gave the rights of the painting to the painter who gets the canvas.[3] In a similar fashion, potters of different guilds etched their marks in their products, which is a forerunner of Trademarks according to commentators.

Whereas the 'Patents Regime' is of later origin compared to the concepts of copyrights and trademarks. Around 1300, the Alps Mountains were essentially an ore mining area. The customs and traditions there dictated the mining, timber use and water use property rights for those who first found the ore site. Water mills were required during pre mining as the surface deposits were getting depleted requiring miners to mine in depth. A part of the water millers from the north requested special privileges for their mines against local competition. This was the birth for establishing special privileges in return for useful creations. Later in 1323, a German milling engineer promised to build grain mills to satisfy the storage needs of entire Venice. He was granted the first known privilege of about 80 ducats for the construction of a model mill. He was also promised additional compensation for his mill if it proved to be useful. Thus the Government not only encouraged a new idea but also was concerned that it should result in a working model.[4] There also seems to have been an earlier law directed specifically at inventions relating to the manufacture of silk.

The first law providing for the grant of exclusive rights for limited periods to the makers of inventions in general as a deliberate act of economic policy seems to have been in Venice in 1474. In 1488 the Venetian Senate promulgated the *Statuto Mineraria*. It does not seem

3 P. Narayanan, Copyright Law, 1986 Eastern Law House, New Delhi

4 Martin J. Adelman et al., Cases and Materials on Patent Law 1 (1998)

coincidental that this was during a long war between Venice and the Turks during which Venice lost most of its trading empire in the Eastern Mediterranean and consequently had to refocus its economy on manufacture rather than trade. Indeed, as Venice's domination of trade with east weakened, it adopted a number of measures to establish and maintain a preeminence in manufacture including laws prohibiting emigration of skilled artisans and the export of certain materials, while at the same time encouraging the immigration of skilled workers from other countries, for example by a tax holiday for two years after their arrival in Venice.[5] History also holds that it was in 1409 that the first patent was granted in Venice to a German.[6] The patent was vested in the form pf a privilege to exploit an ore mine and the right to use the required water and timber for the operation. Soon around 120 privileges were vested on specified individuals for various aspects of the mining operation.

The development of the Venetian system had the influence over the development of the British and the French system. Towards the end of Queen Elizabeth's reign, the English courts, probably at least to some extent noting developments on the continent started to restrict the rights of the sovereign to grant monopolies unless they were for the introduction of a new industry to the country. The British System made a strong foundation as early as in 1602. It was in this year that the King's Bench[7] struck down a monopoly right given to a specified seller to sell playing cards on the basis that the cards were already in the public domain.[8] Thus the main policy of patent law subject matter already in the public domain cannot be removed and given monopoly rights were firmly rooted. It is this policy that is quoted by the west as a reason to refuse intellectual property protection for the traditional knowledge found in the developing nations.

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5 See, http://www.ladas.com/Patents/patentindex.html

6 Id

7 Under British law, King's Bench was originally the principal court for criminal cases. It gradually acquired a civil jurisdiction concurrent with that of the Court of Common Pleas. It also possessed appellate jurisdiction over the Court of Common Pleas. It is now a division of the High Court of Justice.

8 Darcy v. Allein, English Patent Cases 1-5 (King's Bench 1602), see also, supra n 2, p 12

With this also evolved the new policy that monopoly rights can be vested for matter that is not already in the public domain. This is the strong foundation of the intellectual property system as such. In 1624 as part of the skirmishing between Parliament and the Crown leading up to the English Civil War, the English Parliament passed the statute of monopolies. This had the effect of limiting the power of the Crown to the grant of monopolies to making such grants only to inventions for limited periods (14 years - the duration of two training periods for craft apprentices) and most importantly only for "manners of new manufacture" that were introduced into the realm by the recipient of the monopoly. Such grants were, however, conditioned on their not being "mischievous to the state" (for example by raising prices of commodities) or "generally inconvenient." The object of establishing the patent system was clearly to encourage invention and development. With this in view the statue stated that monopoly rights could be vested on anything that is 'novel'. Novelty was defined as anything that was not *domestically* known. That is, knowledge of the same abroad did not detract from patentability in England. In fact, importation of established foreign technologies were encouraged. As noted above the original English approach, which was followed in the American Constitution, was to place emphasis on the advantage to society as a whole of developing new inventions.

The French were instrumental in evolving a system of protection. The influence was again more on patent law. Their attempt to systematize such grants of privileges led to the formation of two kinds of system - the registration and the examination system. The French experimented with both the system. Today, both systems prevail in the world and in embraced by different countries. Under the registration system, technical experts make no review of the merits of a creation when property rights are claimed over it. Any consideration or opposition that the creation does not deserve property rights has to be debated in the courts. On the other hand, the examination system requires that when a creation is placed for vesting property rights on the creator, then a detailed examination have to be made before such rights are vested. The examination is to deduct whether there has been sufficient amount of creativity in the product in question.

There are records of early experimentation by the French with the examination system. In the 1600s, creations were referred to the Royal academy of sciences, on order of the King. The Royal academy of sciences shall on order of the King examine all machines for which privileges are solicited from His Majesty. They would examine whether the invention was new and useful to society. The Government left a model of the inventions, which were thus approved, with the King's offices for use. The Government would vest a privilege for the creator but after the expiration of the privilege the Government would use the invention for the benefit of the people. It was in the aftermath of the French Revolution that the first modern statue was introduced on patents in France in 1791. Section 1 of the French law of 1791 took a somewhat different approach: "All new discoveries are the property of the author; to assure the inventor the property and temporary enjoyment of his discovery, there shall be delivered to him a patent for five, ten or fifteen years". The emphasis here was on the inventor having property in his discovery - an emphasis on the rights in the invention rather than on the benefits to society. Today this approach is of limited importance in the patent field but it is still significant in the area of copyright - where the Anglo Saxon approach is focused heavily on the bundle of economic rights associated with control over whether others are entitled to copy a work, whereas the French approach focuses more heavily on the moral rights of authors - a fact that is emphasized by the fact that the word generally used as the French translation of the word "copyright" is " droit d'auteur" (literally Author's Rights).

The American system reflects a beginning in 1614 when a statute was passed in Massachusetts. It was this period that copyright law showed signs of birth in UK in England in 1710 when the British Parliament enacted the Statute of Anne. The Statute of Anne contained, for the first time in copyright law, legal protection for consumers of copyrighted works by curtailing the term of a copyright thus, preventing a monopoly on the part of the booksellers. It also created a "public domain" for literature by requiring the creation of a new work in order to obtain a copyright, by limiting the length of term of a copyright, and by limiting the rights granted to the copyright owner (print, publish, and sell) so that once purchased the copyright owner does not control the use of the work. The statute also

provided for an author's copyright - although the benefit to authors was minimal because in order to be paid for a work an author had to assign the work to a bookseller or publisher.

Patents also flourished in the US. Several patents were granted in the US over this period. The 1787 patent awarded to Oliver Evans for a grain elevator that was used to hoist grain from the lower floor to the upper loft of the mill. This famous 'hopperboy' patent also made another turning point in the developing of the IP system. This patent was the first to get a patent term extension in 1808 granted after the case of *Evans v. Jordan*.[9] In the meanwhile the US was geared to form its Constitution in 1787. The delegates of the Constitution discussed the various specific national powers that needed to be included in the Constitution. A committee on detail was appointed to suggest various details that needed to be included in the constitution. A legislature who served in South Carolina in 1784 was instrumental for the creation of powers for intellectual properties within the US Constitution. Article 1 Section 8, clause 8 and 18 of the US Constitution[10] seeks to promote the progress of science and technology and to make all laws that are necessary for promoting science and technology.

The United States Constitution, on which U.S. Patent Law depends was drafted at the height of the industrial revolution at a time when the impact of patents was first being seriously felt in England. Additionally while the Constitution was being drafted in Philadelphia, John Fitch's steam boat was undergoing trials on the Delaware River and Constitutional Convention apparently adjourned one afternoon to watch them. A pro-patent climate endured in the United States through much of the nineteenth century leading to the comments by President Lincoln and Mark Twain noted above. However, the last two decades of the nineteenth century and the twentieth century have seen a number of climate changes.

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9 8. F. Cas. 872, also see, supra n 2 where the decision is discussed.

10 Section 8 reads that Congress has the power to, " to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". Section 18 reads that the Congress shall, ".. make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all other powers vested by this Constitution in the government of the United States, or in any department or officer thereof."

In the last two decades of the nineteenth century there was a period of economic depression and increasing concern about the power of "big business" leading to the passage of the Sherman Antitrust Act in 1890. This climate was reflected in the patent field by an increasing tendency of the courts to hold patents invalid. By the late 1890's the depression had run its course and patents came back into favor with the reviving economy.[11]

In general the twentieth century has seen a dynamic interrelationship between the patent system and the application of antitrust laws. Although the first antitrust law, the Sherman Act was enacted in 1890, the courts did not start to give it teeth until Theodore Roosevelt's administration (1901-1909). It was not until the 1930's that the patent system started to come under attack, being viewed as assisting in the maintenance of monopolies that were seen as being at least a contributing factor to the economic misery of the thirties. This skepticism about the patent system survived World War II and blossomed again in the depressed economic conditions of the 1970's, a period of strong anti-trust enforcement.

The origin of IP rights as a technical subject dates back to the period of industrial revolution. It was at this time that the world realized that war was not the solution for attaining supremacy. Even before the end of the First World War, the western countries realized that the supremacy in war is very short lived in any case. However, the industrial revolution in the west also highlighted the power of possessing new technology. Countries realized that the number of men in the battlefield did not matter any more as long as there were adequate aircrafts. The power of technology promised had a potential for the future. Countries looked a technology and trade as the mechanism to gain power and supremacy. Therefore efforts were made to encourage inventors to create more. However, creators needed more incentive than mere recognition. Unless creators saw some monetary gain they were not willing to let out the information that they had. These remained within a few who knew about the technology and died with either with the first creator or after a few generations. In order to avoid this, countries

11 See, A brief history of the patent law of the United States, available at, http://www.ladas.com/USPatentHistory.html

came up with the idea of balancing the interest of the inventor to secure a monetary gain for his creation with the interest of the society in benefiting from the creation. Hence in exchange for a promise to allow the creator to exploit the creation for a few years without any governmental intervention, the inventor provides the invention and its know-how for use by the public after a specified period. This is the policy and the crux of the patent system.

Major changes were also seen in the copyright area. An important revision of the U.S. Copyright Act was completed in 1909. Key aspects of this revision are: a broadening of the scope of categories protected to include all works of authorship, and an extension of the number of years in a renewal term (14-28) for a total of 56 years of protection. With this legislation, the attention is focused away from regulating the marketplace to proprietary rights. In addressing new categories of materials available for copyright the Congress addressed the difficulty of balancing the public interest with proprietor's rights. The House report states:

"The main object to be desired in expanding copyright protection accorded to music has been to give the composer an adequate return for the value of his composition, and it has been a serious and difficult task to combine the protection of the composer with the protection of the public, and to so frame an act that it would accomplish the double purpose of securing to the composer an adequate return for all use made of his composition and at the same time prevent the formation of oppressive monopolies, which might be founded upon the very rights granted to the composer for the purpose of protecting his interests." H.R. Rep. No. 2222 60th Cong., 2nd Sess.7 (1909).

In crux, countries therefore protect intellectual properties for two main reasons. One is to give statutory _expression to the moral and economic rights of creators in their creations and such rights of the public in access to those creations. The other is to promote, as a deliberate act of Government policy, creativity and the dissemination and application of its results and to encourage fair-trading, which would contribute to economic and social development.[12]

12 See, Supra n 1.

1.2 EVOLUTIION OF INTELLECTUAL PROPERTY LAWS IN INDIA

Intellectual property rights in India were imported from the west. This statement is important because such an importation lacked a policy-based objective behind the introduction of the IP system in India. The first Indian law on IPR was the Indian Trade and Merchandise Marks Act, 1884. The Indian Patents and Designs Act was passed in 1911. Three years later, the then Indian Copyrights Act was passed in 1914. Of these three legislations, the Indian Trade and Merchandise Marks Act and the Indian Copyrights Act were fully repealed and have been replaced by the Trade and Merchandise Marks Act, 1958 and the Copyright Act, 1957 respectively.[13]

The first Indian patent law was enacted in 1856[14] as a result of recommendations of the Law Commission[15] - a body established by the Government to recommend revision and updating of laws to serve the changing needs of the country - established by the colonial British Empire. This Act and a series of enactments[16] passed till 1911[17] codified the grant of "exclusive privileges" for a patent owner for 14 years. In 1911, the

13 G.S.Srividhya, Overview of the Law of trademarks in India, Intellectual Property for the Pharmaceutical Industry, also available at http:// www.iprlawindia.org

14 This Act was modeled on the same lines as the British Patent Act of 1852.

15 The first such Law Commission was established in 1834 under the Charter Act of 1833 and under the Chairmanship of Lord Macaulay. This commission recommended the codification of the Penal Code, the Criminal Procedure Code and a few other matters. Thereafter, the second, third and fourth Law Commissions were constituted in 1853, 1861 and 1879 respectively which, during a span of fifty years contributed a great deal to enrich the Indian Statute Book with a large variety of legislations on the pattern of the then prevailing English Laws adapted to Indian conditions. The Patents Act that was passed was one such legislation.

16 The 1856 Act was amended in the year 1859. This Act extended the 'exclusive privileges' for making, selling, licensing and using the invention in India. This Act was followed by the Patterns and Designs Protection Act of 1872, which for the first time introduced the concept of protection of industrial designs. This was later followed by the Protection of Inventions Act of 1883. The 1872 Act and the 1883 Act were later combined and the Inventions and Designs Act, 1888 was passed.

17 After the Amendment of the Patent Act in the year 1970, Part I was repealed making it the Designs Act, 1911 which is the form in which it prevailed and was used for the protection of Industrial designs till the year 2000 when the 1911 Act was amended and repealed as a post TRIPS measure in India.

Indian Patents and Designs Act, was enacted repealing the earlier enactment. This Act introduced the concept of the Controller of Industrial Patents and Designs in India. This Act eventually became two enactments one governing patents and the other governing designs. The Indian Designs Act, 1911 prevailed in India till it was recently reenacted in the year 2000. The Indian Copyright Act introduced the first legislation on copyright in 1847. This Act continued to be in force till Indian Copyright Right Act, 1914, replaced it.

In the meanwhile, in 1948 the Government appointed the first committee to review the then prevailing patents and designs legislation headed by Dr T B Chand.[18] The Government then appointed Justice Rajagopala -Ayyangar Committee[19] (RAC) in 1957[20] to revise the patent law and amend it to suit the industrial needs. It is important to understand what the country was going through at the time of presentation of this report to appreciate the contents of the report. On the one hand, culturally, the Indians believe in a system where knowledge is considered free. It is also considered to be the duty to transmit knowledge from generation to generation - which is reflected by the basic structure of the educational system of the *gurukula*.[21] On the other hand, just one year before the filing of the RAC Report, the first public sector company - Hindusthan Antibiotic Limited - had been established in 1954 to make drugs available to the public, with the help of WHO and UNICEF. The company was established since, after independence, the entire drug industry in India was controlled by the MNCs

18 Dr Chand was a retired Judge of the High Court and his committee's recommendation was incorporated in the amendments that were introduced to the 1911 Act in the year 1950.

19 The report of this committee is considered to be the back bone of the Indian Patent law that was enacted in the year 1970.

20 Between this period and 1950 when the amendments in the Dr Chand report was implemented, a new Bill based in the UK Patents Act of 1949 was introduced and lapsed in India.

21 The gurukula system is a method of teaching followed by ancient India where the pupils stayed in the house of the Guru and served the Guru to get the knowledge that he possessed. The Guru believed in teaching all his knowledge and expertise to his students.

and the Indian market had only imported drugs.[22] These companies were criticized for not showing any inclination in investing or transferring the technology into India. Drug prices in India were amongst the highest in the world.[23]

With this in background, the RAC submitted its Report in 1959.[24] The Report tried to balance the Constitutional guarantee of economic and social justice enshrined in the Preamble of the Constitution. It also sought to achieve the objective of Article 21, which is a fundamental right for a right to life in good health guaranteed by the Constitution of India. In doing so, this Report provided for process patenting of drugs as against product patenting based on the need for medicines to the poorer sections of the society. The Report outlined the policy behind the Indian patent system:

"The theory upon which the patent system is based is that the opportunity of acquiring exclusive rights in an invention stimulates technical progress in four ways: first, it encourages research and invention; second, it induces an inventor to disclose his discoveries instead of keeping them as a trade secret; third, it offers a reward for the expenses of developing inventions to the stage at which they are commercially practicable; and fourth, it provides an inducement to invest capital in new lines of production which might not appear profitable if many competing producers embarked on them simultaneously. Manufacturers would not be prepared to develop and

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22 D. P. Dubey, Globalization and its Impact on the Indian Pharmaceutical Industry, available at http:// http://revolutionarydemocracy.org/rdv5n1/pharmacy.htm

23 Id

24 V R Krishna Iyer, GATT, TRIPS and Patent Law , The Hindu, September 11, 2000 at 5, available at http://www.thehindu.com/stories.html. The wide Admiration for the Rajagopala Ayyangar Report has been recorded in the words of Justice Krishna Iyer, a renowned Judge known to fight for the cause of the down trodden in India as follows: "….A well-debated, development- oriented and patriotically processed statute of 1970, with a progressive perspective and successful sequel, passed after a thorough study (based on the Justice Rajagopala Ayyangar Commission report) proved a tremendous national triumph for the consumer and the manufacturer alike. This finest and most just parliamentary achievement……."

produce important machinery if others could get the results of their work with impunity."[25]

Interestingly, the balance sought is the same as seen in the patent policies of developed nations. The Indian system has retained this philosophy and reiterated it later, for example, *Vishwanath Prasad v. Hindusthan Metal Industries*,[26] where Justice Jeevan Reddy[27] stresses on the above balance.

Based on the RAC report, a Bill was introduced in the year 1965.[28] This Bill was passed in the Lok Sabha but it lapsed in the Rajya Sabha. Therefore a Joint Committee of the Parliament was formed (to study the Bill). The 1965 Bill was tabled in 1966[29] in the Lok Sabha but it lapsed again due to the dissolution of the Lok Sabha. The same Bill was re - introduced in 1967 and passed in 1970 which is the now prevailing Patents Act for which the draft Rules were passed in the year 1971. The Act along with the Rules came into force in 1972. Interestingly, the Drug Price Control Order was also passed in 1970.[30] This gave control over the prices of drugs to the Government.[31]

The repeated drama for the introduction of the patent statute in India reflects the defensive acceptance of the patent system in India. One of the reasons for this is possibly the lack to clarity in policy and in India's vision of what it seeks to derive from a patent system. Though the process patent system was a boon to the country, India made the major mistake of not keeping in touch with the developments the IP systems across the world.

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25 Justice V R Krishna Iyer, Human Health and Patent law, FrontLine, Vol 17, Issue 21, Oct 17-21, 2000, also available at http://www.frontline.com

26 1979 (2) SCC 511.

27 Justice Reddy, however, has an anti WTO perspective, See supra. n 39

28 The Patents Bill, 1965

29 The Joint Parliamentary Commission made various changes to the Bill and it was tabled again as, The Patents (Amendment) Bill, 1965.

30 Later, the Drug Policy was established in the year 1978.

31 In 1970 most of the drugs were under price control. In 1987 this was diluted and the number of drugs, which were restricted, declined to 347, in 1987 it was brought down to 163 drugs and in 1994 only 73 drugs were under DPCO.

This is evidenced by the fact that there was not a single Law Commission[32] established during the long 29 years before 1999[33] to specifically look into the laws relating to patents. A careful study of such a development would have proved to be a great strength for the country later. It would have taught our country to tailor our needs within a framework of international standards. There are other countries like Japan that have done it. On the contrary India chose to ignore the importance of this area of law. The consequence was that the country was eventually forced to accept a system that possibly does not really suit it economic needs.

1.3 AN OVERIVIEW OF THE INTELLECTUAL PROPERTY RIGHTS

The existing frame work of intellectual property laws recognized internationally are those identified by the Trade Related Intellectual Property Rights Agreement[34] (TRIPS) governed by the WTO.[35] They are[36]:

a) Patents[37]

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32 One of the reasons for the above can be the fact that it was the Patents Act, 1970 that contributed to the development of the drug industry in India, which today is a very sophisticated industry. Though there has been no law commission in patents, the Government has looked into various aspects of drug price controlling (which has relaxed steadily over the years) through various commissions.

33 The Law Commission that was headed by Justice B P Jeevan Reddy between the years 1997- 2000 was the first law commission that looked into the Patents Amendment Bill, 1998 in the year 1999.

34 Agreement on Trade - Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organisation [hereinafter WTO Agreement], Annex 1C, Legal Instruments - Results of the Uruguay Round vol. 31, 33 I.L.M 81 (1994) [hereinafter TRIPS Agreement].

35 Marrakesh Agreement Establishing the World Trade Organisation, Annex 1C, Legal Instruments - Results of the Uruguay Round vol. 1, 33 I.L.M 181 (1994) [hereinafter WTO Agreement].

36 TRIPS Agreement art. I part I ("..for the purposes of this Agreement, the term 'intellectual property' refers to all categories of intellectual property that are the subject of Sections 1 through 7 of Part II").

37 TRIPS Agreement art 27, sec 5,states that "patents shall be available for any inventions, whether product or process, in all fields of technology provided that they are new, involve an inventive step, and are capable of industrial application".

b) Copyrights[38]

c) Trademarks[39]

d) Geographical indicators[40]

e) Protection of undisclosed information[41]

f) Layout designs of integrated circuits[42]

h) Industrial designs.[43]

Another area for protection that is interesting for the India is the protection of traditional knowledge as intellectual property.[44] Several pros and cons[45] have been considered for protecting traditional knowledge

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38 TRIPS Agreement art 9, part II, sec 1, provides for the protection of expressions as copyrights.

39 TRIPS Agreement art 15, part II, sec 2 provides for the protection as trademarks of "any sign, combination of signs, …. Capable of inherently distinguishing the relevant goods or service".

40 TRIPS Agreement art 22, part II, sec 3 refers to "….indications which indications which identify a good as originating in the territory of a Member ….. where a given quality or reputation or other characteristics .. is essentially attributable to its geographical origin".

41 TRIPS Agreement art 39, part II, sec 7 provides for the protection of confidential information to avoid unfair competition.

42 TRIPS Agreement art 35, part II, sec 6 protects the topographies of the integrated circuits. These are meant specifically for Circuits made from semi conductor chips (and therefore will not have any bearing on this paper).

43 TRIPS Agreement art 25, part II, sec 4 provides for protection of independently created industrial designs that are new or original (and therefore will not have any bearing on this paper).

44 See Srividhya Ragavan, Protection of Traditional Knowledge, Minn. Intell. Prop. L. Rev. (forthcoming 2002) (copy on file with author).

45 The perception towards intellectual property is different in the in the west which has a more capitalist orientation and believes in the preservation of the property with the ideology that it will benefit the public later. The societies that are holders of this knowledge strongly believe in sharing knowledge and consider it a part of the public domain. See generally, Niaomi Roht- Arriaza, Of seeds and Shamanns: The appropriation of scientific and technical knowledge of the indigenous and local communities. 17 Mich. J. Int'l L. 919. See also, Ruth L. Gana, Prospects of developing countries under the TRIPS Agreement, 29 Vand. J. Transnat'l L. 735, where she details that the developing countries have

under the prevailing regime of intellectual property laws. As of now, it is not recognized as an IP. Each of the area of IP is discussed in detail in the following chapters.[46]

PATENTS

Introduction: A patent is a document, issued, upon application, by a government office (or a regional office acting for several countries). A patent describes an invention and creates a legal situation in which the patented invention can normally only be exploited (manufactured, used, sold, imported) with the authorization of the owner of the patent. The right created by a patent is a monopoly right. The significance of the right is a statutory right to prevent others from exploiting his invention. This is the right to exclude others from making, using or selling his invention. The right to take action against any person exploiting the patented invention in the country without the agreement of the patent owner constitutes the patent owner's most important right. This permits him to derive the material benefits to which he is entitled as a reward for his intellectual effort and work, and compensation for the expenses, which his research and experimentation leading to the invention have entailed. Interestingly, the State grants the patent rights. The State however, cannot and will not enforce the patents by suing on behalf of the owner. It is up to the owner to enforce his rights by suing for what is called an 'infringement' of his rights. Thus the right is vested on the owner unlike criminal law where the state enforces the right on behalf of the victim. This right is vested by the State on the owner in return for the disclosure of the invention. A detailed analysis on Patents is presented in the third chapter.

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remained in the periphery and that the relationship has been of deep mistrust with the developed world. This also reflects the sentiments of Prof David Downes, Supra n.12. However both these articles characterize that the developing and the least developed nations were not ready to shoulder the responsibilities while crying for the benefits from the western world in return for the colonialism. But see, Supra n.2 for a discussion of the sentiments and factors that lead to the mistrust.

46 The entire part has been drawn from the WIPO file on the introduction to intellectual property rights, see, Intellectual Property Reading material, WIPO Publication No.476(E), available at http://www.wipo.int/about-ip/en/index.html.

COPYRIGHTS:

Introduction: Copyright law deals with the rights of intellectual creators. This area of intellectual property is particularly concerned about protecting creativity and ingenuity.

Copyright is an important area of IP because it is one of the means of promoting, enriching and disseminating the national cultural heritage. A country's development depends to a very great extent on the creativity of its people, and encouragement of individual creativity and its dissemination is a sine qua non for progress. The protection afforded to all forms of public communication and is not limited to merely printed publications. Therefore sound and television broadcasting, films for public exhibition in cinemas, etc. This form of intellectual property protects even software. Most artistic works, for example books, paintings or drawings, exist only once they are embodied in a physical object. The process of embodying in a physical object, that is writing or printing on a paper, drawing on a surface etc is called 'fixation'. Copyright law, however, protects only the form of expression of ideas, not the ideas themselves. This is where a protection by copyright is different from a patent protection. Patents does not protect Idea per se but captures the Idea as part of the invention once it is patented This is also the reason why patent protection is preferred and is stronger than the protection by copyright. The creativity protected by copyright law is expression in the choice and arrangement of words, musical notes, colors, shapes and so on.

Normally the copyright Act not only protects the creators of intellectual work but also the creation of the auxiliaries like the performers, producers of phonograms and broadcasting organizations etc. The protection of these so-called "auxiliaries" of intellectual creators is also of importance to developing countries like India since the countries' cultural achievement includes various performance and creations of folklore as well. Countries like India offer an abundance of cultural heritage to the world. These can be protected, within the framework of copyright legislation. Such protection is called the protection of 'neighboring rights'.

Copyrightable matter and the content of copyright: Copyright is awarded to the following:

a. Literary works fixed in any form including handwriting, type, print etc. Unpublished material are also eligible for copyright protection. In some countries the copyright law also protects oral works. These also include maps, computer software and technical drawings. Software is also protected independently (that is, not as literary work in some jurisdictions). It however excludes public material like news and other official documents like original cases list etc.

b. Musical works

c. Artistic works including photographs, pictures and cinematograph works

d. Sound recordings

In order to enjoy copyright protection, the main requirement is that the work must be original. Though copyright vests on non fixated material, most legislations require fixation as a condition for protection. This is merely to logistically ensure that it is fixed. Since copyright is not on ideas, the idea for the work need not be new. However, the form in which it is presented has to be new. It is this creativity of presentation in a different form that gets the copyright protection. Protection also is irrespective of the quality of work.

The protection is vested on the intellectual creators for their creation. It protects the owner and awards rights in creative works against those who "copy"—those who take and use the form in which the original work was expressed by the author. The owner of copyright in a protected work may use the work as he wishes. He has the right to may exclude others from using it without his authorization. The owner therefore has exclusive rights to his works. He has the right to prevent others from using the work subject to what is called a 'fair use' of the work. This right also includes the right to authorize others to use the protected work. This is the right to authorize reproduction, perform in public or record the work. As a corollary, any of the above mentioned acts require the authorization of the owner before it is reproduced.

(i) Right of Reproduction and Related Rights : The right of the owner of copyright to prevent others from making copies of his works is the most basic right under copyright. For example, the making of copies of a protected work is the act performed by a publisher who wishes to distribute copies of a text-based work to the public, whether in the form of printed copies or digital media such as CD-ROMs. Therefore, the right to control the act of reproduction is the legal basis for many forms of exploitation of protected works. National laws supplement this with other rights. These may include the right to authorize distribution of copies of works as in India. The right of distribution is usually subject to exhaustion upon first sale or other transfer of ownership of a particular copy, which means that, after the copyright owner has sold or otherwise transferred ownership of a particular copy of a work, the owner of that copy may dispose of it without the copyright owner's further permission. Another right which is achieving wider and wider recognition, including in the TRIPS Agreement (see chapter 5, paragraph 5.240), is the right to authorize rental of copies of certain categories of works, such as musical works included in phonograms, audiovisual works, and computer programs.

The right of rental is justified because technological advances have made it very easy to copy these types of works; experience in some countries has shown that copies were made by customers of rental shops, and therefore, that the right to control rental practices was necessary in order to prevent abuse of the copyright owner's right of reproduction. Finally, some copyright laws include a right to control importation of copies as a means of preventing erosion of the principle of territoriality of copyright; that is, the legitimate economic interests of the copyright owner would be endangered if he could not exercise the rights of reproduction and distribution on a territorial basis.

(ii) Performing Rights: Performance requires the permission of the author. Performance includes public readings, dramatic and musical performances before an audience. The right to control this act of public performance is of interest not only to the owners of copyright in works originally designed for public performance, but also to the owners of copyright, and to persons authorized by them, when others may wish to arrange the public performance of works originally intended to be used by being reproduced and published.

For example, a work written originally in a particular way in order to be read at home or in a library may be transformed ("adapted") into a drama designed to be performed in public on the stage of a theater.

(iii) Recording Rights: The third act to be examined is the act of making a sound recording of a work protected by copyright. So far as music is concerned, sound recording is the most favored means of communicating a work to a wide public. This serves much the same purpose for musical works as books serve for literary works. Sound recordings can incorporate music alone, words alone or both music and words. The right to authorize the making of a sound recording belongs to the owner of the copyright in the music and also to the owner of the copyright in the words. If the two owners are different, then, in the case of a sound recording incorporating both music and words, the maker of the sound recording must obtain the authorization of both owners. Under the laws of some countries, the maker of a sound recording must also obtain the authorization of the performers who play the music and who sing or recite the words. This is another example of the fact that the owner of copyright in a work cannot use it or authorize the use of it in a way, which is contrary to the legal rights of others.

(iv) Motion Picture Rights: A "motion picture" is a visual recording, presenting to viewers a continuous sequence of images. In the technical language of copyright law it is often called a "cinematographic work" or an "audiovisual work".

(v) Broadcasting Rights: A major category of acts restricted by copyright consists of the acts of broadcasting works and of communicating works to the public by means of wires or cables. In principle, according to the Berne Convention for the Protection of Literary and Artistic Works, 1886 owners of copyright have the exclusive right of authorizing both the wireless broadcasting and the diffusion by cable of their works.

The broadcasting and diffusion by cable of works protected by copyright have given rise to new problems resulting from technological advances, which may require a review by governments of their national copyright legislation. The advances include the use of artificial satellites in space to extend the range of wireless signals, the increasing possibilities of linking radio and television receivers to signals diffused by cable, and the increasing

use of equipment able to record sound and visual images, which are broadcast or diffused by cable.

(vi) Translation and Adaptation Rights: The acts of translating or of adapting a work protected by copyright require the authorization of the copyright owner. "Translation" means the _expression of a work in a language other than that of the original version. "Adaptation" is generally understood as the modification of a work from one type of work to another, for example adapting a novel so as to make a motion picture, or the modification of a work so as to make it suitable for different conditions of exploitation, for example adapting an instructional textbook originally prepared for higher education into an instructional textbook intended for students at a lower level. Interestingly, Translations and adaptations are themselves works protected by copyright. Therefore, in order, for example, to reproduce and publish a translation or adaptation, the publisher must have the authorization both of the owner of the copyright in the original work and of the owner of copyright in the translation or adaptation.

(vii) Moral Rights: The Berne Convention requires member countries to grant to authors:

- the right to claim authorship of the work;
- the right to object to any distortion, mutilation or other modification of, or other derogatory action in relation to, the work which would be prejudicial to the author's honor or reputation.

These rights, which are generally known as the moral rights of authors, are required to be independent of the usual economic rights and to remain with the author even after he has transferred his economic rights.[47]

Neighboring Rights: It is generally understood that there are three kinds of neighboring rights: the rights of performing artists in their performances, the rights of producers of phonograms in their phonograms,

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47 The entire section on the reproduction rights is based from 'International Bureau of WIPO, Introduction to Basic Notions of Copyright and Neighboring Rights, WIPO/CNR/KTM/97/1'.

and the rights of broadcasting organizations in their radio and television programs. Protection of those who assist intellectual creators to communicate their message and to disseminate their works to the public at large, is attempted by means of neighboring rights.

The problem in regard to this category of intermediaries has become more acute with the rapid technological development of the last few decades. Where, at the very beginning of this century, the performance of dramatists, actors, or musicians ended with the play or concert in which they performed, it is no longer so with the advent of the phonograph, the radio, the motion picture, the television, the videogram and satellites. These technological developments made possible the fixing of performances on a variety of material, viz., records, cassettes, tapes, films, etc. What was earlier a localized or short-lived phase of a performance in a hall before a limited audience became an increasingly permanent manifestation capable of virtually unlimited and repeated reproduction and use before an equally unlimited audience that went beyond national frontiers. The development of broadcasting and more recently, television, also had similar effects. Likewise by the very same token, the increasing technological development of phonograms and cassettes and, more recently, compact discs (CDs), and their rapid proliferation, was pointing to the need of protection of producers of phonograms. Consequently, just as the performers were seeking their own protection, the producers of phonograms began to pursue the case of their protection against unauthorized duplication of their phonograms, as also for remuneration for the use of phonograms for purposes of broadcasting or other forms of communication to the public.

Finally, there were the interests of broadcasting organizations as regards their individually composed programs. The broadcasting organizations required their own protection for these as well as against retransmission of their own programs by other similar organizations. Thus the need was felt for special protection for performers, producers of phonograms and broadcasting organizations. Unlike most international conventions, which follow national legislation and provide a synthesis of existing laws, the Rome Convention, 1961 was an attempt to establish international regulations in a new field where few national laws existed. This meant that most States would have to draft and enact laws before adhering to the Convention. India is

one such state that has already legislated in this area. The details of the relevant sections are discussed later. Since the adoption of the Convention in 1961, a large number of States have legislated in matters related to the Convention, and a number of others are considering such legislation.

The notion of neighboring rights is understood as meaning rights granted in an increasing number of countries to protect the interests of performers, producers of phonograms and broadcasting organizations in relation to their activities in connection with the public use of authors' works, all kinds of artists' presentations or the communication to the public of events, information, and any sounds or images. The most important categories are: the right of performers to prevent fixation and direct broadcasting or communication to the public of their performance without their consent; the right of producers of phonograms to authorize or prohibit reproduction of their phonograms and the import and distribution of unauthorized duplicates thereof; the right of broadcasting organizations to authorize or prohibit rebroadcast, fixation and reproduction of their broadcasts. No protection of any neighboring right can, however, be interpreted as limiting or prejudicing the protection secured to authors or beneficiaries of other neighboring rights under a national law or an international convention.

TRADEMARKS:

Introduction: One of the important areas of intellectual property is the trademarks. Like how a name identifies an individual the trademarks provides the identity and origin of a product. Interestingly, this important area of intellectual property traces its origin not to Britain or the US but to India and China. History holds that as far back as 3,000 years ago, Indian craftsmen used to engrave their signatures on their artistic creations before sending them to Iran. These creations have also been later found in the ruins of Mohanjadero and Harappa. Manufacturers from China sold goods bearing their marks in the Mediterranean area over 2,000 years ago. It is also said that at one time a thousand different Roman pottery marks were in use.[48] Interestingly, copying of the marks was also prevalent

48 see supra n. 56

even in the ancient days. With the flourishing trade of the Middle Ages, the use of signs to distinguish the goods of merchants and manufacturers likewise expanded several hundred years ago. It is said that the marks enabled the craftsmen to sell their products beyond the locality. The most important difference between the use of the marks in the olden days and today is the fact that today these marks have increasing economic significance. A detailed analysis of Trademarks is dealt in Chapter IV under Trademarks.

GEOGRAPHICAL INDICATORS:

Introduction: Basmati rice, Darjeeling tea, Champagne, Madras Paan, Kashmir Carpets, Shivakasi Crackers etc are all names of products that we hear in everyday life. These same products are also available in other names. However, when these are associated with the names of origin for these products gain a special significance. There is a huge difference in price between say an IR-20 variety and basmati rice. The difference lies in the belief that basmati refers to a better and richer quality of rice. The richness comes from the fact that basmati rice cannot be grown anywhere and everywhere. It is the rice that is grown in the India Pakistan belt that acquires this significance. Similarly, there are tons of qualities of wince manufactured across the world everyday. Champagne refers to that which is made in France and this gains its significance because of its association with France. In essence, geographical indicators are those that associate a product with a particular place. These have been given the status of intellectual property because the product gets more commercial value by its mere association with a particular place. Just as trademarks are valuable these indicators are also very valuable to the manufacturer.

Like trademarks these indicators also help identify the source of the goods. It helps a consumer to identify where the good originates from. This identification is associated with the quality of the goods. Therefore in effect the indicators help in promoting the product of the geographic area. In effect, There must be a link between some characteristic of the good and the particular region where it was produced. That link must inform consumers of some important characteristic of the product, which is material in their decision to purchase the good. For example, soil from a

particular area might help produce a distinctive-tasting tomato, while goats raised on grass grown in volcanic soil from a particular region in the Himalayas could produce a particular type of fiber for clothing, or silicon crystals artificially created in a highly controlled environment in the Silicon Valley region of California, for use in semi-conductors, might be considered superior due to the knowledge and craftsmanship of the information technology specialists working there.[49]

Examples of indicators like "Champagne," "Cognac," "Roquefort," "Chianti," "Pilsen," "Porto," "Sheffield," "Havana," "Tequila," "Darjeeling have acquired high reputation across the world. These are therefore valuable commercial assets. They are therefore often exposed to misappropriation and infringement. Therefore these indicators have to protected in order to preserve the property in them. TRIPS is the first international agreement that sets forth standards to preserve the geographical indicators to regulate international intellectual property protection and minimum standards for "geographical indications."[50] The Paris Convention for the Protection of Industrial Property did not contain the notion of geographical indication. Article 1 paragraph (2) defines as subjects of industrial property, *inter alia*, indications of source and appellations of origin. This made a distinction between indications of source and appellations of origin: "indication of source" means any expression or sign used to indicate that a product or service originates in a country, a region or a specific place. "Appellation of origin" indicates the geographical name of a country, region or specific place where the product originated.

The use of an appellation of origin requires a quality link between the product and its area of production. This qualitative link consists of certain characteristics of the product, which are exclusively or essentially attributable to its geographical origin such as, for example, climate, soil or traditional methods of production. On the other hand, the use of an indication of

49 see Geographical Indication, United States Patent and Trade Marks Office, available at http://www.uspto.gov/web/offices/dcom/olia/globalip/geographicalindication.htm

50 Part II, Section 3 of TRIPS, in Articles 22-24, specifies the minimum standards of protection that WTO Members must provide for geographical indications.

source on a given product is merely subject to the condition that this product originates from the place designated by the indication of source. Appellations of origin can be understood as a special kind of indication of source. According to the terminology traditionally applied, the term "indication of source" comprises all appellations of origin, but, in its general use, it has become rather a designation for those indications of source, which are not considered to be appellations of origin.[51]

Today the term "geographical indication" embraces products whose qualities are due to its geographical origin (such as appellations of origin), as well as place of origin of a product (such as indications of source). Article 22(1) of the TRIPS Agreement, as "indications" which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographic origin." The TRIPS Agreement requires that WTO Members provide the legal means for interested parties to prevent the use of a geographical indicators that:

(1) indicates or suggests that a good originates in a geographical area other than the true place of origin in a manner which misleads the public as to the geographical origin of the good; or

(2) constitutes an act of unfair competition.

INDUSTRIAL DESIGN PROTECTION:

Introduction: Industrialization was again the main cause for the growth of the protection of design in the world. When new products were invented, what was felt was the need for patents to preserve the genius in the invention. With the passage of time, the products that were invented were developed in better and aesthetic designs that were more appealing to the eye of the consumer. This was also a very important element for the marketability of the product. Therefore protection was envisaged for the aesthetic and the design in the product. This became all the more important when mass

51 International Bureau of WIPO, Protection and Registration of Geographical Indications (including Appellations of Origin) on the National and International Level; The Lisbon Agreement for the Protection of Appellations of Origin and their International Registration, OMPI/ACAD/S/94/8 (Spanish only)

production of various goods had to be done of the market. The design became all the more essential to ensure quick production as well.

United Kingdom was the first country to take the lead. The first law for design protection was passed here in 1878. The Designing and Printing of Linens, Cotton, Calicoes and Muslins Act was passed in 1787 to give protection for two months to "every person who shall invent, design and print, or cause to be invented, designed and printed, and become the proprietor of any new and original pattern or patterns for printing Linens, Cottons, Calicoes or Muslins." The contribution and importance of design in the growing textile industries was thereby recognized.

This was followed in France by the enactment on Literary and Artistic Property in 1793. This was applied in certain cases to the protection of designs. The growth of the textile industries, in particular, soon led to the enactment in 1806 of a special law dealing with industrial designs. The Law of March 18, 1806, established a special council (Conciliation Board or *Conseil de Prud'hommes*) in Lyon responsible for receiving deposits of designs and for regulating disputes between manufacturers concerning designs. While initially destined for industries in Lyon, particularly those manufacturing silk, the system of deposit and regulation by special council was extended to other cities and, through judicial interpretation, to two- and three-dimensional designs in all areas of industrial activity. Today the French law embraces full copyright protection of commercial designs.

Slowly the expansion of industries lead to the gradual extension of design protection to other fields of endeavor (notably sculpted figures used in the pottery and porcelain industries) up until the consolidation achieved in the Designs Act of 1842. This Act extended protection to "any new and original design whether such design be applicable to the ornamenting of any article of manufacture, or of any substance, artificial or natural, or partly artificial and partly natural, and that whether such design be so applicable for the pattern, or for the shape or configuration, or for the ornament thereof, or for any two or more of such purposes and by whatever means such design may be so applicable, whether by printing, or by painting, or by embroidery, or by weaving, or by sewing, or by modeling, or by casting, or by embossing, or by engraving, or by staining,

or by any other means whatsoever, manual, mechanical, or chemical, separate or combined."

Design was thereby recognized as a fundamental element of all production and manufacture. In India the Patents and Designs Act was enacted in 1911 and this gave protection for industrial designs. This enactment provided protection for industrial designs until the recent amendment in 2000 after the TRIPS agreement.

Until 1954 US had design patents. That is patents were given for the designs. In the year 1954 the Supreme Court of the US passed a landmark judgment in *Mazer v. Stein*.[52] The court recognized that very few designs were formally getting patent protection leading to very less protection for the designs. The reason for this Judgment was the pressure from the European business community, which felt that America does not extend adequate protection for the designs. Interestingly, Europeans are well known for their aesthetic creations that look more appealing. This pressure led the copyright office to persuade the Supreme Court.[53] This case led to the recognition of "works of applied art" as copyrightable subject matter for the first time. However, the copyright office in the US encountered operational problems in registering certain designs especially three-dimensional designs. The system was completely unclear as two-dimensional fabric designs qualified for copyright protection as graphic art. Statues of dancers like in the Mazer case still qualified as sculpture even though they were embodied in lamps. A separate design law was sought to be enacted. Today the earlier designs patent law has been revitalized. This applies to the non-copyrightable product designs only. In the meanwhile the establishment of the Court of Appeals for the Federal Circuit in 1982 also preempted the revival of the design patent law. This protection is also combined with the trade dress protection given under 43(a) of the Lanham Act.

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52 347 U S 201 (1954)

53 Jerome H. Reichman, Past and Current Trends in the Evolution of Design Protection Law—A Comment, 4 Fordham Intell. Prop. Media & Ent. L.J. 387 (1993) also see, William Fryer, The Evolution Of Market Entry Industrial Design Protection: An International Comparative Analysis, E.I.P.R. 1999, 21(12), 618-623 (1999)

Protection of designs: The subject matter of the legal protection of industrial designs is not articles or products. The subject matter is the design that is applied to or embodied in such articles or products. The emphasis is on an abstract conception or idea as the subject matter of design protection. Design protection does not apply to articles or products in such a way as to grant the proprietor of the design exclusive rights over the commercial exploitation of those articles or products. Design protection only applies to such articles or products that embody or reproduce the protected design. Protection does not, therefore, prevent other manufacturers from producing or dealing in similar articles fulfilling the same utilitarian function, provided that such substitute articles do not embody or reproduce the protected design. The conception or idea that constitutes the design may be anything that can be expressed either two-dimensionally or three-dimensionally. The definition of "design" which is used in the Registered Designs Act 1949 of the United Kingdom, for instance, refers to "features of shape, configuration, pattern or ornament" (Section 1). It has been generally considered that, in this definition, the words "shape" and "configuration" are synonymous, and that both signify the form in which an article is made or, in other words, something three-dimensional. Likewise, it has also been considered that the words "pattern" and "ornament" are synonymous, and that both refer to something embossed, engraved or placed upon an article for the purpose of its decoration or, in other words, to something essentially two-dimensional.

While the subject matter of design protection is an essentially abstract conception, one of the basic purposes of industrial design protection is the stimulation of the design element of production. It is, accordingly, a usual feature of industrial design laws that a design can be protected only if the design is capable of being used in industry, or in respect of articles produced on a large scale. The requirement that a design must be applied to utilitarian articles in order to be protected is one of the principal matters, which distinguishes the objectives of industrial design protection from copyright protection, since the latter is purely concerned with aesthetic creations. The requirement is variously expressed in different laws. The WIPO Model Law for Developing Countries on Industrial Designs (hereinafter referred to as "the WIPO Model Law") protects designs in so far as they "can serve as a pattern for a product of industry or handicraft." It is usually a condition of

the protection of industrial designs that the design that is applied to or embodied in an article must have an appearance, which is capable of visual judgment. Thus, the WIPO Model Law refers to designs, which give "a special appearance to a product of industry or handicraft" (Section 2(1)). The purpose of this requirement, which also appears in national laws, is to emphasize that industrial design protection is concerned solely with appearance or aspect of articles, and not with their function.

The corollary of the above is that designs that can be described solely by its function (which the article having that design has to perform) shall be excluded from protection. In this respect, the WIPO Model Law provides that protection shall not extend to "anything in an industrial design which serves solely to obtain a technical result" (Section 2(2)). The Swiss Law (Law on Industrial Designs, 1990), an example among national laws, provides that the protection of an industrial design does not extend to the manufacturing processes, the use or the technical effect of the article produced to the design (Article 3). Therefore the equivalent of a functional claim in patent application is not existent is design. The reason for the exclusion of protection of designs by function is that normally the article themselves are not novel. However, the design of the article is novel. Belts, shoes, screws and piston rings, for example, may be produced by hundreds of different manufacturers, and all articles within each class are intended to perform the same function. If a design for one such article, for example, screws, is dictated purely by the function, which the screw is intended to perform, protection for that design would have the effect of excluding all other manufacturers from producing items intended to perform the same function. Also, this in effect will be granting a patent right and not a design right.

Novelty or Originality: One of the main requirements for the protection of design is the requirement of novelty and originality. The novelty of the design constitutes the fundamental reason for the grant of a reward to the originator through protection by registration of the industrial design. The requirement of novelty is normally found in all laws. However, the nature of the novelty provision varies from country to country. The requirements can range from absolute novelty to partial novelty. Absolute novelty requires that the design for which registration is sought must be

new as against all other designs produced in all other parts of the world at any previous time and disclosed by any tangible or oral means.

Industrial design protection is usually granted pursuant to a procedure for the registration of such designs. The most commonly adopted examination system provides for a formal examination only of an application for a registered design. According to this system, an application is examined to ensure that it meets with each of the formal requirements for an application which are imposed by the relevant law (for example, whether the requisite number of representations or specimens of the design are filed with the application), but no search is made of the prior art to determine whether the substantive criterion of novelty or originality is satisfied by the design for which registration is sought.

A system requiring only formal examination has the effect of shifting the burden of assessing novelty to those interested persons in the market who may wish to use, or who may have used, the design or a substantially similar design. Any person interested in using such a design will have the opportunity either to oppose the registration of the design for which application has been made, if the relevant law provides for an opposition procedure, or of bringing proceedings for the cancellation of a registration which it is alleged is invalid. The system thus offers a means of reducing the administrative burden of the maintenance of a system of registration of industrial designs. It also offers a solution to the problem of maintaining an adequate search file to undertake a substantive examination of the novelty of designs. Such a search file can very often be almost impossible to maintain, since, on the basis of a condition of unqualified universal novelty, it would need to include all designs made at any time in any part of the world since the commencement of recorded history.

The alternative system of examination provides for a search of past designs and an examination of the design for which registration is sought to ascertain whether it satisfies the required condition of novelty. It necessitates the maintenance of a search file and sufficient skilled manpower to undertake the substantive examination.

Rights in designs may, under certain laws, also be acquired by the act of creation and fixation of the design, in a document or by embodying the

design in an article. These systems do not require any formal registration procedure for the acquisition of exclusive rights in the design. Examples of this system are provided by the Law of France, and the "design law" under the Copyright, Designs and Patents Act 1988, of the United Kingdom.

The rights, which are accorded to the proprietor of a validly registered industrial design, emphasize the essential purpose of design law in promoting and protecting the design element of industrial production. Thus, whereas copyright accords to an author the right to prevent the copying of a work, industrial design law accords to the proprietor the exclusive right to prevent the unauthorized exploitation of the design in industrial articles. The right to prevent others from exploiting an industrial design usually encompasses the exclusive right to do any of the following things for industrial or commercial purposes:

- make articles to which the design is applied or in which the design is embodied;
- import articles to which the design is applied or in which it is embodied;
- sell, hire or offer for sale any such articles.

In some laws, the exclusive rights of the proprietor also extend to preventing another from stocking any articles to which the design has been applied or in which it is embodied (see, for example, Section 21(1)(c) of the WIPO Model Law).[54] While this right is sometimes considered as excessive in that it deals only with preparatory acts, it is on the other hand often included in order to facilitate the enforcement of a proprietor's rights, since it may often be easier to locate a stock of infringing articles than to apprehend a person in the act of selling or offering for sale such articles. As opposed to copyright, where the subject matter of the right is the work which is created by the author and which is thus defined by the author, the subject matter of the rights of the proprietor of an industrial design are defined by the design which has been registered. However, it is usual to provide that the proprietor's rights extend not only to the unauthorized exploitation of the exact design which has been registered, but also to the

54 T. Zongshun, Industrial Designs, 10, Intellectual Property in Asia and the Pacific.

unauthorized exploitation of any imitations of such a design which differ from the registered design only in immaterial respects. The term for an industrial design right varies from country to country. The usual maximum term goes from 10 to 25 years, often divided into terms requiring the proprietor to renew the registration in order to obtain an extension of the term. The relatively short period of protection may be related to the association of designs with more general styles of fashions, which tend to enjoy somewhat transient acceptance or success, particularly in highly fashion-conscious areas, such as clothing or footwear.[55]

It is also important to understand the difference between the laws of copyright law and protection by the industrial design law is as follows:

- Under the industrial design law, protection is lost unless the industrial design is registered by the applicant before publication or public use anywhere, or at least in the country where protection is claimed. Copyright in most countries subsists without formalities. Registration is not necessary.
- Industrial design protection endures generally for a short period of three, five, ten or fifteen years. Copyright endures in most countries for the life of the author and fifty years after his death.
- The right conferred by registration of an industrial design is an absolute right in the sense that there is infringement whether or not there has been deliberate copying. There is infringement even though the infringer acted independently and without knowledge of the registered design. Under copyright law, there is infringement only in the reproduction of the work in which copyright subsists.

TRADE SECRETS:

Trade secrets are a relatively newer form of intellectual property. All intellectual properties base protection on disclosure to enable public to use the same after several years. Trade secrets, on the other hand, protect material that has not been disclosed. To that extent the entire area of trade

55 International Bureau of WIPO, The Main Objects of Industrial Property: Inventions, Industrial Designs, Marks, WIPO/LIC/WL6/91/1

secrets does not fall in line with the ideology of intellectual property rights. All other forms of intellectual property protection require disclosure at the time the protection is sought. Though the disclosure is not meant for the public immediately, it is made for the accessibility of the public at a later time. However, there are certain corporate secrets that cannot be divulged. These are so important that companies may want to keep them without divulging it to the general public. These are what is called the intangible assets. Some of these may be protected by copyrights. But anything that is copyrighted will have to fixed in printed or in some other form. Moreover, copyrighted material are normally accessible to the public. Most importantly, copyright does not protect the idea. Therefore it is likely that the idea is copied without infringing the copyright itself. This increased the importance of inducing some flexibility in the intellectual properties to enable secrets to be protected in the form of trade secrets.

There are companies where the value of the intangible assets exceeds those of its tangible assets. Even in today's depressed stock market, the market capitalization of a company exceeds by many times the book value of the company. This difference in value is the market's assessment of the value of a company's intangible assets. Interestingly, of these, trade secrets are most neglected though it represents the largest single contribution to intangible assets.[56] Protection of trade secrets requires establishment and maintenance. In this way, trade secrets are more like good will and branding. Trade secrets require continuous effort in order to allow defense by lawsuits against infringers at a later time. Because of this there is no concept of filing an application and getting for trade secrets.

The advantage of trade secret protection is that trade secret protection offers much broader scope than the other forms of intellectual property. Unlike the other forms of intellectual property, their protection is not limited by time. The protection is indefinite. Unlike the other forms of intellectual property where all the statutory criterion have been to met before one can seek protection, anything so designated can become a trade secret. The only requirement to qualify as a trade secret is that it must be kept a

56 see Why trade secret Protection is important, available at http://www.thetso.com/Info/important.html

secret. A legal definition of trade secrets rarely exits, although some countries have attempted to define trade secrets. The Unfair Competition Prevention Act of Japan, defines a trade secret as any information relating to a production method, a sales method or any other information on technology or business that is unknown to the public. A similar definition is contained in the Uniform Trade Secrets Act of the United States of America. Some countries have sought to differentiate between manufacturing (or industrial) secrets and commercial secrets. France is one such example. The reason for such a differentiation is that the punishment may vary depending on the category of trade secret infringed. Manufacturing trade secrets is related to information of purely technical character, like production methods, chemical formulae, blueprints or prototypes. Commercial secrets include sales methods, distribution methods, contract forms, business schedules, and details of price agreements, consumer profiles, advertising strategies and lists of suppliers or clients.

Some countries have special provisions for the protection of trade secrets under unfair competition or as part of another law. Other countries treat trade secrets as an aspect of tort law. Still other countries have enacted criminal, administrative, commercial or civil law provisions prohibiting the unauthorized use or disclosure of business secrets. The criminal provisions are less important in practice, however, since normally knowledge of the secrecy, as well as malicious or fraudulent intent, have to be proved. Yet if the disclosure of a trade secret constitutes a criminal offense, it will normally constitute an act of unfair competition as well. Furthermore, since employees, consultants, independent contractors and joint ventures are often privy to trade secrets, several aspects of civil law concerning employment contracts and general contract law are also relevant, depending on the circumstances of the case. Finally, it is not unusual to have combinations of the above means available. For example, violation of trade secrets could result in unfair competition or tort liability, as well as in criminal sanctions. On the other hand, in situations where non-competitors have intimidated or influenced agents or employees, or have otherwise induced them or other persons bound to secrecy to disclose the secret information, only civil tort law might be applicable.

Normally, in order to decide whether a matter is a trade secret, courts look at several issues. These relate to a) whether a trade secret exist at all,

b) the defendant had access to the trade secret, c) the defendant had notice that the information is a trade secret, d) the trade secret was actually used by the defendant, e) damages suffered and that the remedy exists within the power of the court.

Existence of trade secret is normally proved by extent to which the information is known to the public or within a particular trade or industry, the amount of effort and money expended by the trader in developing the secret information, the value of that information to the trader and to his competitors, the extent of measures taken by the trader to guard the secrecy of the information and the ease or difficulty with which the information could be properly acquired by others. From a subjective point of view, the trader involved must have a considerable interest in keeping certain information as a trade secret. The trader must also have exhibited the intention to have the information treated as a secret. Specific measures taken by the trader to maintain the secrecy of the particular information is normally required. The fact that the information has been supplied confidentially will not always be sufficient. In some countries (for example, the United States of America and Japan), the efforts made by the owner of the information to keep it secret are considered by courts to be of primary importance in determining whether the information constitutes a trade secret at all.[57] In the US the Restatement (Third) of Unfair Competition summarizes the law on trade secrets. This defines that "a trade secret is any information that can be used in the operation of a business or other enterprises and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others". Cases have defined what amounts to a secret. (*Rockwell graphics*[58] case detailed in the Annexure). The restatement also provides for the inappropriate acquisition of trade secrets. The *E I Dupont*[59] case is a good demonstration for this. (See case in the Annexure)

From an objective point of view, the information must, in order to qualify as a trade secret, be known to a limited group of persons only, that

57 International Bureau of WIPO, Protection Against Unfair Competition, WIPO Pub. No. 725(E) (1994)

58 Rockwell graphics systems Inc. v. Dev Indus Inc, 925 F 2d 174

59 E I Dupont Denemours & Co v. Christopher, 431 F 2d 1012

is, it must not be generally known to experts or to competitors in the field. Therefore, external publications or other information that is readily available will not be considered secret. For example, the use or disclosure of a trade secret by a person who has acquired it in a legitimate business transaction and without any negligence is not deemed unfair. Factors that indicate whether the information has the necessary degree of confidentiality to constitute a protect able trade secret are whether it contains material that is not confidential if looked at in isolation, whether it has necessarily to be acquired by employees if they are to work efficiently and whether it is restricted to senior management or is also known at the junior level. Still, the best proof is the strict confidentiality of the information and the contractual duty to keep it secret.

The most rampant form of trade secret infringement is normally by insiders and employees of company. Theft of these trade secrets and infringement by competitors is a direct threat to the shareholder value of the company. Frequently, employment contracts incorporate specific provisions prohibiting the disclosure of business or trade secrets, but such provisions, like undertakings not to compete, must not be so restrictive of the professional abilities of the employee in the future that they constitute an undue restraint of trade. Criminal law, as well as civil and labor law, could create relevant duties in employment relations: for example, it can prohibit disclosure of secret information by employees. Such provisions may be very important in situations where the employee is not bound by contractual clauses, or where the use of such information by former employees is not related to a competitive action. If the former employee can be regarded as a competitor of the former employer, for example if he has set up a company on his own in the same sector, a breach of confidence by the former employee will normally be an act of unfair competition. For example, the inducement of customers of the former employer to become clients of the employee in his new position will probably be deemed unfair, particularly if the employee misuses lists of customers or internal business details in order to make better offers. However, there can also be wrongful misuse of confidential information if special knowledge of the employer's activities in relation to clients' affairs is made use of to persuade those clients to transfer their business to another.

Competitors are usually very interested in acquiring the trade secrets of others. However, as trade secrets themselves are not fully equivalent to exclusive rights under industrial property law, the determination of the unfairness of competitors who use or disclose the trade secrets of others is based on the means of acquiring the information. For example, it is expressly stated in the Unfair Competition Prevention Law of Japan that the rules concerning the protection of trade secrets will not apply where a trade secret is obtained in the course of a legitimate trade activity, provided that the person obtaining the secret did not use dishonest means to do so, or did not negligently disregard the dishonesty of such means. Thus competitors who have not used any influence to bring about the disclosure of the secret information, but have merely taken advantage of the breach of contract of a former employee or partner of the competitor, will seldom be held liable. The competitor's awareness that the disclosure of the trade secret by the former employee or partner would be a breach of contract is regarded as a minimum level of intent for determining liability. The Mexican law, for example, makes it an offense to use a trade secret which has been disclosed by a third party where the person to whom the secret was disclosed knew that the third party was not authorized to disclose the secret. In any case, competitors are not allowed to interfere recklessly with the contractual relations of others. For example, if a competitor has bribed or otherwise unlawfully persuaded a (former) employee to disclose a competitor's trade secret, he will be liable for unfair competition.[60]

INTEGRATED CIRCUITS:

Integrated circuits are essentially semi conductor chips. These contains transistors, resistors, capacitors, and their interconnections, fabricated in a tiny, single piece of semiconductor material.[61] The layout-designs of integrated circuits are creations of the human mind. They are usually the

60 International Bureau of WIPO, The Patent as a Source of Technological Information, WIPO/IP/BUD/97/5. Also see, International Bureau of WIPO, Industrial Property Rights under the TRIPS Agreement- Patents, Industrial Designs and Layout-Designs (Topographies) of Integrated Circuits, WIPO/IP/THP/97/8(b).

61 see S.M. Besen & L.J. Raskind, An Introduction to the Law and Economics of Intellectual Property, J. Econ. Persp. 3-27 (1991).

result of an enormous investment, both in terms of the time of highly qualified experts, and financially. There is a continuing need for the creation of new layout-designs, which reduce the dimensions of existing integrated circuits and simultaneously increase their functions. Integrated circuits are utilized in a large range of products, including articles of everyday use, such as watches, television sets, washing machines, automobiles, etc., as well as sophisticated data processing equipment.[62]

The protection for **integrated circuits** refers to the protection of the layout design of the circuit. This allows the owner of the design to prevent the unauthorized reproduction and distribution of such designs.[63] Because it is merely the design in circuits that are protected, it is easy to infringe the design in the integrated circuits. The possibility of such copying is the main reason for the introduction of legislation for the protection of layout-designs. The TRIPS Agreement urges countries to protect integrated circuits. The obligation to protect layout-designs applies to such layout-designs that are original in the sense that they are the result of their creators' own intellectual effort . The protection does not extend to circuits that are known. The exclusive rights include the right of reproduction and the right of importation, sale and other distribution for commercial purposes. Certain limitations to these rights are provided for. TRIPS expressly states that articles containing protected chips should be protected.[64] It provides that even innocent infringers are liable to pay a sum equivalent to a reasonable royalty to the right-holder after notice of infringement.[65] The term of protection envisaged by TRIPS is for ten years from filing (in countries that require registration) or first commercial exploitation.[66] TRIPS also and prohibits compulsory licensing in connection with semiconductor chip layout designs.[67] The only exception to this is as a

62 Andrew Christie, Integrated Circuits and their Contents: International Protection ,Ed. Sweet & Maxwell, London (1995) 394p.

63 Laurinda L. Hicks and James R. Holbein, Convergence of National Intellectual Property Norms in International Trading Agreements, 12 Am. U.J. Int'l L. & Pol'y 769

64 See TRIPS, supra note 56, art. 33.

65 See TRIPS, supra note 56, art. 37(1).

66 See id. art. 38(1).

67 Id. art. 37(2).

remedy to contain unfair trade practices for non-commercial government use.[68] By reference TRIPS incorporates the provisions of the Washington Treaty.[69] This treaty is the result of a Diplomatic Conference held at Washington, D.C., in 1989.

This treaty however provides for only 8 years protection for the integrated circuits. The treaty also extends the exclusive right of the right-holder to articles that incorporates the integrated circuits. This Treaty urged the Contracting Parties to provide intellectual property protection of layout-designs (topographies) of integrated circuits, whether or not the integrated circuit concerned is incorporated in an article. The Contracting Parties must, as a minimum, consider the reproduction of the lay-out design, and the importation, sale or other distribution for commercial purposes of the layout-design or an integrated circuit in which the layout-design is incorporated as a criminal act if it is done without the permission of the right holder. The Contracting Parties may make protection of layout-designs dependent on their commercial exploitation or on the filing of an application for their registration, or on their registration. Contracting Parties can take measures in the form of national legislation to secure free competition and to prevent abuses by the holder of the right.[70]

Several countries have made national legislation to protect such circuits. Under United States law, the Chip Act provides protection to semiconductor chip designs.[71] "Mask works" are the subject matters of such **intellectual property** protection. Such terminology refers to the masks bearing the design of the circuitry used in the production of the chip. The information is protected regardless of how it is recorded, whether in the chip, on paper, or in a database.[72] The Chip Act, however, does not protect ideas, principles,

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68 Id

69 Treaty on Intellectual Property in Respect of Integrated Circuits, May 26, 1989, 28 I.L.M. 1477.

70 International Bureau of WIPO, Guide on the Licensing of Integrated Circuits, WIPO Pub. No. 689(E), (1995).

71 Id

72 Id

or processes embodied in the chip design. These can be protected, however, by patents or trade secrets. Under United States law, the owner of a mask work has the exclusive right to reproduce it in chips or other forms and to import and distribute semiconductor chips embodying the mask work, in products or otherwise. The Chip Act does not protect commonplace designs, which are familiar in the semiconductor industry, or unoriginal variations of such designs.[73] The originality requirement for semiconductor chip protection is more stringent than for copyrights.

The Chip Act provides a ten-year term of protection commencing when the mark is registered with the United States Copyright Office or is first commercially exploited anywhere in the world.[74] A prerequisite to litigation for infringement of a semiconductor chip design, as well as for enjoyment of the full ten-year protection, is registration with the United States Copyright Office.[75]

In the above classification of Intellectual Property Rights, Software comes under the copyright regime in all civilized nations where IP is in force. However the trend of patenting software is also gaining acceptance and in the Indian context, the second amendment of the Patents Act has included hardware linked software as a patentable subject matter.[76]

The current module in dealing with IPR in Cyber Space will explore the subject matter of Intellectual Copyright and its jurisprudence in assigning the rights to various aspects of creative works as a foundation and thereupon analsye the its framework for the rationale of accommodating computers and computer programmes under its segments of Copyrights, Patents, Trademarks and the emerging segment of 'Databases' which needs to be interpolated into the IPR Regime.

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73 Id

74 Id

75 International Bureau of WIPO, Guide on the Licensing of Integrated Circuits, WIPO Pub. No. 689(E), (1995).

76 See www.patents second amendment.org

CHAPTER II

COPYRIGHT AND INFORMATION TECHNOLOGY

Copyright as a branch of the Intellectual Property regime has some well settled principles and incisive case laws in its expanding subject domain. However the emergence of Internet, expansion of the complexities in computer programme has posed new challenges to the legal regime of copyright law. To surmount such challenges, the debate centers around freeing cyber space from copyright regime on one end of the spectrum and to find effective methods to cover the cyber space on the other end. These challenges are not only with the copyright sphere but in other spheres of Intellectual property as well. This section will deal with the basics of software technology for the purpose of understanding copyright, the copyright –patent debate about software, Issues involving the Authorship & Assignment, Issues relating to commissioned work for hire, Issues of Idea / _Expression in Software, copyright issues in Internet, Jurisdiction issues in Cyberspace, Infringement & remedies, Multimedia & software piracy

1. Understanding the technology of software

To understand the software-copyright issues one needs to understand the subject of 'software' in the context of Information Technology. Software and Hardware constitute the crux of the process of Information Technology.

– Hardware denotes the physical or tangible part commonly known as computer, which comprises of multiple

parts of assembly of mechanical and electronic devices. In other terms, the Monitor, the Hard Disc, the Key board and the Mouse will constitute the bundle of Hardware in a trading jargon. On the other hand software is the intangible part which is a series of commands or instructions written in a specific language which when installed in the hardware either as a embedded process or as an independent process will make the computer function.

In another sense, Hardware is that part of the computer which cannot be transmitted through wire where as the Software is that part which can be transmitted through wire or through wireless mode. Hardware is mechanical and electronic circuits connected in a complex manner where as software is a programme written in a specified language, which activates and makes the computer to function to get the desired results.

Having distinguished between hardware and software one needs to look in detail on the subject matter of 'software'. The following terms and its understanding is essential to understand the subject matter of 'software'

A. Object Code – It is a machine readable language where the instructions are written in a binary mode which is by using '0' and '1' and read by computers as open and closed switches during the operation

B. Source Code – This is an advanced language written in English, which allows programming by the machine after it is translated into object code for operating various functions in the computer. The languages of C+ + or Perl belong to this type of language used to write programmes.

C. Operating Software – This is the category of software programme written and used for machines to perform the basic functions of opening, listing, categorizing, storing and retrieving of information, which is arranged as folders or files. In short it is called as the OS- MS Dos or Unix or Microsoft Windows with its various versions are examples of Operating Systems.

D. Applications Software – This category of software programme is complex in nature and also performs complex functions for the user when installed in a hard disc. Microsoft office, Lotus notes or Tally for accounting will come under the applications software

E. Networking – Networking is a process of connecting computers in a specified location or of scattered locations to be linked for purposes of sharing software and related functions. Here the applications software can be shared by such networked users.

F. Local Area Network – This is a type of network referred as LAN which means the computers are linked and the software applications can be accessed by those computers linked in a specified local area

G. Wide Area Network- this type of network referred as WAN is a networking of computers in different places through wire or wireless mode where they can work on a shared software.

On the product side of the computer programmes the following categories are available in the market:

Proprietary Software: These software are copyrighted and commercially produced software sold as branded software used in commercial and personal computing. Microsoft is the leader in this segment with various players contending in the markets of Accounting, publishing, e-learning, banking and other branches. These software often available off the shelf and through online ordering are based on license agreements often known as the shrink-wrap license.[77] Due to its commercial value and easy to operate construction, these software often face the brunt of copyright infringement as they are counterfeited in a large scale.

Shareware: These type of software are made available for a limited period of free use and after customer satisfaction are available for purchase through a license agreement. In this type of software, the free version is a limited version for a fixed time and at the end of the period, it is built to cease operation and there by the costumer has to make a choice to buy it and register as a regular user. The source code is copyrighted and the customer cannot modify it for permanent use.

Freeware: In this type of experiment, programmers make available software which can be used by customers and those satisfied can pay a

77 V.C.Vivekanandan, The emerging jurisprudence of Cyberspace, 2001, Nalsarproximate Education, p.53

royalty to the owner of the software programme and can distribute this software to others to experiment the same way. The customer however cannot sell the software as the copyright is still with the programmer and the only privilege for the customer is to use and distribute to others free of cost.

Open Source Code software: Also referred as the copy -lefting, Linux is the frontrunner in this type of software, where the recipient is free to change the source code and modify it to his needs. The only condition is that the previous author from whom he has received has to be recognized and in sum cases contribute for their efforts as agreed upon in the transaction. This type of software where 'Linux' is increasing its presence and operations has spawned the open source code movement. This movement in essence challenges the Intellectual Property System as it exists today.

Having defined the above, one needs to look at the interface of Hardware and Software. The software which is called as an operating system is installed in the computer or stored in the hard disc which responds to the applications software and makes it run with the help of the operating software. The operator of the computer now can use the applications software with the help of the OS to perform various functions for which the software is designed.

The software so designed or programmed is created by programmers which is stored in a floppy or CD-Rom (compact disc-Random online memory) or may be in a server. Such created and stored works are distributed as products of commercial value or could also be a freeware for the consumers. The consumers on procuring such software in the stored form can install them in their computer to operate or carry out their function or can directly operate from the floppies or CD-ROMs with some minimum installation in the hardware to read and carry out the functions. In the internet age such software can also be downloaded for a price or as a free product from a remote host server via internet into their computer. One need to keep in mind the product of software is thus intangible in its form but the storage medium is a physical or tangible one such as the floppy or CD-ROM. In essence the storage medium is a separate entity and the

matter it contains called software is a separate entity. The storage medium is a commercial goods whereas the content called software is a creative work for the purposes of understanding the position of these two in the legal regime.

As mentioned earlier, software or alternatively called as computer programme as a product is categorized as a Intellectual Property and is protected under the Copyright Law worldwide. The logic being that it is a creative work and qualifies for Intellectual Property protection and based on the value of its creativity-dubbed as literary work falls under the copyright regime for protection as Intellectual property.

2. COPYRIGHT ISSUE IN CYBERSPACE

As discussed earlier 'software' as used in the networked and stand-alone computers as well as the 'software' which powers the operations of Internet is protected by the 'copyright' segment of IP system in all legal regimes. There is an increasing trend of protecting 'software' under the patents regime in many countries. To analyze the issues of the 'copyright' in Internet as well as in the physical environment, one needs to first understand the basics of 'copyright' in an IP regime and prospects of problems of fitting in software as a product and the operations of Internet in such a matrix.

To analyze the position of software to be protected as copyright and its attendant problems and prospects of such categorization one need to understand the basics of the subject matter of copyright. Copyright in a dictionary meaning denotes "copies of words" and derives from the concept of a manuscript and related matters for printing. It is defined as 'the exclusive right given by law for a certain term of years to an author, composer etc. inclusive of the assignee to print, publish and sell copies of his original work. Yet another definition of copyright is that of the 'exclusive right to multiply copies of a book'. In essence it is a statutory right conferred by law to an author, creator or her licensee or assignee an exclusive right to exploit its value in commercial or other ways under the copyright legal regime.

A legal definition of the same could be inferred from a judgment as, 'An artistic, literary or musical work is the brainchild of the author, the fruit of his labour and so, considered to be his property. So highly is it prized by all civilized nations that it is thought worthy of protection"[78]

Let us now turn towards the position of the definition of Copyright under the Indian Legal system. The Indian Copyright Act of 1957, Section 14 deals with the statutory definition of Copyright as follows:

S. 14 Meaning of Copyright. (1) For the purpose of this Act, "copyright' means the exclusive right, by virtue of , and subject to the provisions of, this Act,-

a. in the case of a literary, dramatic or musical work, to do and authorize the doing of any of the following acts, namely:-

i. to reproduce the work in any material form ;

ii. to publish the work;

iii. to perform the work in public;

iv. to produce, reproduce, perform or publish any translation of the work;

v. to make any cinematograph film or a record in respect of the work;

vi. to communicate the work by broadcast or to communicate to the public by a loud-speaker or any other similar instrument the broadcast of the work;

vii. to make any adaptation of the work;

viii. to do in relation to a translation or an adaptation of the work any of the acts specified in relation to the work in clauses (i) to (vi) ;

78 Justice Chinnappa Reddy in Gramaphone Co., of India Ltd. V Birender Bahadur Pandey and others AIR 1984 SC 667, p.676

b. in the case of an artistic work, to do or authorize the doing of any of the following acts, namely:-

i. to reproduce the work in any material form;

ii. to publish the work;

iii. to include the work in any cinematograph film;

iv. to make any adaptation of the work;

v. to do in relation to an adaptation of the work any of the acts specified in relation to the work in clauses (i) to (iii);

c. in the case of a cinematograph film, to do or authorize the doing of any of the following acts, namely:-

i. to reproduce the work in any material form;

ii. to cause the film, in so far as it consists of visual images, to be seen in public and in so far as it consists of sounds, to be heard in public;

iii. to make any record embodying the recording in any part of the sound track associated with the film by utilizing such sound track;

iv. to communicate the film by broadcast

d. in the case of a record, to do or authorize the doing of any of the following acts by utilizing the record, namely:-

i. to make any other record embodying the same recording;

ii. to cause the recording embodied in the record to be heard in public;

iii. to communicate the recording embodied in the record by broadcast, a work or a translation or an adaptation thereof shall include a reference to the doing of that act in relation to a substantial part thereof.

From the above statutory definition the exclusive rights of the author/ owner and its ramifications are listed exhaustively under s 14 prescribing the complete scope in the act. The subjects of copyright subsistence or what areas come under the copyright scope is defined in s 13 of the Copyright Act of 1957. It is as follows:

13. Works in which Copyrights subsists. (1) Subject to the provisions of this section and the other provisions of this Act, copyright shall subsist throughout India in the following classes of works, that is to say,-

a. original literary, dramatic, musical and artistic works;

b. cinematograph films; and

c. records

(2) Copyright shall not subsist in any work specified in sub-section (1), other than a work to which the provisions of section 40 or section 41 apply unless;

i. In the case of a published work, the work is first published in India, or where the work is first published outside India, the author is at the date of such publication, or in a case where the author was dead at that date, was at the time of his death, a citizen of India;

ii. In the case of an unpublished work other than an architectural work of art, the author is at the date of the making of the work a citizen of India or domiciled in India; and

iii. In the case of an architectural work of art, the work is located in India.

Explanation – In the case of a work of joint authorship, the conditions conferring copyright specified in this sub-section shall be satisfied by all the authors of the work.

(3) Copyright shall not subsist -

a. in any cinematograph film if a substantial part of the film is an infringement of the copyright in any other work;

b. in any record made in respect of a literary, dramatic or musical work, if in making the record, copyright in such work has been infringed.

(4) The copyright in a cinematograph film or a record shall not affect the separate copyright in any work in respect of which or a substantial part of which, the film, or as the case may be, the record is made.

(5) In the case of an architectural work of art, copyright shall subsist only in the artistic character and design and shall not extend to processes or methods of construction.

Further through an amendment brought out in the Copyright Act of 1957, computer programme has been included in the copyright and the same has been defined as, 'computer programme' means a set of instructions expressed in words, codes, schemes or in any other form, including a machine readable medium, capable of causing a computer to perform a particular task or achieve a particular result.'

This definition and its interpretation is based on the Draft Model Provisions for the Protection of Computer Software, of the World Intellectual Property Organization and has defined- computer programmes, Programme description and supporting Materials as follows:

Computer Programme-a set of instructions capable, when incorporated in a machine-readable medium, of causing a machine to have information-processing capability to indicate, perform or achieve a particular function, task or result.

Programme Description- a complete procedural representation in verbal, schematic or other form, in sufficient detail to determine a set of instructions constituting a corresponding computer programme;

Supporting Material- means any material, other than a computer programme or a programme description, created for aiding the understanding or application of a computer programme, for example problem descriptions and user instructions.[79]

Further to the above provisions of the Indian Copyright Act of 1957, it is also pertinent here to remember that though copyright act of the country is what governs the subject matter of computer programme, there are also international conventions, which govern the subject of computer programmes if a country is party to such universal conventions. India is a signatory to

79 Sam Ricketson, "The Berne Convention for the Protection of Literary & Artistic Works" Centre for Commercial Law Studies, University of London, 1987, p.896

the Berne Convention on Copyrights and also signatory to the Universal Copyright Convention . As part of these conventions, the Universal Copyright order of 1958 and the subsequent International Copyright Order of 1991 will apply to the member countries.

From the above factors on Copyright the following can be interpreted and established:

- **Computer Programmes as Copyrighted materials:** Computer Programmes often referred as Software are categorized as works which fall under the copyright regime and are protected by the relevant laws of the country and in the case of India it falls under the Copyright Act of 1957 and as defined in the amended portion of the Act in 1999. Under this all forms of expressions of words, codes, expressions which are machine readable form will come under the protection of the Copyright Act and is categorized under the Literary Work. Hence all rights, issues of infringement, remedies, jurisdiction and related matters which apply to Literary works including computer programmes will be protected under the Copyright Act.

- **International Conventions govern copyright protection of all foreign works:** As signatory of the international conventions of copyright such as the Berne Convention, copyrighted works of any person or organization of the member countries of the convention get protection uniformly as it would have protection in their own country. In other words, once the programmes are published in a country it is protected in other countries based on the conventions and the signatory status of the country.

- **Protection for Expression alone:** Under the copyright regime, the programmes are protected only for the expression of the programmes and not the idea behind. Which means in Indian context, the copyright protection for software or computer programmes is available only on the expression part of it. The idea of the programme will not get protection under the copyright. As discussed on the overview of various IP segments, the idea of the software may have protection if it is patented in some countries like USA, however it may not have the same protection here under the copyright law. In Indian context an amendment of the patents act of 1970 does allow a software, which is linked with software to be

patented, again there is no universal patent rights and hence unless such a software patent of a foreign country may not receive any protection unless it is patented in India based on the recent amendment. Thus it can be concluded the defense of IP for computer programmes is under the Copyright Act as on today with the exception made in the second amendment act recently.

3 Software –Copyright vs. Patent

The recent trend in the protection of the computer programmes, there is a serious debate about the copyright vs. patent dichotomy. United States is a frontrunner followed by Europe for granting patent rights to software. India has also made a beginning by allowing software linked hardware to be patented. This can be discussed in the third chapter under Patents for better understanding after analyzing the subject of Patents and its logic in cyberspace.

4. Authorship and Assignment Issues

Computer programmes today can be created and written by Individuals as well as corporations who assign the work. Unlike manufacturing goods, programmes are classified as creative works and hence the copyright fundamentals will apply to that of the software and programmes.

Under the copyright regime, any creative work belongs to the author who has put in sufficient amount of labour, skill and creativity into the work. Hence the author is the natural owner of the copyright and such copyright comes into subsistence as soon the work is created in the normal process. The registration of copyright is not mandatory and not a legal requirement to acquire such right. Unregistered work is also a copyrighted work. Registration of copyright only assures that there evidentiary value and makes it easy to claim the ownership or authorship in case of a dispute of infringement. This is in variance with the 'Patents regime' of IP where the patents is one that is granted on the basis of first to file as in Indian context and first to invent in US context.

The Author of any work has the right to sell, license, hire, allow adaptation of the work or relinquish in favour of anyone he or she likes. The author or owner is defined as follows in the Copyright Act of 1957.[80]

1. Literary or dramatic work, the author of the work
2. Musical work, the composer,
3. An artistic work other than a photograph, the artist,
4. Photograph, the person who takes the photograph,
5. Cinematograph film, the owner of the film at the time of completion, and
6. A record (sound recording), the owner of the original plate from which the record is made at the time of the making of the plate.

In this context though no explicit definition of author and authorship is mentioned in the Act but it can be inferred by the various definition of various creative works, the programmer of a programme can be inferred as the author of the work. It has also to be understood from the above definition that the right of the author is on the work created and not on the physical material it is created which could be owned by some one else. As a rule the author of the above are considered as the first owner of the copyright. This is subject to the exceptions, which are as defined by s 17 as follows:

S. 17- First Owner of the copyright. Subject to the provisions of this Act, the author of the work shall be the first owner of the copyright therein:

Provided that –

a. In case of a literary, dramatic or artistic work made by the author in the course of his employment by the proprietor of a newspaper, magazine or similar periodical under a contract of service or apprenticeship, for the purpose of publication in a newspaper, magazine or similar periodical, the said proprietor shall, in the absence of any agreement to the contrary, be the first owner of the copyright in the work in so far as the copyright

80 See section 2(d) of Indian Copyright Act of 1957

relates to the publication of the work in any newspaper, magazine or similar periodical, or to the reproduction of the work for the purpose of its being so published, but in all other respects the author shall e the first owner of the copyright in the work;

b. Subject to the provisions of clause (a), in the case of a photograph taken or a painting or a portrait drawn, or an engraving or a cinematograph film made, for valuable consideration at the instance of a nay person, such person shall, in the absence of any agreement to the contrary, be the first owner of the copyright therein;

c. In the case of a work made in the course of the author's employment under a contract of service or apprenticeship, to which clause (a) or clause (b) does not apply, the employer shall, in the absence of any agreement to the contrary, be the first owner of the copyright therein;.....

From the above it can be inferred that though copyright is presumed to subsist with the creator or author and considered as the first author or owner, if it is commissioned by others it belongs to those who have commissioned unless there is a contrary contract in such commissioning.

Such a owner has the right to assign fully or partially the rights of his work by way of an written deed of assignment, which should have the clear details of the assignment and the conditions thereof. In such circumstances the assignee becomes the owner for the purposes assigned to her or him. Such an assignment could be of a work existing already or to any work the author may create in future.

In the context of computer programmes or software created by an individual or an organization, the general practice is to license it to a purchaser. Hence, the purchaser is bound by the license agreement of the software or programme he or she has paid for. Such License agreement is not an assignment and thus the purchaser is not a owner of the product in the complete sense. Such license agreement stipulate the do's and don'ts for the purchaser.

To illustrate –# # if a person buys a book, the copyright of the book will vest with the author who would have assigned the work to a publisher for a particular region and a language for publication for a particular royalty

or the author could have been commissioned by the publisher to do the work and hence the publisher is the sole owner of the book.

The purchaser cannot make any copy of the book but he is entitled to donate it or sell it in a old book shop.

But in case of a software sold by virtue of its license.

The purchaser is bound by the conditions which will stipulate that it should be installed and registered on a name on a particular machine which permits a backup in the same machine. Thus the purchaser cannot donate it, resell it or install it in multiple machines belonging to him.

Thus under the same copyright regime, the purchase of other works differs from that of a software if it were to be licensed and will still get the copyright protection.

4. Commissioned Work and Work for Hire

As discussed earlier that copyright subsists in the work created but by exception of S 17 the ownership of the copyright will be with those who have commissioned the work. In the context of the computer programmes this needs to be considered carefully. By S 17 if an employer wants to commission the work and keep the ownership right with him, it will depend on the explicit and detailed contract executed with the employee. Creation of software programmes could be done at a fixed place of the employer or at any other place as the infrastructure needed could be just a laptop and a few manuals. In such case, the drafting of the contract of the work commissioned will play a crucial role in the ownership of the value created.

It could be exploited both ways if the contract is not watertight. As a employee creating some part of a commissioned work in the residence which if not part of the clear employment conditions may claim to be of his own. On the other hand a employee experimenting some work unrelated to the commissioned work in his spare time may end up giving the right to

the employer if the contractual terms dictates so. The issue of confidentiality also plays a vital role as the process of computer programming is easy to store and taken away or can be created again outside the employment process to be given away for a profit to a rival thereby affecting the copyright protection of a programme under creation. Though technology like Time Stamping methods – where tamper proof stamping can be created as and when some part of the programme is created, contractual aspects will save unwanted litigation and inducement to infringement.

Another aspect other than the commissioned work, in the field of software is that of the BPO-Business process outsourcing, where parts of the work are commissioned to independent programmers or companies. The copyright issue of ownership will be based on the type of contracts worked out here. Apart from that there is also a practice of hiring programmers through companies, which facilitate such manpower. In these cases if the contractual parties are only the companies and not the hired employees, infringement cases will turn difficult without proper contracts.

5. Idea/Expression Dichotomy

As discussed earlier, the basis of copyright is that of the expression and has no bearing on the idea, whereas the basis of the Patent regime is that both Idea and expression are to be protected. The computer programmes covered under the copyright regime has come under criticism quite often.

In the first place, the source code and object code though protected under the copyright regime is only for their expression to do a function and can be altered easily and expressed differently. Hence there is a strong argument that 'software to be considered as an idea' so that it is not duplicated with different expression and rendering the copyright protection ineffective which will have repercussions on the business prospects.

In the second place, it is felt that there are no acclaimed method of ascertaining violation on the expression part of software duplication unlike publication or painting which has its commercial strength in concrete expressions, or films which has its strength on the value of the performers. Though the US courts have used various tests of 'Look and Feel' or that of

or that of the Abstraction- Filtration-comparison tests, the issue is debated. Much on this can be discussed in the third chapter under the software-patents vs. copyright segment.

6. Copyright in Internet

The Internet and its mind boggling growth has also posed challenges to the copyright regime more in terms of enforcement rather than conceptual issues. As it applies to the computer programmes, any information published in the Internet or Software available in the Internet has the copyright protection. The only issue here is the large scale infringement and the bottlenecks to enforcement, which poses a problem.

The first argument is that is that all contents in Internet are copyrighted which could be a registered work or unregistered work. The content in the Internet is provided as free information for public viewing or sold through legitimate assignees or licensors. The content could also be an infringed one and yet not come to the notice of the real owner of the work.

The second corollary of the earlier stand is that any one transmitting any content without explicit permission of the author or owner in fact is committing an infringement. There could be exceptions in the sense that the author or owner may relinquish his rights by explicitly announcing that it is free and anybody can use it freely and transmit freely.

However such simplifications based on the traditional concept of copyright regime is opposed by a cross section of 'netizens'(those who are part of internet life) that Internet as a concept is about freedom of information and expanding the IP regime from the physical world to that of the net world is against the basic foundation of 'Internet' as a universal medium. In that sense one can say that every page browsed is being copied to the temporary Internet files –which strictly interpreted is a copyright violation of copying without the author's permission. Even one accepts the argument, the Internet is a different medium, which cannot be equated with other physical mediums of copyright protection. Except that of paying for an Internet Service Provider or in a Cyber café the WWW is a free space to

surf in and view things. The authors who place their content in such a space could be equated to that of some one posting their creation-a poetry or a painting on a public wall cannot question a person walking in the street viewing that.

However such information posted in public domain for viewing or to be transmitted cannot be taken for granted to pass-off as one's own. In this context it is pertinent to note that even in traditional copyright concepts the author's moral right is always protected even if the economic right is traded. In that sense the information owner or author in a Internet is still entitled to sue some one who infringes in the sense he is plagiarizing the work.

Again Internet and its free access cannot be used as platform for posting a work not published in the net by an author or owner. Neither one can be spared for using innovative technology to be a contributory infringer. Again, Internet has a private side of its character, where information is stored and sold. Any attempt to access by non-legal means will invite the wrath of copyright violation along with the tag of cyber crime. Thus copyright in the traditional sense cannot be applied in Internet by the different nature of the medium and its operations and at the same time concerns are raised that it could be used in such casual manner to infringe works not connected with the Internet.

7. Jurisdiction Issues and Copyright

The advent of Internet and computer communications has made transmission of information across the globe by a click of a few buttons. The strength and rapid spread of Internet penetration is this process of communication among individuals and enterprises with ease, accuracy and zero distortion. This process has opened up enormous possibilities of interpersonal communication, commerce, educational exchange, administrative convenience, development related thrust so on and so forth. This world-wide simplification of operation has also raised the issue of governance and related issues of disputes of civil and criminal nature. On the civil side, one finds the 'physical world' governed by 'legal systems', which has its foundation on territories, which are political creations called Nation States. Whereas the 'virtual world' has to is operating without any

boundaries. The URLs today, which mark countries such as .in for India or .au for Australia, are mere address categorizations for convenience. The rest of the process is world wide operations in the Internet. In this context, the 'law of the land' has to govern the activities of the operations of the 'Universal transactions'.

In the context of Internet and its operations, IP systems which are country specific in their constructs and enforcement will find it difficult entangled in complex litigations and the jurisdiction issue will be the starting point of such complexity of applying the 'the law of the land' over the 'world wide space' of Internet.

In case of 'copyright' the jurisdiction issue in the background of Internet assumes importance. For instance for a work to be considered as copyrighted in India, according to the Copyright Act of 1957, S 13 (2) – Copyright shall not subsist in any work specified in sub-section (1) other than a work to which the provisions of section 40 or section 41 apply, unless –

i. In the case of a published work, the work is first published in India, or where the work is first published outside India, the author was dead at that date, was at the time of his death, a citizen of India;

ii. In the case of an unpublished work other than an architectural work of art, the author is at the date of the making of the work a citizen of India or domiciled in India; and

iii. In the case of an architectural work of art, the work is located in India

Thus from the above the general understanding is that for a work to be considered as copyrightable work should have been published in India. On what is publication according to the Act s 14 –

c. in the case of a literary, dramatic or musical work, to do and authorize the doing of any of the following acts, namely:-

i. to reproduce the work in any material form ;

ii. to publish the work;

iii. to perform the work in public;

iv. to produce, reproduce, perform or publish any translation of the work;

v. to make any cinematograph film or a record in respect of the work;

vi. to communicate the work by broadcast or to communicate to the public by a loud-speaker or any other similar instrument the broadcast of the work;

vii. to make any adaptation of the work;

viii. to do in relation to a translation or an adaptation of the work any of the acts specified in relation to the work in clauses (i) to (vi) ;

What about content Internet and the relevant question is where it has been published? by browsing it here in a computer can it be inferred that the author has published in the territory of India? In case of an infringement can he invoke Indian jurisdiction for taking action as a violation of copyright.

One defense can be put up based on the International Conventions to which India is a party. Thus if any one reproduces and sells a work of a British author who has published some work in his website, the British author can proceed against the violator based on the Copyright Act of 1957 by virtue of the International convention. Yet, the conventional operation of the seizure of the infringing copies will have other jurisdiction involvement. As in the case the website owner through which the infringing copies may in another country. His website may be operated through a server in another country and the owner of the web services may be in yet another country. Which in essence means that the litigation has to be a multi-national litigation to safeguard a copyrighted work. In the second place the copyright violation may not be known in the unfathomable maze of information available unless by chance stumbling compared to the physical copyright violation which is an organized industry and can be checked at production points. However the basic point to be remembered is that, computer programmes coming under the literary segment of copyright regime and governed by international conventions, one need to

understand that jurisdiction can be invoked without getting into the question how viable and successful the enforcement will be.

8. Infringement & Remedies

The copyright of an author or owner is that right to stop any one from reproducing, selling, licensing or distributing freely or for a value without his explicit permission. In a sense it is described as the negative right . In this context any act, which violates the right of the author or the owner of the author, is termed as infringement of the copyright. Infringement according to Copyright Act of 1957 is as follows:

S 51/ When Copyright is infringed. Copyright in a work shall be deemed to be infringed –

a. when a person, without a license granted by the owner of the copyright or the Registrar of copyrights under this Act or in contravention of the conditions of a license so granted or of any condition imposed by a competent authority under this Act –

i. does anything, the exclusive right to do which is by this Act conferred upon the owner of the copyright, or

ii. permits for profit any place to be used for the performance of the work in public where such performance constitutes an infringement of the copyright in the work unless he was not aware and had no reasonable ground for believing that such performance would be an infringement of copyright, or

b. when any person –

i. makes for sale or hire, or sells or lets for hire, or by way of trade displays or offers for sale or hire, or

ii. distributes either for the purpose of trade or to such an extent as to affect prejudicially the owner of the copyright, or

iii. by way of trade exhibits in public, or

iv. imports into India, any infringing copies of the work.

Provided that nothing in a sub-clause(iv) shall apply to the import of two copies of any work, other than a cinematograph firm or record, for the private and domestic use of the importer.

By section 51 on the provisions of the copyright infringement, any copy made from the one that has been purchase will amount to copyright infringement. The issue is that when a programme is purchased in the format of a floppy or a CD ROM, it has to be installed in the computer to make use of the same. In such case a copy is made into the hard disc of the computer and also as a safety measure that the programme may be destroyed fully or in parts a back-up copy is made in the machine. Going by the provisions in S 51 it would amount to infringement in the strict sense. Hence another provision in the Act S 52 (aa) of the act is included in the amendment constituting not an infringement on computer programmes, S 52 Certain acts not to be infringement of copyright (1) the following acts shall not constitute an infringement of copyright, namely –

…..(aa) the making of copies or adaptation of a computer programme by the lawful possessor of coy of such computer programme, from such copy——

(i) in order to utilize the computer programme for the purpose for which it has supplied; or

(ii) to make back-up copies purely as a temporary protection against loss, destruction or damage in order only to utilize the computer programme for the purpose for which it was supplied;

From the above section, storing a programme purchased legitimately can store in the machine and make a copy for back-up purpose in the machine will not be considered as violation of copyright of section 51. This clause is also part of the most license agreement, which allows the purchaser to make a back-up copy in the machine for operations.

On another issue of infringement is that of the importation of personal copies (two) of any literary or dramatic work under which the copyright falls. With online software available, the importation and enforcement against such importation becomes a difficult task in online environment.

On other exceptions of copyright infringement which comes under S 51 (a) are as follows;

a. fair dealing- research or private study; criticism or review; reporting of current events in a newspaper, magazine or similar periodical; by broadcast or in a cinematograph film or by means of photographs;

b. reproduction for the purpose of judicial proceedings

c. reproduction for legislature purposes

d. performance for educational institutions

e. performance for the benefit of the non-paying audience or for any religious gathering

On the remedies for infringement of copyright, the Act provides for the following remedies –civil, criminal and administrative remedies.

CIVIL REMEDIES: Under this the owner of the copyright or an exclusive licensee of the copyright can file for civil remedies to claim a) injunction b)damages c) profit of accounts and otherwise as are or may be conferred by law for the infringement of the copyright.

Here injunction is the first step sought to contain the infringement and the owner can proceed to claim damages based on any mutilation, lowering the reputation of the owner. Such a right of the owner can be exercised even against a licensee, if the licensee happens to be the infringer.[81]

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81 This is based on the author's special rights known as the moral rights which entitles him/her to proceed if a licencee distorts the work assigned fully or partially. S 57 of the Copyright Act of 1957- Author's special rights (1) independently of the author's copyright, and even after the assignment either wholly or partially of the said copyright, the author of a work shall have the right to claim the authorship of the work as well as the right to restrain, or claim damages in respect of ,-(a) any distortion, mutilation or other modification of the said work; or (b) any other action in relation to the said work, which would be prejudicial to his honour or reputation.(2) The right conferred upon an author of a work by sub-section (1) other than the right to claim authorship of the work, may be exercised by the legal representatives of the author.

Profit of accounts relates to claiming the profits made by the person who has infringement of the copy, which could have accrued to the owner of the copyright. The owner can resort to conversion where all the infringed copies can be recovered and returned to the owner.

In civil remedies the copyright owner can claim only an injunction in case the defendant proves that he has infringed a work without having the knowledge of the copyright subsisting in it. Innocence however cannot be a defense in infringement.

In case of a civil suit, the exclusive licensee can proceed against the owner of the copyright and in all suits unless the court directs otherwise the owner of the copyright will be included as a defendant.[82]

CRIMINAL REMEDY

The owner of the copyright can also seek criminal remedy, where a court finds a person knowingly infringes or abets infringement of the copyright in a work or any other right conferred by this Act shall be punishable for not less than six months to that of three years and may be fined from fifty thousand rupees to two lakh rupees based on first time infringement and subsequent infringement after convicted earlier.

The police officer not below the rank of the sub-inspector can raid, seize without warrant of any infringement of copyrighted work and produce the infringed copies before the magistrate.

In cases of offences by corporates, every person who was in charge of at the time of the commitment of the offence will be held responsible along with the company. The Act by section 69- Offences by companies.

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82 S 61 Owner of the copyright be party to the proceeding. (1) In every civil suit or other proceeding regarding infringement of copyright instituted by an exclusive licensee, the owner of the copyright shall, unless the court otherwise directs, be made a defendant and where such owner is made a defendant, he shall have the right to dispute the claim of the exclusive licensee. (2) Where any civil suit or other proceeding regarding infringement of copyright instituted by an exclusive licensee is successful, no fresh suit or other proceeding in respect of the same cause of action shall lie at the instance of the owner of the copyright.

1. Where any offence under this Act has been committed, every person who at the time the offence was committed in charge of, and was responsible to the company for, the conduct of the business of the company, as well as the company shall be deemed to be guilty of such offence and shall be liable to be proceeded against and punished accordingly;

Provided that nothing contained in this sub-section shall render any person liable to any punishment, if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

2. Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company, and it is proved that the offence was committed with the consent or connivance of, or is attributable to any negligence on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Additional to this a section 63 B Knowing use of infringing copy of computer programme to be an offence – Any person who knowingly makes use on a computer of an infringing copy of a computer programme shall be punishable with imprisonment for a term which shall be not less than seven days but which may extend to three years and with fine which shall not be less than fifty thousand rupees but which may extend to two lakh rupees; Provided that where the computer programme has not been used for gain or in the course of trade or business the court may, for adequate and special reasons to be mentioned in the judgment, not impose a fine, which may extend to fifty thousand.

ADMINISTRATIVE REMEDIES

Under this remedy the copyright owner can appeal to the Registrar of Copyrights to ban the imports of works, which may infringe the copyright or infringing works from abroad under section 53 of the Copyright Act.[83]

83 The Registrar after receiving an application for banning importation, may conduct an inquiry and if satisfied may inspect the ship, dock or premises and confiscate the same.

GENERAL REMEDIES UNDER COPYRIGHT

1. No copyright subsist in the work alleged to be infringed
2. The plaintiff is not entitled to sue
3. The alleged copyright is not original
4. The alleged copyright work is not entitled to protection being immoral, seditious or otherwise against public policy
5. The defendant's work is independent and is not copied from the plaintiff's work
6. The defendant's action does not constitute infringement of the plaintiff's work and is permitted by section 52

a. fair dealing-research or private study; criticism or review; reporting of current events in a newspaper, magazine or similar periodical; by broadcast or in a cinematograph film or by means of photographs;

b. reproduction for the purpose of judicial proceedings

c. reproduction for legislature purposes

d. performance for educational institutions

e. performance for the benefit of the non-paying audience or for any religious gathering

8. The suit is barred by limitation
9. The plaintiff is guilty of acquiescence and laches
10. Where an infringement is innocent the plaintiff is not entitled to damages except profits made by defendants against infringement. S 55 (1)

PARTIES TO THE PROCEEDINGS IN A SUIT FOR INFRINGEMENT

A. The right to sue for infringement in copyright vests with the following:

1. The owner of the copyright
2. The assignee of the copyright provided the assignment is in accordance with s. 19

3. In the case of a testamentary disposition of the copyright work the legatee in accordance with s 20
4. An exclusive licensee if the owner of the copyright is made a joint plaintiff or a defendant, unless the court otherwise directs, s 61 (1),
5. In case of anonymous or pseudonymous work the publisher of the work until the identity of the author is disclosed publicly s. 54(b)
6. A co-owner may sue alone to restrain infringement. He may also make a criminal complaint
7. A non-exclusive licensee can be a proper plaintiff in proceedings for breach of copyright provided he joins the owner of the Copyright.

B. The following persons can be sued for infringement:

1. All persons who without the license of the owner of the copyright or the Registrar of Copyright or in contravention of the conditions of a license granted does or authorizes the doing of any of the acts the exclusive right to do which is conferred upon the owner of the copyright–s 14
2. Any person who permits for profit any place to be used for the performance of work in public where such performance constitutes an infringement of the copyright in the mark unless he was not aware and had no reasonable ground for believing that such performance could be an infringement of copyright.
3. Any person who makes for sale or for hire, or sells or lets for hire, or by way of trade displays or offers for sale or hire any infringing copy.
4. Any person who distributes any infringing copy either for the purpose of trade or to such an extent as to affect prejiducially the owner of the copyright.
5. Any person by way of trade exhibits in Public an infringing copy
6. Any person who imports (except for the private and domestic use of the importer) in India any infringing copy of the work.

A & M Records Vs Napster Inc – A case study in infringement

Facts of the Case:

1. Napster Inc a US based company had a software programme, which can be downloaded to the personal computer of any user. Once the programme is downloaded, the user can access the Napster server, which listed thousand of songs by title and by artists. Napster also maintained the database of other users using Napster programme. The users listed out a file of songs they have in their computer. Again if a user wanted to download a song he or she connected to the server of napster database will select the songs they require. Napster server in turn will find the other users who are offering the required songs and connect their computers to the one who is wanting the song. The songs then will directly get downloaded to the requesting person from the one who is offering free of cost. The same process will continue parties who request for files and parties who are willing to swap the files.

2. Five record companies A& M records, Sony Music, BMG Records, Polygram Music, Geffen Records and Warner Bros proceeded against Napster with a civil suit for Injunction and damages of contributory and vicarious infringement.

Arguments of the A & M and Others:

1. The programme of Napster enabled direct infringement of their music being downloaded, copied and distributed without license by the users of Napster
2. Napster by virtue of its programme has committed contributory and vicarious infringement and could not have happened with out the platform of Napster

Defense of Napster

1. Napster argued that it did copy or reproduce any music and only has a software which facilitates file transfers directly from one computer to another.
2. It did not engage in any commercial activity of selling music and only maintained a database of artists and song titles

3. Napster programme merely allowed space shifting of files from one to another.
4. It also evoked the fair- use clause for its defense

Court verdict

The Appeals court of the Ninth Circuit barred Napster from engaging in, or facilitating others in copying, downloading, uploading, transmitting, or distributing the musical compositions of the five record companies, which had brought the suit. The court based its verdict on the following:

1. Repeated and exploitative copying of copyrighted works, even if the copies are not offered for sale, may constitute a commercial use.
2. Increased sales of copyrighted material attributable to unauthorized use should not deprive the copyright holder of the right to license the material
3. Napster had constructive knowledge on the users direct copyright infringement.

The Napster Case opened up many areas of vulnerability of the traditional copyright regime in the age of Internet, where a software company is held liable though it did not directly involve as could have been in copyright violations in the physical world. Napster has appealed to the Ninth Circuit court for dispose the injunction.

Multimedia Works

Multimedia works are a combination of graphics, photographs, sound effects and other software compatible work. Many websites are multimedia works invoking a combination of many of the above. In such creation the copyright issue of the photographs, sound composition, layout design, software solutions will have to be protected. The copyright act protects each type of creative work and hence will come under the purview of the multimedia works.

Software Piracy

As discussed earlier one of the biggest challenges in Internet as well as in the normal process is the copyright violation of software programmes and other materials. Software piracy of commercial software is in the large scale because of the following factor:

1. The method of copying is one of the easiest process
2. The copied product is as good as the original as there is no loss in the process of copying
3. The copy just has the investment of the medium (floppy or CD ROM), which is negligible in terms of cost, and the remaining accrues as profit.
4. The legal software is high priced for many developing countries and hence a pirated edition as good as the original is quite cheap to buy creating a huge market resorted to many who are aware of the violation.
5. With Online operations tracking and policing software piracy is a difficult task

As discussed earlier, Software Piracy could become a cognizable offence on repeated violation as the Copyright Act 1957 stipulates punishment up to three years and fine of two lakh rupees. One effective method is to invoke the Anton Pillar Order where a court order can be obtained for a warrant to search, seizure and confiscation without mentioning the time, place and parties. These types of orders can be obtained if the court is convinced on the gravity of the counterfeiting and the loss to the owner of the copyrighted work. Another method adapted is to invoke S420 of IPC for cheating the consumer apart from the copyright infringement.

CHAPTER III

PATENTS AND INFORMATION TECHNOLOGY

1. Understanding Patents

Patents are given only for inventions. Inventions are solutions specific problems in the field of technology. An invention may relate to a product or a process. The protection conferred by the patent is limited for a statutorily specified period of time. In some countries, inventions are also protected through registration under the name of 'utility model.' The requirements are somewhat less strict than for 'patentable' inventions, and in comparison with patents the fees are lower, and the duration of protection is shorter, but otherwise the rights under the utility model are similar.

Patentability: In order to get a patent for an invention, the invention has to be patentable.

Patentability is determined by whether the invention falls within the scope of patentable subject matter. Patentable subject matter is established by statute, and is usually defined in terms of the exceptions to patentability. The general rule is that patent protection shall be available for inventions in all fields of technology. Normally, discoveries of materials already in nature are not patentable. These are known to fall within public domain. The reason is that no one person can get monopoly rights over something that already exists in nature. Similarly, scientific theories or mathematical methods are also not patentable. The reason is that these theories are not inventions. However, inventions

made using these theories are patentable. Biological processes are not patentable though most countries seek to protect microbiological process. The reason behind this is that in order to qualify for patent protection the substance has to be man made. Since biological processes are not, they are not patentable. Ideas, schemes etc are also not patentable. But these may qualify for copyright protection. Lastly, methods of treatment for humans or animals, or diagnostic methods practiced on humans or animals (but not products for use in such methods) are not patentable. The reason is that these are very subjective and therefore cannot be standardized by patents. However, there are some jurisdictions that believe that these can be patented like the US and Australia. (*Anesthetic Supplies Pty v. Rescare Limited*,[84] *see* case in the Annexure). This case is very important to also understand the thinking with respect to patents in the developed nations). Significantly, patentability is an area where the north and the south have differing views. Examples of this are patentability of software and biotech inventions. Whether these are subject matter that are patentable has been an issue that has been disputed. The US has case laws that explain why they consider this subject matter patentable. (See, Diamond V. Diehr[85], Arrhythema[86] and diamond v. Chakraborthy.[87] These are cases are important for the discussion on the evolution of patenting of biotechnology and of computer software[88] and will be discussed in the respective Modules).

Normally in order for a subject matter to be patentable, it should fulfill two conditions. They are a) novelty b) non obviousness/inventive step and c) Industrial applicability

Novelty: It is a fundamental requirement in any examination for a grant of a patent and is an undisputed condition of patentability. It must be emphasized, however, that novelty is not something, which can be

84 (1994) 50 FCR 1; (1994) 28 IPR 383 Federal Court of Australia, New South Wales District, 1994

85 450 U S 175

86 Arrhythmia Research Tech v. Corazonix Corp, US Crt of Appeals, Fed Circuit, 1992, 958 F. 2d 1053

87 447 U S 303

88 See Annexure on the development of the case law on patenting of computer software.

proved or established; only its absence can be proved. Novelty essentially means that the invention should be new. What is not new is said to exist already in the public domain and therefore is not patentable. What is already in the public domain is called a prior art. "Prior art" simply stated is all the knowledge that existed prior to the relevant filing or priority date of a patent application, whether it existed by way of written or oral disclosure.

The question of what should constitute "prior art" at a given time is one, which has been the subject of some debate. What is a prior art is also disputed between the north and the south. The south demands intellectual property protection for the traditional knowledge. The North argues that traditional knowledge is already known to sections of the public and is therefore a prior art. The North also argues that the determination of prior art should be made against a background of what is known only in the protecting country. This would exclude knowledge from other countries. Therefore what is known in India can be protected in the US. The south makes its distinction based on the differentiation between printed publications and other disclosures such as oral disclosures and prior use, and where such publications or disclosures occurred.[89] Normally, the disclosure of an invention so that it becomes part of the prior art may take place in three ways. These are by publication or by spoken words uttered in public (oral disclosure), or by use of the invention in public. Again the United States has very interesting cases on what amounts to public use. (*Egbert v. Lippman,*[90] *Lough v. Burnswick* Corp,[91]).

Non-obviousness: Once the subject matter of the invention is patent eligible, it should meet other criteria in order to be eligible for patent protection. The most significant is that the invention should be non-obvious. This means that the invention possess sufficient inventive step in such a manner that the invention is non obvious to one skilled the same art. The question as to whether or not the invention "would have been obvious to a person having ordinary skill in the art" is perhaps the most difficult of the standards to determine in the examination as to substance. The reason for

89 For an exhaustive discussion of the subject, see supra n 54

90 US SC 1881, 104 US (14 Otto) 333

91 US Court of Appeals, Fed Circuit, 1996, 86 F 3d, 1113

the inclusion of a requirement like this in patent legislations is based on the premise that protection should not be given to what is already known as part of the prior art, or to anything that the person with ordinary skill could deduce as an obvious consequence thereof.

This criterion of inventive step or non-obviousness has to be differentiated from the earlier criteria of novelty. Novelty exists if there is any difference between the invention and the prior art. The question, "is there inventive step?" only arises if there is novelty. The expression "inventive step" conveys the idea that it is not enough that the claimed invention is new, that is, different from what exists in the state of the art, but that this difference must have two characteristics. Firstly, it must be "inventive," that is, the result of a creative idea, and it must be a step, that is, and it must be noticeable. There must be a clearly noticeable difference between the state of the art and the claimed invention. This is why, in some jurisdictions, there is the concept of an "advance" or "progress" over the prior art. Secondly, it is required that this advance or progress be significant and essential to the invention. Other aspects of getting a patent involves the disclosure and the specification and claim drafting. These requirements are the heart line of actually acquiring a patent.

Industrial applicability: It essentially means that the subject matter should have some practical application. This also explains why theorems and algorithms are excluded from patentability. It also refers to the fact that the subject matter should be such that it can be reproduced. The entire reason for granting an inventor a monopoly right is to encourage R & D and provide the benefit of the same to the public. This purpose will be defeated if the subject matter for which a patent is sought is not capable of being reproduced. The word "industrial" in the same expression has a very special meaning in the terminology of patent laws. In common language, an "industrial" activity means a technical activity on a certain scale, and the "industrial" applicability of an invention means the application (making, use) of an invention by technical means on a certain scale.

2. International context of Patents

Patent policies have proved to be extremely important for several countries to develop. In fact, the patent policy pursued by India enabled it

to becoming a big international player in the generic drug market. The patent policies of Europe and the US enabled it to develop in research and technology and gain global economic leadership position. The patent policy of Japan enabled it to understand and catch up with the American system within a short period of time. In fact western scholars always associate development of a nation with patent policies. The roots of patent policies of developed nations can be traced to the post World War II era.[92] This era marks the shift in focus from war to trade. Countries expanded beyond national boundaries seeking superior trade and economic positions to flourish by investing and inventing. As early as in the 1800s nations perceived that trade had a direct co-relation to the patent policy of the country.

Patent policies are manifested and implemented as patent statues/ legislations. Because of the many benefits and the importance of patents, the subject of patents as such tends to be extremely interesting but very complicated. Before the subject of patents is understood certain terms need to be internalized by a prospective patent scholar to even attempt to understand the law of patents.

The Patent Terms – General Terms

Several terms define the various aspects of patents. As far as possible these terms are explained in the most logical manner for the reader to understand this in perspective.

Patent policy details a country's policy for the patent system. The polices are made by the legislature and based on this policy the patent statute is drafted. For example, the patent policy of India in the 1950 was to ensure that there was local production of drugs. Hence the patent legislation catered to such a need by so drafting the legislation.

Patent legislation is what is called the Patent Act. The patent outlines the gist of the patent system in the country. For example, the Indian Patent Act details what can be patented and that patent applications need to be made in order to get a patent. Now, those interested in obtaining a patent

92 Martin J. Adelman et al., Cases and Materials on Patent Law 1 (1998)

need to understand what the application should contain, where the application has to be submitted etc. All these procedural rules are covered in India by the ***Patent Rules***. Thus the patent rules supplement and compliment the patent legislation. Some times the patent office issues rules that are within their powers. These are called as ***patent notifications.*** In the US, such rules are laid down in the form of ***patent guidelines***. In Europe these same rules are laid down in the form of ***guidelines*** or ***Directives.***

A ***patent*** itself is nothing but a document issued by the government. This document tells the holder of the document that a patent protects a particular product. This means that the product is ***patent protected.*** This means that the product is protected from duplication and copying. The manner of protection is by patents. The person in whose name the document is issued is the ***patent owner***. Most often, the patent owner will also be the ***inventor.*** Sometimes companies or other entities can also be a patent owner by entering into an agreement with the patent owner. Such agreements are called as ***license agreements***. These agreements will essentially give the companies and other entities (the ***licensee***) the right to sell, produce, and re-sell etc the invention. In return the inventor will get monetary returns termed as ***royalties.***

Once a person becomes a patent owner, he gets exclusive rights to sell, manufacture and market the product for a specified period of time. For example, in the US this is 20 years, in India it is 14 years now. This period is called ***patent term.*** This means that during the patent term no person other than the patent owner can ever sell the product. Thus the patent owner is vested with ***exclusive monopoly rights*** over that product. This right is the "the right to exclude others from making, using, offering for sale, or selling" the invention or "importing" the invention. What is granted is not merely the right to make, use, offer for sale, sell or import, but the right to exclude others from making, using, offering for sale, selling or importing the invention. Thus there will be no other competing products during the patent term. Hence the patent owner can meet the demand of the market by supplying the entire market. Lack of competition also allows the patent owner to set a higher price for the product since consumers can only access the patented product.

This monopoly right is given so that research and development leading to inventions are encouraged. This means that the government encourages people to invent more and tells that that their incentive for inventing more is the monopoly rights which enables the inventor to make more money during the patent term. In return the government ensure that the patent owner describes the invention, the making of the inventions and the working of the invention in the application. It then ensures that after the patent term expires, any person interested can gather the information and manufacture similar or the same product. Thus the government on the one hand promotes research and development and on the other hand ensures that the public continues to get the benefit from inventions. The public makes an implied agreement to ensure that they get the benefit of research and development for indefinite period by payinga little extra during the patented term.

Patents affect trade internationally because of the above. That is, a lot of times patent owners sell products at higher prices. Therefore copying patented products (called as ***patent infringement***) enable those who copy to sell the same products at the cheaper price. This affects the right of the patent owner. Most often, developed countries are the source of research and development. In these countries, they protect the rights of the inventors by adequate mechanisms. On the other hand, developing nations could survive only with a little copying in specified industrial sectors like pharmaceuticals etc. Hence developed nations wanted what is called as ***patent harmonization.***

The term patent harmonization essentially means that patents laws and patent protection becomes very similar across the world in all countries. This will ensure that the rights of patent holders of any country are protected internationally. Such harmonization is attempted through ***patent conventions*** or ***patent treaties***, (TRIPS is one such convention. Other patent conventions are Paris Conventions, Patent Cooperation Treaty etc). These treaties and conventions are enforced by ***international organizations.*** The most important international organization for patent law is ***WIPO*** and ***WTO***. WIPO stands for World Intellectual Property Organization and WTO for World Trade Organization. The WTO governs the trade related aspects of intellectual property rights. WIPO is the

main organization for the governance of all the treaties other than TRIPS.

Patents are sought from the ***patent office*** by making a ***patent application.*** In the US there is only one patent office located centrally at Washington DC. The patent office is spread through several buildings in the US. There is one central patent office in Calcutta and regional offices in India.

3. European Position on Patents with special reference to computer Programs

In order to understand and appreciate the differences between the American and European system, it is important for the reader to understand the policy, purpose, nuances and functioning of each of the requirements of patentability and the claiming requirements.

European patent issues fall within the purview of the European Patent Convention. The convention is supplemented by the following:

a) European directives

b) National laws on the subject matter

The following provides an overview of the convention issues. Now, the European Patent Organization was established by the Convention on the Grant of European Patents (EPC) signed in Munich 1973, the EPO is the outcome of the European countries' collective political determination to establish a uniform patent system in Europe. This is a centralised patent grant system and is administered by the European Patent Office on behalf of all contracting states. The European Patent Organization comprises of its legislative body, the Administrative Council and executive body, which the European Patent Office.

In a gist, the European Patent Office (EPO) in proceedings established by the European Patent Convention (EPC) grants a European patent. As of 1 November 2000 there will be 20 EPC contracting states. A European patent is obtained by filing a single application in a unitary procedure before the European Patent Office and is valid in as many of the contracting states as the applicant cares to designate. A European patent attorney is

someone who, having passed the European qualifying examination, is authorized to represent those filing European patent applications before the European Patent Office. The European patent attorney advises inventors and companies on how to protect their inventions, assesses the subject matter in the light of the prior art, and drafts the patent application. He then guides the application through the examination procedure at the European Patent Office, consulting with EPO examiners to determine the legally acceptable content and scope of the application and advising the applicant on any amendments that may be necessary. He also deals with oppositions and appeals. The work of the European patent attorney therefore involves two aspects:

- The technical aspect, requiring the ability to understand the invention, and
- The legal aspect, requiring the ability to define the scope of protection conferred by the patent in accordance with the relevant law.

Even to qualify as a European Patent Attorney, candidates have to possess a scientific or technical qualification - for example, in biology, biochemistry, chemistry, electronics, engineering, pharmacology or physics.

PATENTABILITY ISSUES

Only issues of patentability, novelty and inventive steps are discussed in the European patent system. Issues of claim drafting and claim complexity are not discussed as it would require a much greater degree of understanding of the complexity and the policies of the European patent system beyond the needs of this course. The main object of the following material is to highlight that as a trend Europe is very accommodative of patenting of newer subject matters to encourage innovations into the field. Although general prohibitions are available in the European Convention, specific inventive activities within the prohibited areas continue to remain patentable. This is exactly how a third world country should try to incorporate its policies. Although there can be a stringent policy, specific flexibilities and rules within the broad policy frame work should tune in with the national requirements and create areas of patentability and exclusions as required and dictated by policy needs.

Note: Some of the material for this portion has been referred to or derived from the material in the European Patent Office web site. Further information may be available at http://www.european-patent-office.org/legal/case_law/e/index.htm.

Other materials are information from Professor Strauss's course on biotechnology patents.

The term referred to, as *Prior art* is known as and referred to a *state of art* with Europe.

Patentable Inventions:

All inventions are patentable in Europe. An invention must have a technical character and provide a technical contribution to the art. However, art. 52(2) contain a list of things, which shall not be regarded as inventions. The following are excluded as:

a. Abstract concepts (e.g. discoveries, scientific theories etc.), or
b. Non-technical information (e.g. aesthetic creations or presentations of information).
c. Inventions relating to mathematical methods,
d. Rules and methods for performing mental acts or doing business,
e. Presentation of information or computer programs as such (see Art. 52(2), (3)).

Art. 52(4) provides that methods for treatment of the human or animal body by surgery or therapy and diagnostic methods practiced on the human or animal body shall not be regarded as inventions which are susceptible of industrial application.

PATENTABILITY OF COMPUTER PROGRAMS

The non-patentability of computer programs as such does not preclude the patenting of computer-related inventions. However, the real technical contribution to the state of the art which the subject matter claimed, considered as a whole, adds to the known art, should be ascertained (the subject-matter may also be defined by a mix of technical and non-technical features).

In the *VICOM* case (Decision T 208/84,OJ 1987, 14) the Board set out the principles governing the patentability of computer-related inventions. The Board held that even if the idea underlying an invention may be considered to reside in a mathematical method, a claim directed to a technical process in which the method is used does not seek protection for the mathematical method as such. A claim directed to a technical process carried out under the control of a program (whether by means of hardware or software) cannot be regarded as relating to a computer program as such. A claim which can be considered as being directed to a computer set up to operate in accordance with a specified program (whether by means of hardware or software) for controlling or carrying out a technical process cannot be regarded as relating to a computer program as such.

Later the Board in the case of *Sohei, Yamamoto, et al* (T 769/92, OJ 1995, 525) inventions comprising functional features implemented by software (computer programs) was not excluded from patentability under Art.52 (2)(c) and (3) if technical considerations concerning particulars of the solution of the problem the invention solved were required in order to carry out that same invention. Such technical considerations lent a technical nature to the invention in that they implied a technical problem to be solved by (implicit) technical features. An invention of this kind was considered not to pertain to a computer program as such under Art. 52(3). The decision set out that non-exclusion from patentability could not be destroyed by an additional feature which as such would itself be excluded, as in the present case features referring to management systems and methods which might fall under the "methods for doing business" excluded from patentability under Art. 52(2)(c) and (3).

PATENTABILITY OF METHOD OF DOING BUSINESS

This is a very interesting question. These methods were excluded from patent protection generally in the US. And the European Union. However, the decision of *State street Bank* in the U.S held that the method of doing business was patentable. This resulted in Europe also granting protection for such types of inventions.

Although this material does not discuss the state street bank decision because of its complexity, this portion provides an overview of patentability of methods of doing business.

The above decision of *Sohei, Yamamoto, et al* itself addressed this question. The applicant claimed a computer system for plural types of independent management including at least financial and inventory management and a method for operating said system. Data for the various types of management, which could be performed independently from each other with this system, could be inputted using a single "transfer slip", in the form of an image displayed on the screen of the display unit of the computer system, for example.

Although financial and inventory management would generally fall under "doing business", the board held that the invention was not excluded from patentability under Art. 52(2)(c) and (3). In its view the particular kinds of management mentioned were not decisive; the fact that they were of different "specific" types to be performed "independently" of each other was found to be important. The application contained the teaching to provide, in the memory unit of the computer system, certain files and processing means for storing and further processing the data entered and causing the processing unit to perform these functions. The implementation of this teaching required the application of technical considerations. In the board's view the non-exclusion from patentability also applied to inventions where technical considerations were applied concerning particulars of their implementation. The very need for such technical considerations implied the occurrence of an at least implicit technical problem to be solved and at least implicit technical features solving this problem.

Furthermore, the provision of the single transfer slip required the application of technical considerations. This "user interface" implied that, in effect, independent financial and inventory management systems were combined by a common input device allowing data entered for use in one of the said systems also to be used, if required, in the other system. The implementation of such an interface in the claimed computer system was not merely an act of programming, but rather concerned a stage of activities involving technical considerations to be carried out before programming could start.

In the view of the board, restricting the application to financial and inventory management did not give rise to an objection under Art. 52(2)(c). By this restriction, the claimed subject matter only gained, in addition to the combination of features, which were not excluded from patentability, a further feature that, as such, would be excluded. However, it was established board of appeal practice to allow patentability for a mix of technical and non-technical features.

4. LEGAL POSITION OF US ON COMPUTER RELATED PATENTS

Before we go on to discuss the American patent system in depth is important to understand the issue of WHO IS A PATENT LAWYER and WHAT IS REQUIRED TO UNDERSTAND and appreciate patents. Scientists will be very interested to note that in the US, in order to become a good patent attorney, law firms look for a PhD is science as an essential. Along with that a simple graduation in law is enough.

Similarly, a PhD in chemistry will never become a patent lawyers working on say, biotechnology or electronics invention. He will ONLY work on Chemical inventions. Likewise, a PhD in electronics will only work on electronics inventions. Such is the importance placed on the role of science for drafting the patent claims. A lot of engineers, who came to the US from India as computer science people, branched out as lawyers since they figured that this field had more potential.

Unlike in India, the western countries realised the importance of the IP rights soon after the industrial revolution, when society became more consumer-driven. In fact, Article 1 Section 8 of the US Constitution specifically empowers the Congress under Clause 8 to "promote the progress of science and useful arts, by securing, for limited times, to authors and inventors, the exclusive right to their respective writings and discoveries.

In the US there is great emphasis on the understanding of IP law, not only within the US, but also on developments that occur elsewhere. The US' Special and Super 301, which affected India, was a direct result of this emphasis. The idea behind this was to ensure that American corporate

interests outside the US were not affected on account of the weaker protection given in any particular nation.

This has resulted in the formation of the American Intellectual Property Lawyers Association (AIPLA) as a separate club within the American Bar Association (ABA). Both the ABA and the AIPLA take a lot of interest in IP issues. The role of the lawyer vis-à-vis an IP issue is perceived as "use of legal tools effectively to achieve business results of the clients." In India, a lawyer can at some point decide to become a patent lawyer. When a lawyer becomes a patent lawyer, the Bar Council does emphasise sharpening the knowledge of the lawyer's science background.

In the US, it is the other way around. It is more likely that a science graduate, or an engineer, decides to become a patent lawyer and, therefore, acquires legal skills to complement his science background. Usually, college students contemplating a career as patent lawyers first major in engineering, physics or natural sciences such as chemistry or biochemistry. If the person wants to work only on patents under the USPTO (United States Patent and Trade Marks Office), he must take and pass the 'patent bar' exam, officially known as the "Examination for registration to practice in Patent Cases before the US Patent and Trademarks Office."

Interestingly, a person need not be a lawyer to do the patent bar. To be eligible to take the exam, the candidate should have a bachelor's degree, or the equivalent in engineering or one of the sciences specified by the USPTO; hold a bachelor's degree in another subject and have taken a certain number of specified science courses; or have taken and passed the engineering in training test. This qualifies the candidate to work on patents with the USPTO. To work with the patents section of the USPTO, a person need not be a lawyer.

In order to be a patent lawyer, the person has to additionally take the Bar Exam, for which a law degree is a must. After taking the basic law degree, (which is called the JD and takes about three years), the person must take the bar exam of the state in which he or she seeks to practice and qualify for the Bar. Only on passing the exam does any individual qualify to practice as a lawyer. If a person seeks to practice in more than

one state, he/she has to qualify for the Legal Bar Exam of the states in which he/she seeks to practice.

The ABA and the AIPLA also conduct regular seminars and conferences, either individually or in association with Universities, to share the best practices and legal techniques.

A recent conference focused on the Practical tips that are required for the patent litigations. Instances of this kind of specialization in India are rare. Most often, if it happens, it is because the lawyer in question has clients whose focus is more in one area rather than in others. However, India is also trying to catch up on the IP aspects of various issues, especially in the post-TRIPS era.

The conference's various sessions covered essentially pre-trial procedures, patent clients, trial procedures, discoveries as tools of evidence, interrogatories, expert evidence and its importance, testimony of the inventor, jury satisfaction, and so on. The conference also focused on some filing procedure issues and litigation aspects in countries such as Japan and the EU.

There was no discussion at all on the substantive aspects of patent laws. This was important because the level of discussion was not meant to be educative, but the focus was on sharing the best practices in a patent litigation. It covered both defending a patent, defending an accused infringer before a judge or a jury, or in an appeal. The focus was on the difference in tactics involved at each stage.

For example, in a discussion on the appellate procedure, a lawyer who had clerked with the Appellate Judge spoke about the limited time each judge had to read on a particular case and emphasised the need to ensure that the brief was outstanding to get the judge to take interest in it, more so in patent litigation where there were complex issues of science involved. The conference was on lawyering as a whole, rather than on patent law, and that made all the difference.

As part of defending patents, one of the law firms that represented a company for a corn patent brought out details on patents related to agriculture. The focus was that there may be clients who rush to patent offices before ensuring they had an invention. There are times when we

assume that when big multinationals file for patents they are sure that they have invented something. Apparently, more often than not, the companies are not sure themselves that it is an invention. However, they still file first to ensure that they do not lose out in case it amounts to an invention.

But interestingly, even such cases are lost or won (a patent is granted or denied) not because the case deserves it but because the lawyers concerned so drive the case. It is in the hands of the lawyer who wants the patent denied to argue that what is claimed is not an invention. One firm made a presentation on how to handle such clients and give a realistic opinion, and focused on working with the client to see if one or more aspects would qualify and be brought within the definition of an invention.

With the number of multinationals established in India, there are ample chances of having to fight off American defendants, plaintiffs or lawyers. Indian lawyers have proved their ability beyond doubt in the turmeric dispute and, more recently, in the decision on the neem patent dispute at Munich by the European Patent Office on May 11. However, we are still going through the phase of critiquing TRIPS and the WTO, though both these have become realities in our lives whether we like it or not. It is time India devoted more time and effort to increasing the expertise to compete with such foreign firms. The option for engineers to become IP lawyers is still unheard of in India. IP law as a career choice is not yet such an important field in India.

This is not a glorification of the American system. But, the idea is to drive home the point that a similar set of professionals with comparable efficiency levels are gaining an edge because of the rigour in training. It would be a challenge to ensure the same level of training and efficiency in this country too."

Patentability: Refers to the question of whether the product can be patented. *Patentability of a subject matter:* Refers to whether a whole subject matter is eligible for patent protection. A 'subject matter' refers to an area of science as opposed to a product. E.g., biotechnology related materials, Chemical materials, living matter etc. Each of these is subject matter.

Prior Art: Prior art refers to all similar or comparable inventions prevalent in the particular area or subject matter of the patent. For example, assuming someone discovers a new kind of washing machine that will also iron the clothes after washing. The regular washing machine and the ironing board and the iron-box are prior arts. When a patent application is submitted, the inventor normally is required to submit information on the prior art to the patent examiner. The idea is that the patent examiner looks at the invention and the prior art and decides whether the application refers to a product that has so far not been available to the public. In this case a washing machine that can also iron will be considered as an invention.

Public domain: This term refers to all things that are available to the public in general and accessible to them.

First to invent: It is important to understand that the United States follows what is called as the first to invent system. Under this system, the first inventor becomes eligible to get the patent protection irrespective of the fact that the first inventor probably made the later application for patent protection.

As in other patent regimes, US patent regime is also based on the three crucial tests of:

1. Utility
2. Novelty
3. Non-obviousness.

PATENT ELIGIBILITY

Patent eligibility refers to the issue of whether the particular subject matter is eligible for patents. All inventions are eligible for patent protection. But so far some areas have been excluded from patent protection for various reasons. For example, in India section 4 discusses areas that cannot be covered by patents. Section 5 states that invention in the area of atomic energy is a government issue and therefore cannot be a subject of patent protection.

Within the United States there are three areas of science where the issue of patentability of inventions have come into question. These relate to:

a. Biotechnology

b. Computer software

c. Chemical inventions

The following discussion examines what is protected in each of the above-mentioned areas of invention and how such protection is required encouraging the industries.

WHETHER SCIENTIFIC PRINCIPLES CAN BE PATENTED

1. Whether a mere scientific principle or a law of nature can be protected by patents?

Funk Brothers Seed Co V. Kalo Inoculant Co (333 U. S 127), the Respondent brought a patent infringement claim against petitioner. The infringement claim was limited to respondent's claim that he provided a mixed culture of Rhizobia capable of inoculating the seeds of plants belonging to several cross-inoculation groups. The petitioner filed a counterclaim asking that the entire patent be adjudged invalid. The Supreme Court reversed and found the patent invalid. It held that respondent's discovery that certain strains of each species of the bacteria involved could be mixed without harmful effect to the properties of either was a discovery of their qualities of non-inhibition. It was not patentable because it was no more than a discovery of the laws of nature. Respondent's discoveries did not make the bacteria perform in any other way than their natural way. The aggregation of select strains of the several species into one product is an application of that newly discovered natural principle. However ingenious the discovery of that natural principle may have been, the application of it is hardly more than an advance in the packaging of the inoculants. Each of the species of root-nodule bacteria contained in the package infects the same group of leguminous plants, which it always infected. No species acquires a different use. The combination of species produces no new bacteria, no change in the six species of bacteria, and no enlargement of

the range of their utility. Each species has the same effect it always had. The bacteria perform in their natural way. The court stressed that their use in combination did not improve in any way their natural functioning. Though respondent's combination of the bacteria was new and useful it nonetheless lacked the requirements of invention or discovery. Court held that once nature's secret of the non-inhibitive quality of certain strains of the species of Rhizobium was discovered, the *prior art* made respondent's production of a mixed inoculants a simple step and hence unpatentable. It was considered as a mere mixture of two known elements.

This question first came up in the case of Gottshalk v. Benson. Here the US Supreme Court indicated that that software algorithms could not be protected under patent law. The Court reached much the same result in Parker v. Flook. However, the court subsequently modified its rule in Diamond v. Diehr. In this case the court held that software could be patentable under rather stringent constraints. In particular, the Supreme Court specified that the operation of the computer program must be tied to some physical result - almost a "fixation" rule for patent law.

In *Diamond V. Diehr (*450 U. S 175) the respondents submitted a patent claim for a process for molding raw, uncured synthetic rubber into cured precision products. Included in the claim was the use of a mathematical formula and a programmed digital computer. The patent examiner rejected respondents' claim, concluding that respondents' claim sought protection of a computer program for operating a rubber-molding process. The court noted that respondents' claim for a physical and chemical process for molding precision synthetic rubber products fell within categories of possibly patentable subject matter. The fact that respondents used a mathematical formula and programmed digital computer did not change that result. The only question before the court was whether respondents' claim fell within the categories of possibly patentable subject matter.

Respondents' claim was nothing more than a process for molding rubber products, and was not an attempt to patent a mathematical formula. The court affirmed the lower court's decision finding that respondents' patent claim was a patentable subject matter. The court held that the respondents were not seeking to patent the mathematical formula per se,

but were only using it in conjunction with a process for curing synthetic rubber. Hence the court held that this did not fall under the mathematical formula exception and was patentable.

4. Patenting In India & Patenting of Computer software

We have dealt with the history of the patent regime in Chapter I. The patent regime in India operates through the Patent Act 1970 with subsequent two amendments to it. The best way to understand the Patent Act, 1970 is to understand areas that contravene with the TRIPS Agreement. There are six aspects of the Patent Act in India that directly contravene with the requirements in TRIPS. All these six aspects will be described in detail for a fuller understanding of the patent provisions. These are:

1. Patentable Invention
2. Process patents
3. Compulsory licensing
4. Working of patents
5. Term
6. Burden of proof

Patentable invention: Under the Patents Act, 1970 (hereinafter, the Act) any 'new and useful invention,' qualifies for a patent under section 2(j). Section 2 (j) details that an invention has to be a *a new product or process involving an inventive stepand capable of industrial application;*and includes a new and useful improvement over any of them. Thus in India any 'new and useful' invention is a patentable subject matter. The term invention has been defined by the court in *Raj Parkash v. Mangat Ram Chowdhary,* AIR 1978 Delhi 1. The court held that, "Invention is to find out or discover something not found or discovered by any one before and it is not necessary that the invention should be anything complicated and the essential thing is that the inventor was the first one to adopt it and the principle therefore is that every simple invention that is claimed, so long as it is something novel or new, would be an invention and the claims and the specifications have to be read in that light and a new invention may consist of a new combination of all integers so as to produce a new or important result

or may consist of altogether new integers and the claim for anticipation by the defendant has to be either by prior user or by prior publication".

The Act under section 3 defines what cannot amount to an invention. These are:

(a) an invention which is frivolous or which claims anything obviously contrary to well established natural laws;

(b) an invention the primary or intended use or commercial exploitation of which could be contrary public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment;

(c) the mere discovery of a scientific principle or the formulation of an abstract theory or discovery of any living thing or non-living substances occurring in nature;

d) the mere discovery of a new form of a substance which does not result in the enhancement of a known efficacy of that substance or the mere discovery of a new property or new use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.

Explanation: For the purpose of this clause, salts, easters, ethers, polymorphs, metabolites, pure form, particle size, isomers mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy

(e) a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance;

(f) the mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;

(g) Omitted.

(h) a method of agriculture or horticulture;

(i) any process for the medicinal, surgical, curative, prophylactic, diagnostic, therapeutic or other treatment of human beings or any process

for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products.

(j) plants and animals in whole or any part thereof other than microorganisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals;

(k) a mathematical or business method or a computer program per se or algorithms;

(l) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions;

(m) a mere scheme or rule or method of performing mental act or method of playing game;

(n) a presentation of information;

(o) topography of integrated circuits;

(p) an invention which in effect, is traditional knowledge or which is an aggregation or duplication of known properties or traditionally known component or components.

Notably, 'inventions,[93] the primary use or intended use of which would be contrary to law or morality or injurious to public health' are excluded from patentability to[94] facilitate compulsory license. The 'law or morality' phrase in section 3 is used to restrict biotech patents. Exclusion of a 'mere discovery of scientific principle or formation of an abstract theory'[95] denies protection to software related material. Clause (h) of section 3 excludes 'a method of agriculture or horticulture' thereby excluding protection to plant varieties.[96] Notably, protection of plant varieties by some form of intellectual property is mandatory under TRIPS.[97] Thus the

93 see Section 3 clause (b) Patent Act, 1970

94 Id. This clause is similar to the exception under art 27 in TRIPS.

95 Section 3(c) Patent Act, 1970

96 A new Plant Variety Protection Act was passed in 1999 to tune in with TRIPS.

97 TRIPS, supra note 6, art 27

Indian Patent Act contravenes some provisions of TRIPS. However, India is trying to amend this by enacting a new legislation for patent protection of plant varieties.

New and Useful: The Act does not define the terms 'new' and 'useful'. But these terms have been given meaning by the decisions of the court in India. The terms 'new' and 'useful' are comparative to universal requirements of novelty and utility. The court has also read the concept of non -obviousness into these terms in India. The Supreme Court in the case of *M/s. Bishwanath Prasad Radhey Shyam v. M/s. Hindustan Metal Industries,* reported in (1979) 2 SCC 511: (AIR 1982 SC 1444). In this decision, the Supreme Court propounded the *test of inventive step*. By this the court held that,"To be patentable the improvement or the combination must produce a new result or a new article or a better or of old than before. The combination article of known integers may be combined that by their working interrelation to produce a new process or improved result. Mere collection of more than one integers or things, not involving the exercise of any inventive faculty, does not qualify for the grant of a patent. ...Even in adopting the old contrivance to new purpose[s] there must be difficulties to be overcome requiring what is called invention, or there may be some ingenuity in the mode of making the adoption".

The Supreme Court also held that whether an alleged invention involves novelty and an inventive step is a mixed question of law and fact.

Obviousness: The term obviousness is also not defined specifically in the Act. This term merely refers to the fact that if the invention is obvious then it is not patentable. Therefore any invention has to pass the test non-obviousness in order to be patentable. This test becomes more crucial in the case of new improvements or even combinations. In India though there is no test of non-obviousness for patentability, a patent granted by the patent office can be opposed on the ground of obviousness. Every patent application can be opposed on the grounds of anticipation by prior publication (that is someone else has already published this invention before and hence it is not a new invention), prior use, lack of utility, obviousness and lack of inventive step.

The courts have also in the case of *Press Metal Corporation Ltd v. Noshir Shorabji,* AIR 1983 Bom 144, intertwined the requirement of non-obviousness within new and useful. The court held that, "New and useful method or manner of 'manufacture' need not necessarily be any product i.e. it need not necessarily be a new article; 'it may be any physical phenomenon in which the effect, be it creation or merely alteration may be observed. In considering whether the claim as made by the inventor is an invention, it will have to be considered whether the subject matter is not obvious. Obviousness is to be judged by the standard of a man skilled in the art concerned."

Process Patents: A patent may be granted for a product, or a process. In the case of a product, the patent is in the end product. In the case of a process the patent does not lie in the end product but only in the process of production.[98]

Reasons for India having a process patents system and whether this form of patents has facilitated India:

In 1950, foreign multinational made the entire drug supply in India.[99] Foreign multinationals controlled more than 90% of the Indian pharmaceutical industry and hence determined supply and availability of drugs.[100] Drugs were manufactured outside India and imported for a higher cost. The cost of drugs in India was amongst the highest in the world.[101] The drug prices were so high that in 1961, the U.S Senate committee headed by Senator Estes Kefauver observed that India ranks among the highest priced nations in the world for drugs.[102]

98 Raj Prakash v. Mangath Ram Chowdry., 1978 A.I.R. 1978 (Del.) 1.

99 D. P. Dubey, Globalization and its Impact on the Indian Pharmaceutical Industry, Revolutionary Democracy (April, 1999), available at http://revolutionarydemocracy.org/rdv5n1/pharmacy.htm

100 Banerji, at 78

101 Id.

102 Id.

Around the same period the government of India made the first five-year plan to carve India's development path. Statistics reveal that income from industries was as low as a mere 6.6% of the total national income. A mere 8% of the total labor force was working in industrial establishment.[103] Epidemic diseases accounted for 5.1% of the total mortality.[104] The first five-year plan recorded that[105] India was then the largest reservoir of epidemic diseases. Poverty was also at its peak in India. Around 50% of India's population were living under poverty[106] and were unable to afford the cost of drugs. Consequentially, life expectancy was very low and mortality rate due to diseases was very high. The central government under the Drugs Act of 1940 imported required drugs since India had no local production of bulk drugs.[107]

Unable to control the expenditure on drugs the government of India took two significant steps to remedy the situation. First, the government signed an agreement with UNICEF to set up a factory for manufacturing of penicillin and other antibiotics.[108] This resulted in the establishment of Hindustan Antibiotic Limited in 1954 to manufacture drugs at a cheaper rate for the public. Next, the government appointed Justice Rajagopala Ayyangar Committee[109] in 1957[110] to recommend revisions to the patent law to suit industrial needs. The object of the committee was to ensure

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103 First Five Yr. Plan, (1951 – 1956), Planning Comm. Off. Doc., (Vol I & II) Government of India (Jan, 2002), available at http://planningcommission.nic.in/fiveyr/default.html

104 Id.

105 First five year plan

106 World Bank, India shows mixed progress in the war against poverty, 98/1449SAS (Aug. 26, 1997) available at http://www.worldbank.org/html/extdr/extme/1449.htm

107 Abhijit Dey et. al, Pharmaceutical Marketing In India: A Macroscopic View (Nov, 2001), at http://www.sbaer.uca.edu/Research/1999/SMA/99sma151.htm

108 Hindustan Antibiotics, Profile (1999) at http://www.hindantibiotics.com/htdocs/profile.html

109 The report of this committee is considered to be the backbone of the Indian Patent law that was enacted in the year 1970.

110 Between this period and 1950 (in 1950 the Dr Chand report was incorporated), a new Bill based on the UK Patents Act of 1949 was introduced and lapsed in India.

India developed a locally sustainable pharmaceutical market. The committee submitted its report in 1959.[111]

The report submitted that the patent legislation needed a clear directive. In recommending changes, the Ayyangar committee was bound by the provisions of the Indian Constitution. Article 21 of the Constitution guarantees right to life, which includes the right to good health. The preamble of the Constitution requires policies to balance 'social and economic' rights. Hence public health concerns need to be weighed with business interests in amending the patent legislation. The Ayyangar report argued that a patent policy vesting unrestrained monopoly would deny a vast section of India's population from access to medicines. The report concluded that a policy with unfettered monopoly rights would violate the preamble of the Indian Constitution. The report studied the patent systems of U.K, Germany and the U.S and pointed that Germany's weakened patent protection encouraged the growth of chemical industry. Hence the report recommended a compulsory licensing system[112] and process patenting of drugs. The Act based on the Ayyangar report and the rules came into force in 1972.[113] (Model I has additional details on the issue).

Since health care was a major concern, the Drug Price Control Order was also passed in 1970.[114] The order gave control over the prices of drugs to the government thus complimenting the compulsory license provisions in the Indian patent legislation.[115]

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111 V R Krishna Iyer, GATT, TRIPS and Patent Law, The Hindu, September 11, 2000 at 5 where the wide admiration for the Rajagopala Ayyangar report has been recorded in the words of Justice Krishna Iyer, a renowned Judge in India known to fight for the cause of the down trodden: "….A well-debated, development- oriented and patriotically processed statute of 1970, with a progressive perspective and successful sequel, passed after a thorough study (based on the Justice Rajagopala Ayyangar Commission report) proved a tremendous national triumph for the consumer and the manufacturer alike. This finest and most just parliamentary achievement……."

112 Id.

113 Patents Act, (1970) (India), 27 A.I.R. Manual 450 (1979) [hereinafter, Patents Act (1970)].

114 The Drug Policy was established in the year 1978.

115 After the Drug Price Control Order was passed, the government of India placed most drugs under price control.

The patent policy of 1970 dramatically changed this condition.[116] In 30 years, the Indian pharmaceutical industry is valued at USD 70 billion compared to a mere USD 2.1 million before 1970. Currently 24000 pharmaceutical companies are licensed in India. Of the 465 bulk drugs used in India, approximately 425 are manufactured within the country. Indian industry has emerged as a world leader in the production of several bulk drugs.[117] Indian industry has emerged as a leader for the production of bulk drugs like sulphamethoxazole and ethambutol. Indian production accounts for nearly 50% of the world production. Several companies like Ranbaxy, Dr Reddy's and Cipla have the potential to become billion dollar companies within the next few years. Other than developing indigenous pharmaceuticals, India has grown as a major player in the international generic drugs market. The U.S during the Anthrax scare considered importing cheap generic drugs from India.[118] India emerged as a reliable exporter of the generic AIDS drugs in the South African AIDS crisis.[119]

Most importantly, the patent policy of 1970 has catered to the needs of the Indian poor. Drug prices in India are one of the cheapest in the world today and are affordable to the population. On an average, drugs manufactured in India are more than a 100% cheaper than the same

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116 Id.

117 see Martin Adelman & Sonia Baldia, Prospects and Limits of the Patent Provisions in the TRIPS Agreement : The Case of India, and 29 Vand. J. Transnat'l L. 507 (1996) arguing that strong intellectual property protection will be in India's interest given its infrastructure in pharmaceutical production. In contrast, J.H. Reichman uses the same data to argue that free riding is a way for a developing economy to accumulate the skills and capital necessary to become innovative, but see J.H. Reichman, Compliance with the TRIPS Agreement: Introduction to a Scholarly Debate, 29 Vand. J. Transnat'l L. 363 (1996).

118 see Manu Joseph, Indian Cipro copies don't pay off, Wired News, (Nov 8, 2001) at http://www.wired.com/news/medtech/0,1286,48153,00.html, detailing the cost of cipro was Rs. 27 (60 cents) per tablet eight years ago in India. The cost of cipro currently is Rs. 1.50 (4 cents). Indian drug-makers export the generic version of Cipro to Russia, Brazil, southeast Asia and the Middle East at highly competitive prices,

119 see Michael Waldholz and Rachel Zimmerman, Bristol Myers Offers to sell two AIDS Drugs in Africa below cost, The Wall Street Journal, March 15, 2001 at B1 explaining that although Bristol Meyers lowered their prices by 55%, it was still higher than the price of Indian drug companies. see also Robert Block, Cipla tries to skirt South Africa AIDS-drug battle, The Wall Street Journal, March 9, 2001, at B6.

drugs in U.S.[120] For example, the price of antibacterial drug Norfloxacin at USD 6 cents (Rs 33.61) in India compares to USD 12.26 (Rs 613.77) in America. The anti- inflammatory drug Piroxicam costs less than USD 5 cents in India (Rs 14.04) as against the American price of USD 11.50 (Rs 592).[121] AZT (azidovudine) a drug retailed in the U.S for USD 5.82[122] is sold in India in capsule form for USD 1.42 per 300 mg. The government of India has achieved the Constitutional mandate of social and economic balance by setting a maximum sale price while still leaving a reasonable profit.

The Indian government assures availability of patented drugs in the market by retaining the power to compulsory license. Interestingly the Indian government has never used the compulsory licensing provision since the enactment of the patent legislation.

The economic brunt of the 1970 patent policy has not escaped India. Multinational companies, once major players, became reluctant to sell in India. By 1997, multinationals accounted for less than 30 percent of bulks and 20 percent of locally produced formulations.[123] Most multinationals complied with the minimum requirements necessary to maintain presence in the Indian market (such as producing simple formulations from imported bulks), while awaiting stronger patent protection.[124] The government responded by steadily reducing price control on drugs. In 1970 most

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120 see David Scondras, A visit to India – Drug prices, Research and Global access, Being Alive, (May, 1999) at http://www.beingalivela.org/news0599/0599_visittoindia.html, arguing that drug prices in India are between a 1000 to 4000 percent cheaper than the prices in the U.S.

121 Id.

122 Hytrin, a sophisticated anti-hypertensive, is sold in India for 7 cents a tablet. A month's supply of the drug costs about USD 4.20. This is the final price after adding a 200% profit as allowed under the drug price control order. In the U.S, (Boston) the same drug from the same company costs USD 44.48.

123 Jean Lanjouw, The Introduction of Pharmaceutical Product Patents in India: Heartless Exploitation of the Poor and Suffering?, (1998) NBER: Cambridge, MA. p. 4.

124 see Sean Eric Smith, Opening up to the World, India's Pharmaceutical companies prepare for 2005, in Asia Pacific Research Papers 32 (Stanford Univ. Institute for International Studies, Working paper, 2000) at http://APARC.stanford.edu;

drugs were under price control, by 1984 this was reduced to 347 drugs, and to 163 drugs in 1987. In 1994 only 73 drugs remained under price control.[125]

In spite of such aggressive development of the indigenous pharmaceutical industry, only a mere 30% of India population has secured access to modern medication.[126]

Examination of the policies of developed nations on patenting new methods of producing a known product treated in developed nations.

Novel and non-obvious process of making known products are patentable in developed nations (particularly the U.S and Europe) by the use of process by product claims. In ***Atlantic Thermoplastics*** Co. *v. Faytex Corp.*,[127] the plaintiff owned a patent containing process and product-by-process claims for a shock absorbing shoe innersole made from an elastomeric material and polyurethane foam. The issue related to innersoles with elastomeric heel inserts distributed by the defendant. Defendant bought the product from two separate manufacturers using separate manufacturing process. The plaintiff's suit was against the defendant for infringing the patented process and therefore related to both the manufacturing process. The Federal Circuit held that the process of one manufacturer infringed the patent, as it contained all the claim limitations. The second manufacturer used a different process to achieve albeit an indistinguishable product, thus, no infringement of product-by-process claim. The Federal Circuit overruled *Scripps Clinic*[128] by holding that a product claimed by a product-

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125 see supra note 108 – 112 and accompanying text.

126 Interview by Pharmabiz.com with Ranjit Sahani, President of Pharmaceutical Producers Association of India, (2000), at http://www.pharmabiz.com/interv/intrv73.asp; see also Pharmaceutical Research & Manufacturers of America International, India: A cautionary tale on the critical importance of IP Protection, (Jan 2002) at http://www.phrma.org/intnatl/news/2001-04-12.41.phtml.

127 see 970 F. 2d 834, also see 974 F. 2d 1279 Judge Rich dissenting; see generally William E. McGowan, Patent Law - Limiting Infringement Protection for Product-by-Process Claims – Atlantic Thermoplastics Co. v. Faytex Corp., 970 F. 2d 834 (1992), 27 Suffolk U. L. Rev. 300 (1993).

128 Scripps Clinic & Research Foundation v. Genentech Inc., 927 F. 2d 1565 (1991).

by-process description is only infringed when the allegedly infringing product is produced via the same process described in the claim.[129] In effect this judgment allows the patenting of a different processes of producing a known product.

This is the equivalent of the process patents of developing countries. Section 5 of the Indian Patent Act, 1970 states that, '… no patent shall be granted in respect of claims for the substances themselves, but claims for the methods or process shall be patentable' (in the case of chemical process, substances that are intended to be used as or capable of being used as food, drug or medicine). Interestingly, the *Atlantic Thermoplastics* case related to a chemical process. Developed nations protect the product using the claimed process. Developing countries merely protect the process alone. Currently, both systems facilitate the same result and encourage novel methods of producing known products. The U.S does not believe in process patent but facilitates the same result by the use of a process by product claim. A careful study of Judge Rich in his overly harsh dissent criticizing the Federal Circuit for refusing to rehear *Atlantic Thermoplastics* case[130] *en banc* reflects this argument.[131]

TRIPS patent policy requires developing countries to only award product patents. Novel processes will not be patentable in developing countries since these countries do not use process by product claims. Consequentially, inventions patentable in developed nations by use of process by product claim will fall outside TRIPS compliant patent legislation of developing nations. Some generic drugs patentable in developed nation using process by product claim will be unprotected in developing nations. The lesson from this is the need to improve claim-drafting techniques.

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129 Atlantic, 970 F. 2d at 838.

130 974 F. 2d 1279 (1992)

131 see Atlantic, 974 F. 2d, where Judge Rich quotes a statement (made by Roger A Brooks, the Assistant vice president to the Pharmaceutical Manufacturers Association. The statement was made on May 1 4 (1992) meeting of AIPLA (Bulletin), April- June 1992 p. 475) discussing the cost of research and development and that, '…innovative R & D is not going to be encouraged by the rule just laid down by the Atlantic Panel'.

Compulsory licenses and working of patents: The Ayyangar committee recommendations to balance economic and social justice resulted in provisions on compulsory license and local manufacturing of patents. Compulsory licenses enable the government to intervene if the patents are not worked for the benefit of the people. Local manufacturing requirement necessitates local manufacturing of the patented products to ensure that the patented inventions are worked on a commercial scale in India to the fullest extent reasonably practicable.[132]

Compulsory license is granted under Section 84 of the Act. Any interested third party can seek a compulsory license after three years of grant of patent on the grounds that either the patent has not been worked in such a manner as to satisfy the reasonable requirement of the public or that the patented invention is not available at a reasonable price. The controller of patents can compulsorily licenses the patent taking into account several factors including the nature of the invention and the ability of the applicant to work the invention to the advantage of the public.

Alternatively, under section 86, the central government has the right to make an application requesting the controller to endorse a patent with the 'license of right'. Licenses of right are granted on the same grounds for which compulsory licenses are granted. Under section 86 (2), the controller can issue an order to endorse the patent with a 'license of right' if the controller is satisfied with the arguments of the central government. Section 87 deems that a license of right is endorsed after three years from the date of sealing the patent for inventions in food, medicine, drug and chemical processes (that is, inventions entitled to process patents under section 5). A patent subjected to either a compulsory license or a license of right is open under section 88 for any person interested in working the patent to acquire a manufacturing license even if the patentee is not interested.

The concept of licenses of right is alien to TRIPS. TRIPS provides for compulsory license under article 31 subject to certain terms and conditions. Satisfying the reasonable requirement of the public is a precondition to avoid compulsory licensing of the patent. Section 90 (c) of the Act deems

132 Section 94, Patent Act, 1970.

that the reasonable requirement of the public is not satisfied unless the invention is worked in India. The reasonable requirement of the public is also prejudiced under section 90, if by reason of the refusal of the patentee to grant a license, the establishment or development of commercial activities in India is prejudiced.[133] Non-working the patent in India, or manufacturing abroad and importing into India can be construed as violating section 90(c). Article 27(1) of TRIPS deems importation as amounting to working the patents. This section stipulates that patent rights shall be enjoyed "without discrimination as to the place of invention, field of technology and whether the products are imported or locally produced." TRIPS does not distinguish an importer from a local producer and vests the same rights on both.

Term: Section 53(1) of the act vests process patents in food, drug and medicines for a term of five years from the date of sealing or seven years from the date of filing a complete specification, whichever is shorter. However, since the license of right is deemed on inventions relating food, drug and medicines after 3 years, exclusive protection is effectively provided only for three years. Patents protection for other inventions are available for a period of fourteen years as against the twenty years prescribed in TRIPS.[134]

Burden of proof: *No* provision in the Indian patent act clearly vests the burden of proof on either party. However, the Nagpur high court established in 1953 in the *Bombay Agarwal v. Ramchand Diwan Chand*[135] that the 'onus of proving infringement lies upon the plaintiff. The plaintiff not only has to prove the patent in his favor but also that the patent is being infringed by using a process patented by the plaintiff'. This contravenes article 34 of TRIPS. Article 34 vests the burden of proof on the defendant. This article applies if a new product is obtained by the patented process, or if an identical product is made and the patent owner is unable to determine the process used.

133 Section 90 1(a) (iv) Patent Act, 1970

134 TRIPS, art 33.

135 e.g., 1953 A.I.R. (Nag.) 154

Patent Amendment Act, 1999

Article 27 of TRIPS provides that members are obligated to provide patent protection for any invention, whether products or processes, in all fields of technology without discrimination based on the place of invention or production or field of technology. Article 65 gives India until 2005 to establish its product patent regime. Furthermore, Art. 70 (8), read with Art. 65 (2) and (4) of TRIPS, obligates developing countries to provide for a mailbox mechanism for depositing applications and an exclusive marketing regime right (hereinafter, EMR) for such inventions during the interim period. The mailbox provision mandates that such a facility should be available during the interim five years (until 2005) or until the time the product patent was introduced. The applicant is entitled to an exclusive marketing right over the product provided that a "patent application has been filed and a patent granted for that product in another member state and marketing approval has been obtained in such other member". India was required to fulfill this obligation by January 1, 1995.

During this time, India could not afford to violate TRIPS and face trade sanctions impacting Indian exports. The U.S. was extending preferential tariff treatment under the GATT Generalized System of Preferences (GSP). The U.S. revoked duty-free treatment under the GSP for India's exports of pharmaceuticals, citing India's poor protection of U.S. patented drugs resulting in a levy of $ 60 million thus reducing Indian exports. On the other hand, Congress (I) was aware that local economic conditions would impede amendments to the Patents Act, 1970. In fact, Congress (I) understood that patent amendments would directly affect the party's popularity amongst people. Hence, the party was forced to take an ambiguous position in fear of special 301 on one side and local politics on the other.

In order to fulfill the TRIPS obligations, the President of India on December 31, 1994, promulgated the Patents (Amendment) Ordinance to amend the Patent Act of 1970 and provide for an EMR. The Ordinance became effective on January 1, 1995 and India notified the Council for TRIPS as required under Article 63(2) of TRIPS. However, the Ordinance lapsed on March 26,1995 since legislation of this kind ceases to apply at

the expiration of six weeks from the re-assembly of Parliament. The Patents (Amendment) Bill of 1995, which was intended to give permanent legislative effect to the provisions of the Ordinance, was passed by the Lok Sabha in March 1995, but unfortunately lapsed in the Rajya Sabha. Therefore the Patents (Amendment) Bill lapsed with the dissolution of the 10th Lok Sabha on that date in November 1995.

The Indian sentiment over the introduction of EMRs also accounted for the lapsing of the bill. Indian Drug manufacturers believed EMRs would lead to the destruction of the local drug industry and that it was more restrictive than even the product patent regime. They argued that foreign drug companies would get the right for exclusive marketing in India before going through an examination in India. Indian drug manufactures also felt that EMRs did not address domestic production, thereby leaving the ground open for foreign multinationals to take over the market. However, the biggest impediment to the implementation of the EMR legislation was the fear that the cost of medicines would increase substantially. It was also feared that the Indian drug companies would be driven out of business.

Amidst all of this, India did not fulfill its obligation to have a transitional system within the stipulated time period. Therefore, the United States asked for a consultation on July 2, 1996 under Article 4 of the Understanding on Rules and Procedures Governing the Settlement of Disputes read with Article 64, the US asked for a consultation. This consultation failed on July 27, 1996. The U.S. then requested the Dispute Settlement Body ('DSB') of the WTO to examine whether India had defaulted in its TRIPS obligation. On November 7, 1996 a panel was requested by the US, which the Panel agreed to take up on November 20, 1996.

India argued that the applications for chemical and biological patents were being filed in the patent office, which in itself constituted an effective means as required, by TRIPS. Moreover, India said that its patent legislation had been supplemented by administrative notifications that had the force of law. Notwithstanding the above, India argued that as a developing country it was entitled to delay the process under Article 65 (2) for a period of 4 years. The U.S. argued that the mere fact India felt the need for an ordinance at the outset indicated that there was a need for a formal legislation.

The Panel ruled that India was in default of its obligations because the administrative notifications could not be considered as a compliance with the requirements in TRIPS. The Panel also held that India was obligated under 70(9) to have a transitional system in place immediately and not after five years.

Aggrieved by the decision of the Panel, India raised three main issues at the appellate level. The first concerned the proper interpretation of the word "means" in Article 70(8) of the TRIPS Agreement. The second was whether there was a requirement under Article 70(8) to provide for exclusive marketing rights from the date of entry into force of the Agreement. The Appellate Body agreed with the Panel, and was of the view that India is obliged, by Article 70(8)(a), to provide a legal mechanism for the filing of mailbox applications that provides a sound legal basis to preserve both the novelty of the inventions and the priority of the applications as of the relevant filing and priority dates and held that "administrative instructions" did not constitute a sound legal basis. With regard to Article 70(9), the Appellate Body agreed with the Panel that India should have had a mechanism in place, to provide for the grant of exclusive marketing rights effective as from the date of entry into force of the WTO Agreement. However, the appellate body upheld the ruling of the Panel and India lost the appeal. After the decision of the appellate tribunal of the WTO, India was forced to amend the Patent Act to avoid facing trade sanctions. Hence both the BJP and Congress party (which were at that time the opposition and the ruling parties respectively) were forced to put the much-delayed legislation in place. The Patent First Amendment Act was thus passed in December 1999.

Patent First Amendment Act of 1999:

This amendment introduced Chapter IVA dealing with exclusive marketing rights. The amendments under Section 24A(1) mandated the Controller to refer every application seeking an EMR to an examiner to see whether it is an invention for which a patent can be granted under Section 3 and 4 (and not under Section 5 which previously excluded drugs etc). Unless the Controller is satisfied that the claimed substance will not qualify for a patent under Section 3 of the Act, (in which case he can reject the

application), he may proceed to grant an EMR. Section 24A(2), read with Rule 33G, allows the Controller to conduct tests and report it within 90 days thereby avoiding delays. The critical aspect is the issue of subjectivity vested in the Controller to determine whether it is an invention falling within Section 3 and 4. This will be the decisive factor for granting the EMR and it cannot be avoided since the office mechanism is not well equipped to accommodate a more expansive process.

Section 24B(1)(b) authorizes the grant of an EMR for five years for inventions made in India on or after January 1, 1995 and for which a claim for process patent has been made, and granted. This provision has been criticized as being discriminatory on the basis of place of invention and contrary to the national treatment provision of TRIPS. However, the discrimination here is actually not on the basis of place of invention but on the grant of a process patent. The Act provides for this discrimination because in India there will only be process patent applications (as the product patent regime is not in place yet) and this can be disadvantageous to the applicant.

In the case of substances that can be used as medicines or drugs, Section 24B(2) provides that prior publication or use, before the filing of the claim for patent by the applicant either in India or in a convention country, will not constitute EMR infringement. This implies that such prior use excludes use by the third persons. The section also does not specify whether such use by a third person (or even by the person himself), will bar the patentability of the invention (as in the United States). If patentability is not barred, then a person who clearly has an unpatentable invention is getting an EMR for five years. If patentability is barred, then it violates section 13. Section 13 bars patentability if the document has been published earlier in India or abroad. To qualify as a prior user, commercial use by the third party should be mandatory. Rule 33F of the draft rules states that documents relating to specifications and trial or use referred to in Section 24B(2) shall include public documents, public trials or use. Interestingly Rule 33F specifically excludes personal documents or secret trials or use. In doing so, this Rule implies that such a secret use by a person who later applies for a patent can constitute EMR infringement.

Patent Second Amendment Bill

Legislative action for Second Amendment:

Other than the EMR, India had one more milestones to cross the TRIPS barrier. This is to introduce product patents by January 1, 2005. The Patent Second Amendment Bill of 1999 was introduced in the Upper House on December 20, 1999 to cross the first milestone (and avoiding running into the DSB in Geneva). This bill sought to amend the Patent Act to make changes that were required immediately. The bill was passed in December 2001, and has gone for Presidential approval. A subject-by-subject discussion of each area sought to be amended by the second amendment is provided below.

1. Patentable Inventions: The Second Amendment Bill seeks to amend the definition of 'invention' in Section 2(j). The definition introduced in the second amendment requires that an invention should have an "inventive step" and is "capable of industrial application" which are synonymous with "non obvious" and "useful", respectively. This new definition will perhaps force a different treatment of "inventive step" for the test of patentability and for the opposition procedure.

2. Exclusions from patentability: The Bill amends the existing Section 3, which provided a list of exclusions from the definition of invention to be in line with TRIPS. The new definition excludes, in sub- section 3, inventions whose "primary or intended use or commercial exploitation" is contrary to law and morality. The exclusions regarding primary and intended use, however, may also be contrary to Art. 27(2) of TRIPS which limits exclusions from patentability to "inventions,… the commercial exploitation of which is necessary to protect *ordre public* or morality". That is the exclusions in TRIPS can only be made if it affects the *ordere public*. The proviso to Art 27(2) envisions that "such exclusion is not made merely because the exploitation is prohibited by their law". TRIPS envisions the exclusions in the Indian legislation are line with the international trend of patentability. However, in view of the recent WTO meeting at Doha, (developing countries got concessions in this meeting), these exclusions will not be construed too strictly. India also excludes the patenting of computer software and business methods patents specifically and biotech patents by implication.

3. Term and Date: The proposed bill amended the 14-year term to 20 years beginning from the date of the filing of the application in tune with Article 33 of TRIPS. The term begins from the date of filing of sealing the patent.

4. Application Requirements: Section 8(d) of the proposed bill amends Section 10 of the IPA (relating to the specification) and requires "an abstract of the technical information" of the patents. However, there is neither a definition of the term "abstract" nor is there any criterion for the kind of technical information that is required. Regardless of how the IPA is amended to suit TRIPS, unless the law and the rules relating to claims and specifications including drafting, interpretation, etc. are harmonized or, at least clarified, the grant of a patent will always rest on very subjective factors.

Section 8 also requires identification of the source and origin of the biological material in the specification. Although such a requirement is not envisioned under TRIPS, it does not specifically prohibit Members from seeking the source and origin of biological material. This provision will go a long way in avoiding the turmeric and neem type disputes for India. The best solution is to possibly include it, not as a requirement of the application, but as falling within the criterion of anticipation and obviousness within the Patent Rules.

5. Compulsory Licensing: Chapter XVI of the Patent Act provides for compulsory licensing - as a necessary safeguard for protecting the public interest. Three years after a patent is sealed, any "interested party" can allege that the invention is not reasonably available to the public and can request the grant of a compulsory license. The bill removes Section 86 to 88 of the IPA, which previously provided the right to the Central Government to seek a "license of right" over patents not worked for three years in India.

The bill also amends Section 90 which deemed that reasonable requirements of the public are not satisfied if the invention is not manufactured in India or the patentee refuses to grant a license, thereby removing a presumption that requirements of the public are satisfied based on local manufacture. The criterion to be considered by the Controller to

grant a compulsory license under Section 85 has also been amended to include a national emergency, etc. (and local manufacture is not one such criterion). Interestingly, under Section 84, a specific inclusion has been made enabling third parties to seek for a compulsory license on the ground that the invention is not manufactured in India. Similarly, in Section 89, the bill introduces non-working in India as a specific criterion for the revocation of the patent. Section 90(c), which provides non-working in India under certain circumstances as a ground for imposing a compulsory license, has not been revoked. This is envisioned as a balancing mechanism, but there is a likelihood of it being interpreted as violating the right of the patent holder to import as established under Art. 27 and Art. 28 of TRIPS. Article 27.1 of TRIPS provides that patent rights shall be enjoyed "without discrimination as to the place of invention, field of technology and whether the products are imported or locally produced." The Indian Government opines that its provision is in line with Article 31 of TRIPS that allows for the use of the patents within certain terms and conditions. It is also interesting to note that several countries including the Honduras, Argentina, Brazil (which has several types of compulsory licenses, including for lack of local working, national emergency, dependent patents, public interest and abuse of the rights) and China have incorporated provision relating to compulsory licensing.

The Indian Government also pointed out that there have been no instances of misuse of the provisions relating to compulsory licensing in India since 1970. The foreign multinationals, however, are skeptical that once the product patent regime comes into place the Government could potentially misuse the same. It would be prudent to wait and watch the Government's use of the provision before assuming the worst. After all, more than 80% of the patents owned in India are owned by foreign multinationals. It is a fact that local manufacturing in India, where labor and raw materials are cheap, will go a long way in reducing cost of the product.

The bill also introduced a checking mechanism that requires an applicant for a compulsory license to prove that she approached the patentee with reasonable terms for a license. Similarly, where the patent holder imposes a condition for a grant back, prevention of challenges to the validity of the patent is deemed to be against public interest. This is a very welcome provision and is absolutely required considering that the

bargaining power of an individual or company, compared with a patent holder, is always less. The bill provides for an appeal before an Appellate Board, on decisions of the Controller, including a grant of a compulsory license. Section 95A, as introduced in the bill, also provides for revocation of the compulsory by the Controller himself if the circumstances that gave raise to it ceases to exist.

6. Right to import & parallel import: The IPA did not vest on the patentee or the license holder the right to import a patented product into India, thus favoring local manufacturing. After the second amendment almost all of the restrictions on the need for local manufacturing had been removed. Hence there was a need to ensure the accessibility of products in all ranges of cost for the Indian consumers. Therefore, the bill introduces Section 107A(b) which states that the importation of a patented product from a duly authorized license holder will not amount to infringement. Thus it opens the market more for foreign companies.

PATENTS (AMENDMENT) ACT 2002- Salient features

a) The definition of the term "invention" was modified in consonance with international practices and consistent with TRIPS Agreement.

b) Section 3 of the present Act was modified to include exclusions permitted by TRIPS Agreement and also subject matters like discovery of any living or non-living substances occurring in nature in the list of exclusions which in general do not constitute patentable inventions and also to specifically exclude the inventions which in effect are traditional knowledge.

c) The rights of patentee was aligned as per Article 28 of the TRIPS Agreement.

d) A provision for reversal of burden of proof in case of infringement, suit on process patent, in accordance with Article 34 of the TRIPS Agreement, was added.

e) Uniform term of patent protection of 20 years for all categories of invention as per Article 33 of the TRIPS Agreement was prescribed.

f) The provisions relating to compulsory licensing was modified to suit the public interest requirements and also to comply with TRIPS Agreement

g) A provision was incorporated for enabling parallel import of patented products at lowest international prices.

h) To ensure smooth transition of a product from the monopoly status created by the patent to the public domain, a provision was incorporated for obtaining marketing approval from the appropriate regulatory authorities before the expiration of the patent term.

i) Several provisions was incorporated for protecting bio-diversities and traditional knowledge.

j) The provisions relating to national security was strengthened.

k) A provision was incorporated for hearing of appeals which at present, lie before High Court, by the Intellectual Property Appellate Board, for speedy disposal of such appeals

l) Several provisions was incorporated with a view to simplifying and rationalizing the procedures.

Additionally the Term of every patent which is in force including a patent restorable U/S. 60 as on 20.5.2003 has now become 20 years from date of filing. Time for restoration of a ceased patent U/S 60 has now increased from 12 months to 18 months; as such an application for restoration of a patent ceased on or after 20th May, 2003 can be filed within 18 months from the date of ceasing.

A new definition of "Invention" meaning a new product or process involving inventive steps and capable of industrial application has now come into force. A method or process of testing during the process of manufacture will now be patentable. Process defined U/S 3(i) in case of plants, are now patentable while a process for diagnostic and therapeutic has now been considered as non patentable. A list of Authorized Depository Institutions have been notified in the Gazette Of India, Part II, Section 3 sub-section (ii) dated 20.5.2003 for depositing the biological materials mentioned in the specification at the time of filing a patent application.

The source of Geographical origin of the biological material used in invention is required to be disclosed in the specification. 18 months publication has been introduced, therefore, every patent (except in which a

secrecy direction is given U/S 35) will now be published just after 18 months from the date of filing/priority and will be open for public on payment. As such the filing intimation being published in the Gazette immediately after filing has been stopped. A request for examination system has been introduced and therefore all the patent applications in which First Examination Report has not been issued on or before 19th May, 2003 will now be examined U/S 12 only after filing a request for examination on Form –19 with prescribed fee.

The applications for patent will now be examined in serial order in which the request for examination is filed. In case the application has been filed before the commencement of this Act, the request shall be made within a period of twelve months from the date of commencement of the Act i.e. 20th May 2003 or 48 months from the date of application, whichever is later. Provision for filing request for examination by any other interested person (other than applicant) also has been introduced. Provision for the withdrawal of application by applicant any time before grant has been introduced. Time for putting the application in order for acceptance U/S 21 has now been reduced from 15/18 months to 12 months. Ground of opposition U/S 25 as well as revocation U/S 64 have been enlarged by adding following ground:

a. disclosure or wrongly mentioning the source of geographical origin of biological material used for invention;

b. Anticipation having regard to the knowledge oral or otherwise available with in local or indigenous community in India or elsewhere.

c. Section 39 in modified form prohibiting filing patent application outside India, inventions limited to the fields of defence purposes or atomic energy has been reintroduced.

d. Opposition Proceedings U/S 25 have been simplified and shortened, fixing hearing is not compulsory, if the applicant does not file reply statement and evidence, application will be deemed to have been abandoned.

e. Provision for extension of time up to 6 months for paying the overdue renewal fees initially i.e. renewal fees, which have

become due, due to the late grant of patent can now be paid within 9 months from the date of record by taking an extension on Form – 4.

f. Fees required to be paid on documents can now be paid within 1 month from its date of filing. Provision for allowing Paris Convention Priority has been extended to group or union of countries or inter governmental organizations, therefore, 12 month priority will also be available to applications filed in EPO, AIRPO, OAPI and EAPO.

Patent (Amendment) Act 2005 –Salient Features[136]

1. In the definition of what are not inventions, the amendment now says "***Mere*** *new use for a known substance*" is not an invention. In other words if the applicant can substantiate that it is new use for a known substance with some technical input such new use can be patented.[i]

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136 i 3. Amendment of section 3.-In section 3 of the principal Act, for clause (d), the following shall be substituted, namely:- "(d) the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.

Explanation.-For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy;".

ii 3(K) a mathematical or business method or a computer program perse or algorithms. Computer program product is claimed as "A computer program product in computer readable medium", "A computer-readable storage medium having a program recorded thereon", etc. In such cases the claims are treated as relating to software perse, irrespective of the medium of its storage and are not held patentable. Examples in respect of other categories of subject matter are Scheme or method of bookkeeping. Business method in the field of accounting. Method of tax collection.

iii Omission of section 5.-Section 5 of the principal Act shall be omitted- original act read as Chapter II- 5. Inventions where only methods or processes of manufacture patentable (1) In the case of inventions- a. claiming substances intended for use, or capable of being used, as food or as medicine or drug, or b. relating to substances prepared or produced by chemical processes (including alloys, optical glass, semi-conductors and inter-metallic compounds), no patent shall be granted in respect of

2. A computer program per se is not patentable but its "*technical application to industry or a combination with hardware*" is patentable. The scope of patentability of a computer program has now been widened and is more or less on lines with US Patent grant.[ii]

3. A mathematical method or business method or algorithms are not patentable.

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claims for the substances them selves, but claims for the methods or processes of manufacture shall be patentable. [(2) Notwithstanding anything contained in sub-section (1), a claim for patent of an invention for a substance itself intended for use, or capable of being used, as medicine or drug, except the medicine or drug specified under sub-clause (v) of clause (1) of sub-section (1) of section 2, may be made and shall be dealt, without prejudice to the other provisions of this Act, in the manner provided in Chapter IVA.]

iv Amendment of section 9.-In section 9 of the principal Act,- "(1) Where an application for a patent (not being a convention application or an application filed under the Patent Cooperation Treaty designating India) is accompanied by a provisional specification, a complete specification shall be filed within twelve months from the date of filing of the application, and if the complete specification is not so filed, the application shall be deemed to be abandoned.";

v Amendment of section 11A.-In section 11A of the principal Act,- sub section(2) The applicant may, in the prescribed manner, request the Controller to publish his application at any time before the expiry of the period prescribed under sub-section (1) and subject to the provisions of sub-section (3), the Controller shall publish such application as soon as possible

vi Substitution of new sections for sections 25 and 26.-For sections 25 and 26 of the principal Act, the following sections shall be substituted, namely:- "25. Opposition to the patent.-(1) Where an application for a patent has been published but a patent has not been granted, any person may, in writing, represent by way of opposition to the Controller against the grant of patent…

(2) At any time after the grant of patent but before the expiry of a period of one year from the date of publication of grant of a patent, any person interested may give notice of opposition to the Controller in the prescribed manner…

(3) (a) Where any such notice of opposition is duly given under sub-section (2), the Controller shall notify the patentee.

(b) On receipt of such notice of opposition, the Controller shall, by order in writing, constitute a Board to be known as the Opposition Board consisting of such officers as he may determine and refer such notice of opposition along with the documents to that Board for examination and submission of its recommendations to the Controller.

(c) Every Opposition Board constituted under clause (b) shall conduct the examination in accordance with such procedure as may be prescribed.

4. The provision prohibiting product patent for food, medicine, drug and chemical processes has been removed. In India with effect from **1st January 2005** product patent is available for medicine, drug, chemical processes and food. This is the most important amendment introduced by the new Ordinance. Product patent regime in respect of drug, medicine, food and chemical processes is implemented in India.[iii]

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(4) On receipt of the recommendation of the Opposition Board and after giving the patentee and the opponent an opportunity of being heard, the Controller shall order either to maintain or to amend or to revoke the patent.

(5) While passing an order under sub-section (4) in respect of the ground mentioned in clause (d) or clause (e) of sub-section (2), the Controller shall not take into account any personal document or secret trial or secret use.

vii Insertion of new section 92A.-After section 92 of the principal Act, the following section shall be inserted, namely:- '92A. Compulsory licence for export of patented pharmaceutical products in certain exceptional circumstances.-(1) Compulsory licence shall be available for manufacture and export of patented pharmaceutical products to any country having insufficient or no manufacturing capacity in the pharmaceutical sector for the concerned product to address public health problems, provided compulsory licence has been granted by such country or such country has, by notification or otherwise, allowed importation of the patented pharmaceutical products from India. (2) The Controller shall, on receipt of an application in the prescribed manner, grant a compulsory licence solely for manufacture and export of the concerned pharmaceutical product to such country under such terms and conditions as may be specified and published by him. (3) The provisions of sub-sections (1) and (2) shall be without prejudice to the extent to which pharmaceutical products produced under a compulsory licence can be exported under any other provision of this Act.

Explanation.-For the purposes of this section, "pharmaceutical products" means any patented product, or product manufactured through a patented process, of the pharmaceutical sector needed to address public health problems and shall be inclusive of ingredients necessary for their manufacture and diagnostic kits required for their use.'.

viii Substitution of new section for section 117G.-For section 117G of the principal Act [as inserted by the Patents (Amendment) Act, 2002 (38 of 2002)], the following section shall be substituted, namely:- "117G. Transfer of pending proceedings to Appellate Board.- All cases of appeals against any order or decision of the Controller and all cases pertaining to revocation of patent other than on a counter-claim in a suit for infringement and rectification of register pending before any High Court, shall be transferred to the Appellate Board from such date as may be notified by the Central Government in the Official Gazette and the Appellate Board may proceed with the matter either de novo or from the stage it was so transferred."

5. If a patent application is accompanied by a provisional specification, the complete specification should be filed within 12 months of filing of the application. Otherwise the application shall be deemed to be abandoned.[iv]

6. A patent application shall be examined only on a request in prescribed manner. Without a request the patent applications would not be examined as a matter of routine as it was prior to the year 2003.[v]

7. Provisions relating to Exclusive Marketing Rights (**EMR**) have been removed. EMR provision was introduced in India in the year 1999 in compliance with TRIPS as product patent for drug and medicine was not available in the Indian Act. As product patents can now be granted for Drugs, medicines, food, and chemical processes the EMR provision has become redundant and has been repealed.

8. When a patent has been published but has not been granted, any person can make a representation to the Controller of Patents requesting him to refuse the application on the ground of lack of novelty, inventive steps, and industrial applicability. The Controller shall consider such representation and dispose it off. The person making the representation is not a party to the proceeding. After the grant of a patent but before the expiry of the period of one year from the date of publication of grant of a patent, any person **interested** may give notice of opposition to the Controller.[vi]

9. Only after grant of patent the application, specification and documents related thereto are opened for public inspection.

10. The Act now provides for compulsory license for manufacture and export of patented pharmaceutical products to any country having insufficient or no manufacturing capacity in the pharmaceutical sector for the concerned product to address public health problems provided compulsory license has been granted by such country. To avail of this provision, the applicant should satisfy two conditions viz.

(a) The country to which export has to be made has insufficient or no facility to manufacture.

(b)The recipient country should grant compulsory license for import and sale of the drug.[vii]

11. The Act also provides for appeal from the order of decision of the Controller to Intellectual Property Appellate Board (IPAB). The power of revocation is also conferred with IPAB.[viii]

Procedure For Patent Application

The 1970 Act in section 6 reflects the first to file system by placing emphasis on date of application and not on the date of invention. Applications for a patent can be made by the true and the first inventor, or their assignees[137] or legal representatives.[138] The first importer of an invention or a person to whom the invention is first communicated from outside India will not be considered a first inventor.[139]

Every patent application has two important aspects that will decide the fate of the application. These are Specification and Claims. The specification clause originates from Section 4 of the Patents Act, 1949 of United Kingdom. The Patents Act provides that every application shall contain a specification[140] the specification can either be a provisional[141] or a complete specification.

Provisional specification: A provisional specification is a document drawn in a prescribed format. It contains a description of the essential features of the invention. It does not include claims and description of manner of performing the invention. It is notable that in a first to file system like India the date of application for the patent becomes important. If two inventors file patent application for the same invention, then the one whose application has the earlier date has the advantage of being awarded the patent. Therefore it is very important to file the application as soon as possible. The provisional specification facilitates this. The date of filing the

137 Proof of such assignment is required to be submitted by virtue of Rule 11 of the Patents Rule, 1972 within in a maximum period of three months from the date of the application.

138 Section 6 of the Patents Act, 1970

139 Section 2(1)(y) of the Patents Act, 1970

140 Section 7(3) of the Patents Act, 1970.

141 A provisional specification gives the mere description of the nature of the invention and its intended manner of working. This can be submitted after the inventor is ready with a prototype.

provisional specification becomes the date of the application. This date is called the **priority date** and this date is accorded to the claims in the complete specification which can be filed later based on the provisional specification.

A provisional specification should be drawn in Form 2 of the Rules. This application will contain a description of the nature of the invention. The title to the provisional specification should give a fair detail of area of science the application will deal with. The object of the invention and a statement of the actual invention need to set forth in the provisional specification. The most important aspect is that when a complete specification is files, the provisional specification should with reasonable certainty relate to the same invention. However, it is advised that the provisional specification be couched in broad terms. This is prevent a competing inventor to seek a broader patent based on the provisional specification.

Complete Specification: After filing a provisional specification, the applicant should submit a complete specification within 12 months of the date of filing of the provisional application without which the application will be deemed to be abandoned[142] unless a request to file the same within 15 months is filed with the controller. If the applicant is unable to file the complete specification within the prescribed time, then the applicant can request for post dating of the application for a six-month period. The advantage is that the applicant gets another 6 months to file a complete specification. The disadvantage is that the applicant will lose the priority dates. Thus a later filed application may get priority because of this.

Every complete specification shall, a) fully and particularly describe the invention and its operation or use and the method by which it is to be performed, b) disclose the best method of performing the invention which is known to the applicant, and c) end with claim or claims defining the scope of the invention.

142 Section 9(1) of the Patents Act, 1970.

The courts have held that the construction of a specification is a matter of law; therefore, it is within the courts' domain to properly construe the specification.[143] The Delhi High Court, in 1978, noted that:

'Whether a patent sets out an invention is to be determined by a true and fair construction of the specifications and the claims. In construing the specifications it would be erroneous to rely too much on the title thereof because the title cannot control the actual claim and a misleading title is of no consequence. The words of the specifications should be given their ordinary meaning but where necessary must be construed in the sense in which they are used in a particular trade or sphere in which the invention is sought to have been made and it is the pith and marrow of the invention that has to be looked into…'[144]

This approach is similar to the American approach, however, in Indian law there are no additional guidelines to supplement this rule of interpretation. Therefore an Indian judge has unfettered power to construe the specification depending upon his predilections and preconceived notions or depending on which side of bed he or she gets up in the morning. Needless to say, specification construction in India is therefore very subjective and unlimited.

Claims: All complete specifications end with claims. Section 10 (5) notes that the claims shall relate to a single invention. The requirement of a claim seems is "fairly based on the matter disclosed in the specification."[145] The objects of claims are to:

1. State with precision the detail of the invention
2. Define the exact scope of the invention. This will enable a narrow invention to be patentable later – Example, a claim for a folding chair should clearly so specify the features of a chair and limit the claim to chairs that fold. This will enable inventor No 2 to patent a revolving chair or may be a non-folding chair.

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143 Lallubhai Chakbhai v. Chinamanlal Chunilal, A.I.R 1936 Bom 99.

144 Raj Prakash v. Mangath Ram, A.I.R. 1978 Delhi 1

145 Section 11 (2) (b) of the Patents Act, 1970

3. To clearly set the limits of the claim. This is interrelated to the above concept. In the above example, if chairs already exist, and if inventor No 1 is the first inventor if just the folding quality of the chair, then the claims should set the limitation properly. This will keep all chairs other than the folding chairs within the public domain. That is, this inventor does not have exclusive rights over that chair. At the same time, it will encourage other inventors to find newer forms of chair – say a cushion chair, revolving chair, floating chair and so on.

4. Claims can be narrow or broad based on the invention. A narrow claim is one that sets the limitations clearly. In the above example, a claim language is said to be narrow if it limits the patent to a folding chair only. The claim will be a broad claim if it tries to cover all chairs. Though on a plain reading a broad claim seems to cover everything and seems like it is more desirable, in reality it is not. For example, inventor A gets a patent on all chairs be drafting a broad claim and later inventor B invents a new 'muscle massaging' chair. The inventor B will also get a patent over the chair with a limitation that it should have a 'muscle massaging' feature. Thus a later inventor narrows the scope of the claim of the earlier inventor. Thus the first inventor will slowly see that other narrow claims will result in him losing the exclusivity in his market. Therefore narrow claims are preferred.

The Bombay High Court detailed that the claim and the specification should be read together to understand the invention.[146] The Delhi High Court has held that the claim should specify the particular feature of the device and the distinguishing feature from the earlier invention, if any and shows the nature of the invention.[147] However, the Delhi high court in 1978 held that the title of the invention claimed has little consequence in controlling the claim.[148] Notably, the Bombay High[149] Court held that the duty of the

146 See supra note 63

147 Ram Narain Kher v. Ambassador Industries, A.I.R. 1976 Delhi 87

148 See supra note 64

149 Press Metal Corporation v. Noshir Shorabji, A.I.R. 1983 Bombay 144.

patentee to ensure that the nature and the limits of the claim are laid out with clarity of language. The Supreme Court of India later clarified that 'by looking at the claim the description of the invention in the specification should be read in order to prepare the mind to understand what the inventor has claimed.'[150]

A comparison to the American system reveals that claim construction is the heart and the soul of the American patent system. Claims in the United States reflect the "proprietary technological rights set forth by the patentee."[151] 35 U.S.C Section 112 provides the relevant statutory guidance. Apart from Section 112, the USPTO has strict policies governing over proper claim drafting. The American courts measure the scope of the patent protection from a careful reading of the language of the claims. Sophistication in claim draftsmanship is a mark of a sophisticated of the patent system, which is a direct result of increased applications for patents.

Section 10. Contents of specifications.-

(1) Every specification, whether provisional of complete, shall describe the invention and shall begin with a title sufficiently indicating the subject matter to which the invention relates.

(2) Subject to any rules that may be made in this behalf under this Act, drawings may, and shall, if the Controller so requires, be supplied for the purposes of any specification, whether complete or provisional; and any drawings so supplied shall, unless the Controller otherwise directs be deemed to form part of the specification, and references in this Act to a specification shall be construed accordingly.

(3) If, in any particular case, the Controller considers that an application should be further supplemented by a model or sample of anything illustrating the invention or alleged to constitute an invention, such model or sample as he may require shall be furnished before the application is found in order for

150 Bishwanath Prasad v. Radhey Shyam Industries, (1979) 2 SCC 511

151 Martin J. Adelman et al., Cases and Materials on Patent Law 1 (1998)

grant of a patent, but such model or sample shall not be deemed to form part of the specification.

(4) Every complete specification shall—

(a) fully and particularly describe the invention and its operation or use and the method by which it is to be performed;

(b) disclose the best method of performing the invention which is known to the applicant and for which he is entitled to claim protection; and

(c) end with a claim or claims defining the scope of the invention for which protection is claimed;

(d) be accompanied by an abstract to provide technical information on the invention:

Provided that;

(i) the Controller may amend the abstract for providing better information to third parties; and (ii) if the applicant mentions a biological material in the specification which may not be described in such a way as to satisfy clauses (a) and (b), and if such material is not available to the public, the application shall be completed by depositing the material to an international depository authority under the Budapest Treaty and by fulfilling the following conditions, namely:—

(A) the deposit of the material shall be made not later than the date of filing the patent application in India and a reference thereof shall be made in the specification within the prescribed period;

(B) all the available characteristics of the material required for it to be correctly identified or indicated are included in the specification including the name, address of the depository institution and the date and number of the deposit of the material at the institution;

(C) access to the material is available in the depository institution only after the date of the application of patent in India or if a priority is claimed after the date of the priority;

(D) disclose the source and geographical origin of the biological material in the specification, when used in an invention.

(4-A) In case of an international application designating India, the title, description, drawings, abstract and claims filed with the application shall be taken as the complete specification for the purposes of this Act.

(5) The claim or claims of a complete specification shall relate to a single invention, or to a group of inventions linked so as to form a single inventive concept, shall be clear and succinct and shall be fairly based on the matter disclosed in the specification.

(6) A declaration as to the inventorship of the invention shall, in such cases as may be prescribed, be furnished in the prescribed form with the complete specification or within such period as may be prescribed after the filing of that specification,

(7) Subject to the foregoing provisions of this section, a complete specification filed after a provisional specification may include claims in respect of developments of, or additions to, the invention which was described in the provisional specification, being developments or additions in respect of which the applicant would be entitled under the provisions of section 6 to make a separate application for a patent.

Rule 13. Specifications.-

(1) Every specification, whether provisional or complete, shall be made in Form 2.

(2) A specification in respect of a divisional application under section 16 shall contain specific reference to the number of the original application from which the divisional application is made.

(3) A specification in respect of a patent of addition under section 54 shall contain a specific reference to the number of the main patent, or the application for the main patent, as the case may be, and a definite statement that the invention comprises an improvement in, or a modification of, the

invention claimed in the specification of the main patent granted or applied for.

(4) Where the invention requires explanation through drawings, such drawings shall be prepared in accordance with the provisions of rule 15 and shall be supplied with, and referred to in detail, in the specification:

Provided that in the case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification, it shall be sufficient to refer to them in the complete specification as those left with the provisional specification.

(5) Irrelevant or other matter, not necessary, in the opinion of the Controller, for elucidation of the invention, shall be excluded from the title, description, claims and drawings.

(6) Except in the case of an application (other than a convention application or an application filed under the Patent Cooperation Treaty designating India) which is accompanied by a complete specification, a declaration as to the inventorship of the invention, shall be filed in Form 5 with the complete specification or at any time before the expiration of one month from the date of filing of the complete specification, as the Controller may allow on an application made in Form 4.

Explanation,—For the purposes of this rule, the date of filing of the complete specification with respect to an application corresponding to an international application in which India is designated shall be reckoned from the actual date on which the corresponding application is filed in India.

(7) (a) The abstract as specified under clause (d) of sub-section (4) of section 10, accompanying the specification shall commence with the title of the invention. The title of the invention shall disclose the specific features of the invention normally in not more than fifteen words.

(b) The abstract shall contain a concise summary of the matter contained in the specification. The summary shall indicate clearly the technical field to which the invention belongs, technical problem to which the invention relates and the solution to the problem through the invention and principal use or uses of the invention. Where necessary, the abstract shall contain the chemical formula, which characterises the invention.

(c) The abstract may not contain more than one hundred and fifty words.

(d) If the specification contains any drawing, the applicant shall indicate on the abstract the figure, or exceptionally, the figures of the drawings which may accompany the abstract when published. Each main feature mentioned in the abstract and illustrated by a drawing shall be followed by the reference sign used in that drawing.

(e) The abstract shall be so drafted that it constitutes an efficient instrument for the purposes of searching in the particular technical field, in particular by making it possible to assess whether there is a need to consult the specification itself.

(8) The period within which reference to the deposit shall be made in the specification under sub-clause (A) of clause (ii) of sub-section (4) of section 10 shall be three months from the date of filing of the application.

Complete Specification is required to have the following components:

(a) Title

(b) Preamble of the invention

(c) Name, address and nationality of the applicant

(d) Field of Invention

(e) Use of Invention: A brief statement of the advantages of the invention

(f) Prior Art

(g) Problem to be solved

(h) Object of Invention(may be more than one)

(i) General statement of invention

(j) Detailed Description of Invention[with reference. to drawings , if any)

(k) Best method /example of working of the invention

(l) Statement of claims

(m) Signature with date

(n) Drawings

(o) Abstract

Grant of patents: After the complete specification has been filed, the application is allotted by the controller to specific examiners to see whether a patent should issue. The inventor gets a period of 12 months before filing the complete specification to conduct further research and incorporate further advances into the complete specification provided it does not change the nature, characteristics of the technology or the invention. The patent applicant will get the advantage of the priority date of the provisional application in the complete application so long as the nature of the invention remains the same. If the nature of the invention is changed the inventor cannot get the advantage of the provisional specification. This is called the 'Fairly Based' principle. The examiner allotted by the controller determines the procedural validity and compliances before proceeding to check the claims. This stage of the application is termed the examination. Then a prior art search covering publications in India and abroad is then conducted.[152]

152 Chapter VI of the Patents Act, 1970 read with Rules 21 to 23 of the Patent Rules, 1972

Rule 24:

Publication of application

The period for which an application for patent shall not ordinarily be open to public under sub-section (1) of section 11A shall be eighteen months from the date of filing of application or the date of priority of the application, whichever is earlier.

Provided that the period within which the Controller shall publish the application in the Journal shall ordinarily be one month from the date of expiry of said period, or one month from the date of request for publication under rule 24A.

If the applicant makes a request in Form 9 (before the expiry of 18 months from the date of priority if no priority claimed from the date of filing) with the prescribed fee Rs.2,500/- for natural person(s) and Rs.10,000 for legal entity [other than natural person(s))], the application will be published within one month from the date of filing of such request.

EXAMINATION OF APPLICATIONS

Section 11 Request for examination

(1) No application for a patent shall be examined unless the applicant or any other interested person makes a request in the prescribed manner for such examination within the prescribed period.

(2) Omitted by Act 15 of 2005

(3) In case of an application in respect of a claim for a patent filed under sub-section (2) of section 5 before the 1st day of January, 2005 a request for its examination shall be made in the prescribed manner and within the prescribed period by the applicant or any other interested person.

(4) In case the applicant or any other interested person does not make a request for examination of the application for a patent

within the period as specified under sub-section (1) or sub-section (3), the application shall be treated as withdrawn by the applicant:

Provided that—

(i) the applicant may, at any time after filing the application but before the grant of a patent, withdraw the application by making a request in the prescribed manner; and

(ii) in a case where secrecy direction has been issued under section 35, the request for examination may be made within the prescribed period from the date of revocation of the secrecy direction.

Section 12: Examination of application;

(1) When a request for examination has been made in respect of an application for a patent in the prescribed manner under sub-section (1) or sub-section (3) of section 11B, the application and specification and other documents related thereto shall be referred at the earliest by the Controller to an examiner for making a report to him in respect of the following matters, namely:—

(a) whether the application and the specification and other documents relating there to are in accordance with the requirements of this Act and of any rules made there under;

(b) whether there is any lawful ground of objection to the grant of the patent under this Act in pursuance of the application;

(c) the result of investigations made under section 13; and 145

(d) any other matter which may be prescribed.

(2) The examiner to whom the application and the specification and other documents relating thereto are referred under sub-section (1) shall ordinarily make the report to the Controller within such period as may be prescribed.

Rule 24 B: Examination of application.;

(1) (i) A request for examination under section 11 B shall be made in Form 18 within forty-eight months from the date of priority of the application or from the date of filing of the application, whichever is earlier;

(ii) The period within which the request for examination under sub-section 3 of section 1I B to be made shall be forty-eight months from the date of priority if applicable, or forty-eight months from the date of filing of the application;

(iii) The request for examination under sub-section (4) of section 11B shall be made within forty-eight months from the date of priority or from the date of filing of the application, or within six months from the date of revocation of the secrecy direction, whichever is later;

(iv) The request for examination of application as filed according to the 'Explanation' under sub-section (3) of section 16 shall be made within forty eight months from the date of filing of the application or from the date of priority of the first mentioned application or within six months from the date of filing of the further application, whichever is later;

(ii) The period for making request for examination under section 11B, of the applications filed before the 1st day of January, 2005 shall be the period specified under the section 11B before the commencement of the Patents (Amendment) Act, 2005 or the period specified under these rules, whichever expires later.

(2) (i) The period within which the Controller shall refer the application and specification and other documents to the examiner in respect of the applications where the request for examination has been received shall ordinarily be one month from the date its publication or one month from the date of the request for examination whichever is later:

Provided that such reference shall be made in order in which the request is filed under sub-rule (1).

(ii) The period within which the examiner shall make the report under sub-section (2) of section 12, shall ordinarily be one month but not exceeding three months from the date of reference of the application to him by the Controller;

(iii) the period within which the Controller shall dispose off the report of the examiner shall ordinarily be one month from the date of the receipt of the such report by the Controller.

(3) A first examination report along with the application and specification shall be sent to the applicant or his authorised agent ordinarily within six months from the date or the request for examination or six months from date of publication whichever is later. In case other interested person files the request for examination, an intimation of such examination may be sent to such interested person.

(4) The time for putting an application in order for grant under section 21 shall be twelve months from the date on which the first statement of objection is issued to the applicant to comply with the requirements.

Opposition: In India, any person interested can oppose the grant of the patent within six months from the date of notification of the acceptance of the complete specification. A notice of opposition needs to be filed in the appropriate office within six months. The 2005 amendment changed the pre-grant system incorporating both pre grant and post grant opposition. With the new act even after the grant an interested person can file for opposition within a 12 month period which is known as the post-grant opposition system. The American patent system envisages a post-grant opposition called the re-issue and the re-examination. In the American system the review is based on the error in the patent, which can either be an error in conduct or an error in patent.[153] On the one hand, the post- grant opposition has its advantages because a pre-grant procedure can block the applicant from getting a patent for many years. Whereas the pre grant opposition is favoured to stop patents

153 Hewlett Packard Co v. Bausch and Lomb Inc, 882 F.2d 1556.

which are not eligible. Recently, China amended its laws and replaced pre grant opposition with post grant revocation. This change allowed applicants to obtain their patent rights more quickly by speeding up the examination procedure.[154]

In India, there are several grounds for opposing a patent. Some of the most important grounds are:

a. That the applicant has wrongfully obtained the patent from the person opposing the application

b. The invention is already known to a person skilled in the art (obviousness)

c. The invention has been in public use in India

d. The claims do not relate to an invention within the ambit of the Act

e. The best mode is not disclosed in the complete specification. Best mode is a very important requirement in across the world. The term **best mode** means that in the patent application the inventor should disclose not only the invention but also the best method of making the invention. This is because after the expiry of the term of the patent (that is after the inventor loses his exclusivity and monopoly rights), the public should be able to work the patent. Therefore the inventor ought to have disclosed the best method of making. This requirement is called the **enablement** requirement in the US. That is unless the patent application reveals the best mode of making; the application is not enabled for the public. Therefore the application will fail. There are several ways to determining the best mode of making in India as well as in the US.

Applications for Patents under the PCT: Any country that has signed the PCT is termed as the convention country. India is one such convention country for filing the PCT applications. The PCT application

154 Lehman, Lee & Xu, Comments on Amendments of Patent Law, China Virtual Intellectual Property Law Newsletter, (September, 2000), at http://www.lalawfirm.com.cn

can be filed if at least one of the applicants (need not be the inventor) resides or is a national of a PCT convention country. PCT applications are complicated and merely technical. It is purely an area for law practitioners to handle. Therefore the following is a mere gist of the PCT.

However, for Indian scientists when they make a new invention that can be ground breaking internationally, (even if it is a improvement over the old invention), it is best to make a PCT application covering India, Europe and sometimes even the US if the cost is not too formidable. However, since US will insist on following the national procedure (after the application reaches the national stage), it is also best to designate countries like Singapore that will accept the international search and immediately award a patent.

Several countries are members of the PCT. Therefore an applicant for an international patent should clearly specify the countries where the applicant wishes to obtain patent protection. But with the recent changes in PCT all thememberbe countries are automatically designtated.

PCT applications are filed in India in the competent office. The competent office for filing a PCT application In India is the Patent Office, Calcutta, and its branch Offices at New Delhi, Bombay, and Chennai. A PCT application will contain the following:

1. A request under Art 4 of the PCT. In this request the applicant will have to designate contracting states or state where he seeks patent protection. These states are called the **designated states.** Where there are regional conventions like the European Patent Convention, entire Europe can be made as one designation. An application with such a designation will be centrally processed under the European Patent Convention. This has the advantage of avoiding the national stage in each of the European countries. Also, when the applicant gets a patent, the patent will be valid for all countries that are members of the European Convention.
2. Description of the invention
3. Claims
4. Abstract of the invention
5. Drawings (where applicable)
6. Fees

7. Claiming priority-this means that the applicant can claim the priority date (date of application for patent) in another PCT convention country if that application has been made before the PCT application. The PCT application may claim priority under the Paris Convention. This means that if the inventor had made a national application earlier that date can be considered as the filing date for PCT. Since an earlier date is likely to be considered this is called priority date. For Indians this means that you can file a simple provisional application in India, as the inventor is reasonably ready. That gives the inventor another 12 months to continue with the invention before he can file PCT application. (This is because **12** months is the latest period to given to file the complete specification. Otherwise the provisional specification will lose the priority date in the Indian patent office). A PCT application thus filed later 12 months can bear the priority date from the date of filing the provisional application in India. **This is a very important advantage.** If no such priority is claimed, then the date for the PCT application will begin with the international filing date.

Normally 4 copies are required to be filed. But some of the regional offices have sought only one copy so that they can make the required copies and send it to the international bureau. India has announced its recognition of Chinese Patent Office and US Patent Office as authorised international search and examining authorities in addition to the Australian, Austrian and European Patent Offices.

National Stage: The International preliminary examination has to be done within 21 months if the applicant decides to proceed with the application for obtaining patent in India based on the international search report, or (b) 31 months from the priority date, if the applicant opts for an international preliminary examination. Then the application enters the national phase. This means that the formal requirements of each state needs to be met and national fees need to be paid. Different countries also have different levels of accepting the PCT preliminary examination report. After this stage, the application proceeds into domestic laws.

The most important issue in the PCT application is the fee. Fees become due and payable at two stages. One is at the receiving office. That is, for India these fees are payable at Calcutta or the regional offices at Madras, Bombay or New Delhi. These offices collect the following fees:

1. **Transmittal fee**: This is retained by the office in India. These include the fee for preparing certified copy of priority document and transmission of the same to the international bureau.
2. **Search Fee**: This is transferred to the international searching authority. Depending on the searching authority the fee varies from USD 100 to USD 800. But Indian nationals may be eligible for a reduction of these fees by 75% provided a request for reduction of fee is filed in a prescribed form.
3. **International Fees**: There are two kinds of international fees collected by the receiving office in India. These are called the **Basic fees** and **Designation fees**. Both these fees are transferred to the international bureau. However, in case the patent application exceeds 30 pages, additional fee is levied for each additional page that needs to be processed.

Other fees are payable if the inventor wants to seek an non-binding opinion on whether the claimed invention appears to satisfy the novelty and involves an inventive step. This is termed as a **Demand** and is optional. If such a preliminary examination is sought by designating a country, the application will enter the national phase in that country after 30 more months. The advantage of this is that before the inventor starts paying the national fees the inventor can know whether there are flaws in the application. That way there are more chances of getting the patent in the country or designated state. For example, if Europe as a whole is designated in the PCT-application, the International Preliminary Examination Report that is already available may favorably influence the granting procedure of the European patent application. The fees for these can be anywhere between USD 100 to 1000 depending on several factors like which country is being designated. These fees are known as handling fees and preliminary examination fee. These fees are also reduced by 75% for Indian nationals residing in India.

The most important aspect to bear in a PCT application is the following:

1. A PCT-application as such will never mature into a patent, but it provides some extra time for making a commercially sound decision as to whether foreign patent protection should be sought.
2. PCT application has the advantage of extension of the priority year by 8 to 18 months, so providing more time for the inventor to decide as to whether or not the inventor needs to file foreign patent applications.
3. The International Preliminary Examination Report (optional and can be sought by filing a Demand), which may smoothen the granting procedure in most cases.

Patent Search

Patent Offices in India:

The following table informs details of the patent offices in India.

Office Name	Office Address	Office Phone/ Fax/Telegram	Name of Contact Person
Office of the Controller General of Patents, Designs & Trade Marks	C.G.O. Building, 101, Maharshi Karve Road, Mumbai - Pin-400 020. India	91)(22) 2207 0146 (91)(22) 2201 3646 (91)(22) 2203 9050 Fax: (91)(22) 2205 3372 (91)(22) 2201 7368	Shri S. Chandrasekaran Controller General of Patents, Designs & Trade Marks
Patent Office Kolkata (Head Office)	The Patent Office, Nizam Place, 2nd M.S. O. Building, (5-7) floors, 234/4 Acharya Jagdish Bose Road, Kolkata. Pin 700 020, India E-mail: patentin@vsnl.com patindia@giascl01.vsnl.net.in	(91)(33) 2247 4401 (91)(33) 2247 4402 (91)(33) 2247 4403 (91)(33) 2247 3851 (91)(33) 2240 1353 Fax (91)(33) 2247 3851	Dr. S.K. Pal Assistant Controller of Patents & Designs

Office Name	Office Address	Office Phone/ Fax/Telegram	Name of Contact Person
Patent Office Branch Delhi (New Address with effect from 25th July 2001)	Government of India Patent Office Branch, W-5, West Patel Nagar, New Delhi, Pin 110 008, India E_mail : delhipatent@vsnl.com	(91)(11)25871255 (91)(11)25871256 (91)(11) 25871257 (91)(11) 25871258 (91)(11) 25877245 Fax:(91)(11)25876209 (91) (11)25872532	Shri K.S. Kardam Asstt. Controller of Patents & Designs
Patent Office Branch Mumbai	Patent Office Branch Todi Estate, IIIrd Floor, Sun Mill Compound, Lower Parrel, West Mumbai - Pin 400013 India E_mail : patmum@vsnl.net	(91)(22)24925092 (91)(22)24924058 Fax (91)(22)24920622	Shri N. K. Garg Asstt. Controller of Patents & Designs
Patent Office Branch Chennai	Patent Office Branch, Rajaji Bhavan, IIIrd Floor, 'C' Wing, Besant Nagar, Chennai- Pin 600090. India E-mail: chpatent@tn.nic.in 2.patentchennai@vsnl.net	(91)(44)24901495 (91)(44)24901496 (91)(44)24903686 Fax (91)(44)24901492 (91)(44)24900931 E-Mail : chpatent@tn.nic.in	Shri K Venugopal Asstt. Controller of Patents & Designs
	Patent Office Chennai Branch,Guna Complex, Annexure-II, Sixth Floor, No. 443, Annasalai, Teynampet, Chennai - 600018	(91)(44)24314324 (91)(44)24314325 (91)(44)24314326 Fax (91)(44)24314750	Shri (Dr.) W.S. Dhumane Deputy Controller of Patents & Designs

International Patent Classification

The International Patent Classification, which is most often referred to as the IPC, has now existed for 25 years and is the only truly worldwide classification system for technical information. The system was not developed from scratch but was based on an already existing classification system, the International Classification of Patents for Invention, which had been

elaborated under the auspices of the Council of Europe, in Strasbourg, during the years 1954 to 1965.

The Council of Europe's Committee of Experts on Patents, which was entrusted with studies on the harmonization of national laws and formalities, in 1951 set up a Classification Working Party with the task of elaborating an international patent classification system. A system combining function-oriented principles (according to the intrinsic nature or function of a process, product or apparatus, independent of its field of application) and application-oriented principles (according to the particular use or application of a process, product or apparatus) was contemplated.

On account of several issue, a *Joint ad hoc Committee of the Council of Europe and BIRPI on the International Classification of Patents* was set up in 1969 to facilitate:

1. the use of the Classification
2. to prepare the five-yearly revisions of the Classification
3. to ensure the uniform application of the Classification and to assist
4. as far as possible, in establishing translations of the Classification into languages which were not official languages of the Council of Europe.

Finally, on March 24, 1971, the *Strasbourg (IPC) Agreement Concerning the International Patent Classification*, was adopted.

Introduction of Indexing Schemes: In December 1979, the IPC Committee of Experts decided that – when a specific technical field of the IPC could not be further developed by using conventional classification techniques – in order to improve the effectiveness of the IPC as a search tool, the classifying entries of that field could be supplemented by indexing entries, which should be presented in an indexing scheme. A technical subject classified into such a field of the IPC could, if appropriate, also be indexed. The indexing entries permit indexing of aspects of the technical subject that cannot be classified, for example, a technical subject classified according to its intrinsic nature may be indexed according to its application.

The IPC: CLASS CD-ROM: In May 1992, WIPO published the first edition of the IPC:CLASS CD-ROM. It was not merely the publication of the current version of the IPC on this new type of data carrier, but the publication of a complete search system for the IPC, intended mainly for the user who is not very familiar with the IPC.

The second edition of IPC:CLASS, published in September 1994, contains all six IPC editions in English as well as catchword indexes and revision concordance data. The use of IPC:CLASS obviates the voluminous collection of publications which otherwise has to be used in order to identify in different IPC editions the places which cover a given technical subject.

Patent searching Importance:

Patent search is one of the important tools for information. This helps decide weather to see if the inventions made is already in the public domain or is patentable. Search can be made either manually or electronically. Each of these searches has it-sown advantages and disadvantages.

The main advantage of manual search is Confidentiality. However, in order to do a manual search, one needs a collection of foreign and other journals and manuals. To that extent this can be strenuous. In any case even if there is a similar invention, a good lawyer with through knowledge of science can advice whether the claims can be broadened or narrowed to accommodate the new invention. For example, if you are trying to search whether an ink pen is patented, even if a pen has already been patented, you can get a patent for the nib of the pen if it can write in a different manner (say lithographic writing, thinner writing, thicker writing, a nib that can adjust its writing.. and more). So never give up. Listed below are some of the documents that are available in paper form, which interested companies, or libraries can purchase:

- US patents issued from 1790
- UK Patent applications published since1979.
- The European patent applications since 1978
- European patents issued by the EPO since 1980;

- PCT patent applications since 1978;
- The publishing Patents Gazette

The Electronic patent searching mechanism has the advantage of fastest Searching Speed and a better interface because of the Selective Dissemination of Information. It is easier to use and normally has either country wide or worldwide information. For example, US patents issued from 1790 to the present are available in the USPTO Search Rooms in paper and in image microfilm. The following are available as CD-ROMS:

- USPS: Bibliographic data of the United States patents since 1975;
- Espace-Access: Bibliographic data of the European patent applications since 1978;
- CASSIS CD-ROM products by the USPTO: Patents Bib, Patents Assist, Patents Class, Patents Snap and Patents Assign;
- PAJ: Bibliographic data of the Japanese patent applications Since 1976;
- GLOBALPAT: Patent family and bibliographic data of the patent since 1978 for several countries and treaties (PCT, EPO, GB, DE, FR, CH and US).

Note that even the Indian Government has a CD-ROM details of which can be obtained from NISSAT. Other than these are several web sites that provide the patent search. Each of these web sites has different features that are user friendly. Some are cost effective some are more equipped with prior art material etc. It is for the inventor to look at some of the sites and decide the functional qualities that best suites the inventors requirement for a search. Most of these sites can be accessed by typing in 'patent search', or something similar in the goggle site. The details and categories of search and indexing are dealt with while dealing with the Strasbourg Convention.

Patent Search

A patent search involves searching different databases to see if your idea has already been patented, to know if you can patent your idea. The results of a good patent search should reveal any identical, similar, or partially similar inventions to the one you might patent. As a bonus, viewing and reading already issued patents will:

- help you to write your patent application
- help you understand your competition
- help you avoid patent infringement
- help you learn more about your field of invention

It is also a good idea to write down any patent assignees that you notice listed in the patents you examine. They may be in the market to license patents in your field of invention - more about this later.

You have to do (or hire someone else to do) a patent search before investing in the cost of patenting. Even if you hire someone else to do the patent search for you and that is highly recommended for beginners - do a preliminary search yourself and bring that research to the intellectual property attorney or agent that you hire. Doing so will save you money, plus provide the other benefits mentioned above.[155]

How to search-Key points

1. You can do a patent search online. The U.S. Patent and Trademark Office (1790 - Present) and Delphion (1974 - Present) both provide free online databases.
2. You can search using keywords or phrases that describes your invention. Look for common terms describing the invention and its function, effect, end-product, structure, and use.
3. The results will list the title and number of all patents related to your keywords (l976 forward only). The title link will take you to the full text of the patent.

155 *See* About.com- Mary Bellis, Your Guide to Inventors

4. You will not be able to do a complete search online for a pre-1976 patent unless you know the exact patent number. With online patent be sure to examine other referenced patents that the inventor has listed.

5. For better results the inventor could visit one of the 87 patent and trademark depository libraries - you can make an appointment with one of the patent librarians for further help.

6. In conducting a patent search at a PTDL, you will need to take the next steps.

7. The index to the US Patent Classification (paper, CD-ROM) Begin with this alphabetical subject index to the Manual of Classification. Search for your keywords. Note class and subclass numbers.

8. Locate those numbers in the Manual of Classification. Note where the terms fall within the US Patent Classification System. Scan the entire class schedule, paying attention to the dot indent. Revise search strategy as needed.

9. Classification Definitions (microfiche/CD-ROM/USPTO web) Read definitions to establish the scope of class (es) and subclass (Es) relevant to the search. They include important search notes and suggestions for further search.

10. Patents BIB (CD-ROM, WEST) - Check if you are on the right path; search Patents BIB (1969 -) or WEST (1971-) for a particular class/subclass; retrieve results and examine titles.

11. Try other relevant classes/subclasses. Revise your search by using applicable keywords; note the classes and subclasses and go back to step 8.

12. Patents CLASS (CD-ROM or WEST) - Once relevant class (Es)/ subclass (Es) are identified, obtain a list of all patent numbers (1790-present) granted for every class and subclass to be searched.

13. Official Gazette - Patent Section (paper or microform) Go to the Gazette and look for exemplary claim(s) and a representative drawing for all patents on the list(s) to eliminate those unrelated to the invention.

14. Complete Patent Document (microfilm, paper, CD-ROM, WEST, or USPTO web; years of coverage vary) Search the complete text and drawing(s) of closely related patents to determine how different they are from the invention.

Dos and Don'ts of Search

1. Use an attorney, agent or independent research company when quality becomes more important. Keep your own search results and compare them to the professional search.
2. Professional searches can come with a formal written opinion or simply be copies of the prior art found in the search. Ask how the search will be done, what databases will be used.
3. Sign a non-disclosure agreement before hiring a professional. Watch out for invention scams.
4. Not every reference librarian in each PTDL library will be skilled in patent searching. Ask before you make an appointment.
5. Check classification numbers associated with each patent you examine. Go to the Manual of Classification to find out what the number/s state and then go to the Definition of Classifications to understand the invention.[156]

Contents of Patent Documents

Patent documents are published in fairly standard format and structure by patent offices all over the world. In general, the format and information contents of patent documents are as follows:

- Bibliographic data - providing bibliographic information on the granted patent or patent application, which includes the

156 Ibid

document number, filing and publication dates, name of the patentee(s) and addresses, etc.

- A description, in most cases including drawings - disclosing clearly the technical details of the invention concerned, normally illustrated by working examples showing how to carry out the invention into practice.
- A claim or claims - defining the scope of protection for the invention under consideration; hence satisfying the legal aspect of the patent document.
- An abstract (may be accompanied by a drawing) - giving a concise summary of the technology of the invention.

An example of patent document is shown in Annex I i.e. US-A 5,372,018. In the first or 'front' page of the patent document, there are the bibliographic data about the patented invention i.e. the title of the invention, name of the inventor, name of the applicant, date of application, and date of grant and so on. There is also an abstract that contains an illustrative drawing of the invention.

Take note that each element of the bibliographic data is associated with a 2-digit number or code, e.g. country of issue (19), patent number (11). These numbers are related to the "Handbook on Industrial Property Information" published by WIPO. The above-mentioned handbook has many recommendations on the publication of patent documents, one of which concerns bibliographic data. Said recommendation is aimed at improving the access to information relating to the bibliographic content of patent documents such that information users would have no difficulty in retrieving the information they want.

The recommendation on bibliographic data covers a list of approximately 60 distinct titles widely used on the front page of patent documents. They are identified through code numbers, known as the "INID" code or "Internationally agreed Numbers for the Identification of Data". The "INID" code numbers, given in a small circle or between brackets are placed before the relevant bibliographic data element.

After the front page, we can find the main body of the patent document, which is sometimes called the "patent specification". Generally, patent specification includes the standard contents about the invention in the following sequence:

- An identification of the technology or technical field to which the invention concerns e.g. a device for preventing theft of a vehicle.
- An assessment on the prior art in the technical field or background of the invention.
- A technical discussion of the problem or problems which the invention intends to solve.
- A description of the invention in sufficient detail with reference to one or more working embodiments, as required by the law for a skilled person to be able to practice the invention.
- Drawing(s) relating to the working embodiments to assist the understanding of the invention mentioned in the description.

In the example given, the patent document further includes the claims of the invention, which are placed after the above-mentioned specification of the same document. The claims of patent documents have an important legal function i.e. to define the scope of protection for the inventions concerned. They differentiate The prior art from the new technology as defined by the inventions and hence, constitute the legal aspect of patent documents.[157]

Patenting of Software in India

Computer programmes or software has been under the domain of copyright in Indian context in spite of increasing trend of including in the patents regime in US and India. One reason could be that Indian Industry has not come of age on the development of software products and more catering to body-shopping and on-site services.

157 Extracted from WIPO regional training course on Intellectual property for developing countries of Asia and the pacific - Document prepared by Mr. Lee Yuke Chin, General Manager, Malaysian Technology Consultants, SDN. BHD, Malaysia

However, in the Patents (second amendment) Bill, 1999, has revised the definition of "invention" under Section 2 (1) (j) so as to mean a "new product or process involving an inventive step and capable of industrial application." It has also stated that the subject matter of the invention should not be excluded from patentability under Section 3.

In the new amendment under Section 3K of the patents (second amendment) Bill 1999, a mathematical or business method or a computer program or algorithms had been excluded from patentability. The JPC (Joint Parliamentary Committee) had recommended the exclusion from patentability, computer programs per se. The existing practice with regard to "software related inventions" at the Indian Patent Office prior to the Bill was very ambiguous. There were no guidelines to assess the patentability for the software related inventions and the practice was to allow grant of patents to software coupled with hardware.

The Bill appears to have legitimized the grant of patents to software related inventions, wherein the software is coupled to hardware. The scene therefore for software patents in India after the Act comes into force looks healthy as now the software patents cannot be rejected on the basis that they are not permissible by law. As long as the software to be patented solves a technical problem, it might be patented.[158]

6. Software-Copyright Vs Patents Debate

With the increasing trend in patenting of software in USA and Europe, the debate on whether software to be included under patents has strong votaries and opponents. In USA the patent office is granting any where around 2000 patents for software and in European patent office has granted well over 12000 patents so far for software. In Indian context again with the second amendment of the Patents Act has paved the way for patenting software, which is linked with hardware. We shall take a look at the argument on for and against inclusion of software for patents.

158 See www. NASSCOM.org/ Newsline Policy Clipboard.htm

Arguments for inclusion of Software under Patents:

1. One of the main arguments is that a good idea behind software is not protected as it is in a copyright regime and hence it is easy to create a new software with altering the expression part of it. Hence there is no incentive in creating a 'big idea', which is left unprotected.
2. The period of software under copyright is around 60 years and the author's lifetime in most regimes is anachronistic with the productive life of software ranging from couple of years to additional couple of year. It would be prudent to give a shorter but stricter monopoly, which will benefit the creators.
3. On the enforcement of the IP regime, copyright regime allows criminal proceedings, which would not be in case of the classification as patent regime where there are only civil proceedings.
4. The copyright of any work is instant and there is no professional or inventive proof needed makes it easy for many to do reverse engineering of a source code and keep flooding the market with products and may not be a viable proposition of a sustained business model for the industry.
5. Many a software in the high-end application in the sectors of satellite communication, aviation, nuclear physics are done at huge costs with no commercial returns per se in the short run. These programmes if not protected by Patents may end up exploited by commercial programmers who can create programmes with alternate expressions without investing in the 'idea'.
6. Physical invention has been replaced with digital mode of software and hence one need to revamp the existing patent jurisprudence to accommodate software in the patent regime.

Arguments against software patenting:

1. Patenting of software will lead to a monopoly of 'few ideas' which will not allow the new software to come in as it is happening under the 'copyright regime'

2. Patenting of software will lead to defensive portfolios of patents, which will block new entrepreneurship and applications and creativity.
3. Placing software in patenting will result in inordinate delay for products to come to the market as the procedural hurdles and other issues will block products.
4. With the software life very short it any way will not benefit by a patents regime giving monopoly for 14 or twenty years. In fact by the time patent is granted the utility of the product may be outdated.
5. With the rapid application of software in hitherto unknown fields, speed and adaptations is the key to sustain the industry and hence copyright is more suited as it allows products to be in the market than waiting for patents to be granted.
6. Mathematical algorithms are not inventions and cannot be considered as inventions but rather a creative use of a subject and hence copyright regime is best-suited one for software.
7. As a product which is intangible and can be copied with ease by even a computer illiterate, civil remedies will only throw the baby out of the bath water and hence copyright regime and criminal remedy could only be the deterrent.
8. Software has assumed a mass movement with the advent of open source code model like Linux, which allows more creative minds to be part of the movement, and this will be stopped by the quagmire of patent portfolios and litigations.

CHAPTER IV

TRADEMARKS IN CYBER SPACE

Introduction

Trademarks in IP System has assumed a pivotal position in the world of trade and commerce. With mass production and consumerism stabilizing the growth of enterprises, the importance of Trademarks has grown in the last few decades. Trademarks are signs distinguishing enterprises for consumers to identify the products with their manufacturers or service providers. Essentially Trademarks protect the public so that it may be confident in getting the product which it asks for and it wants to get. It also protects the owner's investment from misappropriation by pirates and cheats. Trademark helps customers to select goods where they identify the source of goods, which convey valuable information to consumers.

With the advent of Internet and its evolution as a platform for e-commerce, the legal position of Trade Marks and their equivalence in Internet – referred as Domain Names has thrown new prospects and problems. Trade Marks as a IP tool has evolved considerably as a system which is territorial in their nature with occasional interpretations of trans-border reputation of enterprises and its affect on National Laws. But in Internet where the operations are universal, the equivalence of trade marks as domain names has a different challenge to the IP system. We shall explore in the chapter on the fundamentals of Trade Mark legal regime and their relevance and problems in applying the same in the world of cyber space.

1. Understanding Trade Marks

The evolution of trademarks as a right arose with the evolution of the consumer protection laws. The geneses of trademarks law can be traced to the concept of 'caveat emptor', which essentially meant 'buyer beware'. The concept was that when a buyer bought a product the seller is not responsible for the defects in the product. It was in the 1920's that British law in the famous case of *Donogue v. Stevenson*[159] accommodated the concept of consumer protection. This was a case where a lady went to buy ginger beer and found the remains of a dead snail in the contents of the sealed bottle. The shopkeeper refused to take responsibility and therefore it became important to find the producer. This case marked the evolution of consumer protection laws but laid the genesis for trademarks law. It gave the realization of the need for the identity of the producer of a product. Today every trademark bears with it the identity of the producer along with the promise of quality. Some brands carry more promise than the other. However, all trademarks directly help the customer identify who the manufacturer is and the manufacturer is able to relate indirectly with every customer of his product.

Trademarks started to play an important role with industrialization, and they have since become a key factor in the modern world of international trade and market-oriented economies. Industrialization and the growth of the system of the market-oriented economy allow competing manufacturers and traders to offer consumers a variety of goods in the same category. Often without any apparent differences for the consumer they do generally differ in quality, price and other characteristics. Clearly consumers need to be given the guidance that will allow them to consider the alternatives and make their choice between the competing goods. Consequently, the goods must be named. The medium for naming goods on the market is precisely the trademark. By enabling consumers to make their choice between the various goods available on the market, trademarks encourage their owners to maintain and improve the quality of the products sold under the trademark, in order to meet consumer expectations. Thus trademarks reward the

159 (1932) AC 562 (HL)

manufacturer who constantly produces high-quality goods, and as a result they stimulate economic progress.

A trademark can be defined as "any sign that individualizes the goods of a given enterprise and distinguishes them from the goods of its competitors." This definition comprises two aspects, which are sometimes referred to as the different functions of the trademark, but which are, however, interdependent and for all practical purposes should always be looked at together. Thus in order to individualize a product for the consumer, the trademark must indicate its source. This does not mean that it must inform the consumer of the actual person who has manufactured the product or even the one who is trading in it. It is sufficient that the consumer can trust in a given enterprise, not necessarily known to him, being responsible for the product sold under the trademark. The function of indicating the source as described above presupposes that the trademark distinguishes the goods of a given enterprise from those of other enterprises; only if it allows the consumer to distinguish a product sold under it from the goods of other enterprises offered on the market can the trademark fulfill this function. This shows that the distinguishing function and the function of indicating the source cannot really be separated. For practical purposes one can even simply rely on the distinguishing function of the trademark, and define it as "a sign which serves to distinguish the goods of one enterprise from those of other enterprises."[160]

It follows from the purpose of the trademark that virtually any sign that can serve to distinguish goods from other goods is capable of constituting a trademark. Following are some of the examples of matter that can serve as trademarks.

- Words: This category includes company names, surnames, forenames, geographical names and any other words or sets of words, whether invented or not, and slogans.
- Letters and Numerals: Examples are one or more letters, one or more numerals or any combination thereof.

160 This is the approach chosen by Section 1(1)(a) of the WIPO Model Law for Developing Countries on Marks, Trade Names and Acts of Unfair Competition of 1967 ("the Model Law").

- Devices: This category includes fancy devices, drawings and symbols and also two-dimensional representations of goods or containers.
- Combinations of Any of those Listed Above, Including Logotypes and Labels.
- Colored Marks: This category includes words, devices and any combinations thereof in color, as well as color combinations and color as such.
- Three-Dimensional Signs: A typical category of three-dimensional signs is the shape of the goods or their packaging. However, other three-dimensional signs such as the three-pointed Mercedes star can serve as a trademark.
- Audible Signs (Sounds Marks): Two typical categories of sound marks can be distinguished, namely those that can be transcribed in musical notes or other symbols and others (e.g. the cry of an animal).
- Olfactory Marks (Smell Marks): Imagine that a company sells its goods (e.g. writing paper) with a certain fragrance and the consumer becomes accustomed to recognizing the goods by their smell.
- Other (Invisible) Signs: Examples of these are signs recognized by touch.

The majority of countries allow the registration only of signs that can be represented graphically, since only they can be physically registered and published in a trademark journal to inform the public of the registration of the trademark. A number of countries allow the registration of three-dimensional trademarks, obliging the applicant either to submit a two-dimensional representation of the three-dimensional sign (drawing, picture or any other representation which can be printed) or a description (or both). In practice, however, it is not always clear what is protected by the registration of a three-dimensional sign. A similar problem exists for audible signs. A sequence of notes can of course be registered as a device mark, but that registration does not normally give protection to the actual musical

phrases so expressed. What is protected is the sequence of notes, as registered, against the use of similar devices.

Registration of color marks is also not very common in many countries. Unfortunately, there is no global uniformity in statutory definitions or relevant case law concerning whether a single color, or a combination of colors, can function as a trademark.[161] Some countries do not specifically encourage registration of color marks. But they include the registration of such marks by implication. For example, the current United States trademark law does not prohibit the registration or protection of colors *per se*.[162] Earlier decisions of the US have been against the registrability of color as a trademark.[163] These cases evolved what is called the 'color depletion' rule. This essentially meant that color alone could not serve as trademarks. It was only in 1985 that the federal circuit issued a break through decision[164] in the case of *In re Owens-Corning Fiberglass Corp*[165].

This ruling was concretized by the decision of on March 28, 1995 of the United States Supreme Court in the case of *Qualitex v. Jacobson Products*[166]. Here the court unanimously held that, "sometimes, a color will meet ordinary legal trademark requirements. And, when it does so, no special rule prevents color alone from serving as a trademark." This case left the question whether single colors may be registered as a trademark open. The court seemed to suggest that even single colors may be used as trademark. However the Court also cautioned that single colors not be inherently distinctive, but like descriptive marks or words, may only be protected when they have acquired a secondary meaning through use.

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161 See Making sense of trademarks, available at http://www.ladas.com/GUIDES/TRADEMARKS/MakingSenseTM.html

162 [Lanham Trademark Act [[section]] 45, 15 U.S.C. [[section]] 1127 (1946).

163 Campbell Soup Co. et al.v. Armour & Co., 175 F.2d 795 (3rd Cir. 1949), also see Diamond Match Co. v. Saginaw Match Co, 142 F. 727, 729 (6th Cir. 1906).

164 see Marilyn T. Dare, Current Developments in Trademark Law, available at http://www.arentfox.com/publications/tipsheet/tipf95c/tipf95c.html.

165 774 F.2d 1116

166 115 S.Ct. 1300

Sound marks are also allowed as trademarks. The US, for example, allows the registration of sound marks. In practical terms, this means that the sound must be recorded and the cassette submitted to the U.S. Patent and Trademark Office for registration.[167] The United States has long recognized sound marks. For example in the case of *In re General Electric Broadcasting Co.*,[168] a series of bells for radio broadcasting services was held to be capable of functioning as a service mark upon evidence of acquired distinctiveness. The decision also referred to other sound marks that had been registered in respect of series of musical chimes, sound of a creaking door, sound of a coin spinning on a hard surface and electrically produced series of three notes. However, there is no uniform protection at the international level. Even if permitted by statute, registration of sound marks may be frustrated by the practical difficulties of sufficiently describing such marks to satisfy local Trademark Offices. Interestingly, the United States of America is the only country to have recognized the registrability of a smell mark. In a recent decision titled *In re Clarke*[169] the court recognized the smell of the fresh floral fragrance reminiscent of Plumeria blossoms for sewing thread and embroidery yarn as a trademark. However, most of these are restricted to one or a few countries. There seems to have been no international treaty that requires countries to recognize the sound and scent marks.

Interestingly, India has one of the most well advanced trademarks law. The recent amendments that have been made to the Trademarks and Merchandise Marks Act, 1958 after the TRIPS Agreement now known as the Trade Mark Act of 1999 has made our enactment an even better ammunition. This amendment included the concept of 'service marks'. Service marks are trademarks used in the service sector like hotels, laundry services etc. In modern trade consumers are confronted not only with a

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167 Sound marks are neither registrable nor otherwise enforceable under related laws in many countries, such as China, Taiwan or Japan. In view of the inconsistency in protection for sound marks, trademark owners with multinational interests must be wary of adopting such marks, since they will be difficult, if not impossible, to register at foreign trademark offices or protect in the courts of many jurisdictions.

168 199 USPQ 560

169 17 USPQ2d 1238 (TTAB 1990)

vast choice of goods of all kinds, but also with an increasing variety of services which tend more and more to be offered on a national and even international scale. There is therefore also a need for signs that enable the consumers to distinguish between the different services such as insurance companies, car rental firms, airlines, etc. These are the service marks. These marks fulfill essentially the same origin-indicating and distinguishing function for services as trademarks do for goods.[170]

Variations of the concept of trademarks are found in collective marks. Normally individual owners or industry use trademarks. On the other hand, a collective mark may be owned by an association which itself does not use the collective mark but whose members may use the collective mark; typically, the association has been founded in order to ensure the compliance with certain quality standards by its members; the members may use the collective mark if they comply with the requirements fixed in the regulations concerning the use of the collective mark. Thus, the function of the collective mark is to inform the public about certain particular features of the product for which the collective mark is used. An enterprise entitled to use the collective mark may in addition also use its own trademark.

The regulations concerning the use of the collective mark normally have to be included in an application for the registration of the collective mark and any modifications to the regulations have to be notified to the Trademark Office. In several countries (for example, the Federal Republic of Germany, Finland, Norway, Sweden and Switzerland), the registration of a collective mark may be canceled if that mark is used contrary to the provisions of the regulations or in a manner which misleads the public. Collective marks, therefore, play an important role in the protection of consumers against misleading practices.

India did not recognize collective marks in the 1958 legislation. However, the new Act of 1999 in India refers to the collective marks as distinguishing the goods or services of members of an association of persons

170 see supra n 56 and 58. see also, About intellectual property, available at http://www.wipo.int/about-ip/en/index.html

(not being. a partnership within the meaning of the Indian Partnership Act, 1932) which is the proprietor of the mark from those of others.[171] The Paris Convention contains provisions on collective marks in its Article 7bis. Those provisions, in particular, ensure that collective marks are to be admitted for registration and protection in countries other than the country where the association owning the collective mark has been established. This means that the fact that the said association has not been established in accordance with the law of the country where protection is sought is no reason for refusing such protection. On the other hand, the Convention expressly states the right of each member state to apply its own conditions of protection and to refuse protection if the collective mark is contrary to the public interest.[172]

The certification mark may only be used in accordance with the defined standards. The main difference between collective marks and certification marks is that the former may be used only by particular enterprises, for example, members of the association which owns the collective mark, while the latter may be used by anybody who complies with the defined standards. Thus, the users of a collective mark form a "club" while, in respect of certification marks, the "open shop" principle applies. An important requirement for the registration of a certification mark is that the entity which applies for registration is "competent to certify" the products concerned. Thus, the owner of a certification mark must be the representative for the products to which the certification mark applies. This is an important safeguard for the protection of the public against misleading practices.

The definition of "certification mark" is not the same in all countries. In the United States of America, for instance, a certification mark may not be used by anybody who complies with the defined standards, but only by enterprises which have been authorized by the owner of the certification mark to use that mark.[173] Thus, in the United States of America, the difference

171 Section 2(g) of the Trade and Merchandise Marks Act, 1999

172 International Bureau of WIPO, Introduction to Trademark Law & Practice (second edition), WIPO Pub. No. 653(E) (1993)

173 International Bureau of WIPO, Comparative Trademark Law, BTMC/1, BTMC/4 Rev., BTMC/6

between a certification mark and a collective mark is smaller than in other countries. This is true about India too. In India Agmark and ISI are examples of certification marks. Notably, the 1999 Act has transferred the final authority for the registration of a certification trademark. The power was earlier vested on the Central Government under the 1958 Act. Now the registrar is the final authority for the registration of certification trademark. The criterion for protection and the manner of registration of trademarks are issues that will be discussed later.

2. Trademark Law in India

The law with reference to trademarks in India is governed by the Trade Marks Act, 1999 and read with the Trade and Merchandise Marks Rules, 1959. The Trade and Merchandise Marks Act, 1958 which governed this area of law was amended several times. After TRIPS there were several areas where the old legislation needed amendments. Hence the Trade Marks Act, 1999 was passed.

One of the main changes that this Act has made includes providing for registration of trademark for services. Normally, in developed economies marks used in relation to services also falls within the definition of a trademark. However, in India, till recently there was no provision for the registration of service marks. Therefore the following services that are profit making with very high chances of infringement were excluded from the protection under this Act:

- Advertising
- Insurance
- Financial
- Sector
- Communication
- Transportation
- Storage
- Education
- Entertainment
- Construction, etc.

It should be noted that as per the TRIPS agenda, India was required to ensure that there is provision for the registration of service marks as well under the Act. As a mater of fact, countries like Indonesia and Malaysia have already enabled the registration of service marks. The new 1999 Act has included the registration of service marks. The definition of 'trademark' has been amended to include within its purview the concept of service marks as well.

The Act defines a "mark" to INCLUDE "a device, brand, heading, label, ticket, name, signature, word, letter, numeral, or any combination thereof". The word 'includes' in the definition signifies that the definition of 'mark' is not exhaustive. The following are the attributes that a trademark should posses:

a) It should be an invented work

b) It should be distinctive

A trademark should NOT have the following features:

a) It should NOT be deceptively similar to any other existing mark

b) It should NOT be a descriptive of the goods. A remote reference is sometimes allowed.

c) It should NOT be a word that defines the nature of the product

d) It should NOT be the name or the surname of a person

e) It should NOT be a geographical name

The rights once acquired in a trademark are proprietary in nature. Such proprietary rights can also be acquired in a non-distinctive mark that is used in trade (for example, a descriptive word, surname, geographical name) by the extensive use of the mark in relation to the goods in which the marks are being used, resulting in the mark becoming distinctive of the goods and the manufacturer. In such cases, the doctrine of prior use applies and it serves as a valid defense for the manufacturer to claim proprietary rights over the trademark. Some examples of such marks /brands are Nilgiris, Nagarjuna Fertilisers, Taj Mahal Tea etc.

(a) ***Invented word***: One of the essential requirements for a trademark to be registered is that the mark/ word has to be an invented word. A mark that describes the product or the quality of the product cannot be registered as a trademark.

For example, the name "Tea" cannot be registered as a trademark for coffee.

The name Rasoi was refused registration for hydrogenated cooking oil.

The Indian courts have taken the view that for a word to qualify as an invented word, the word must be:

i) Newly coined, so that it is unique and therefore can easily be identified and attached to the goods in which it is used.

ii) It should convey no meaning-should not convey any quality assurance of the product. This is to ensure that it does not mislead the consumer.

iii) It should not give an indication of the type of goods to which the word relates. The reason being that any mark that gives such an indication, will make it difficult for manufacturers of alternate or same products to describe their products.

(b) ***Distinctiveness:*** Distinctive refers to the quality of the mark to be able to distinguish the goods of the applicants from the goods of others. Distinctiveness should be a part of the mark itself. Sometimes such distinctiveness is acquired by the use of the mark itself. Whether a particular word is distinctive or not is for the registrar of trademark to decide. It also depends on nature of the goods and to some extent on the use of the goods itself. Basically, distinctiveness is a feature of originality of the mark. It ensures customers identification of the mark with the specified product.

(c) ***Deceptive similarity:*** Where the mark lacks distinctiveness, the natural effect is that it resembles or causes to resemble with another mark. A trademark is said to be deceptively similar to another mark if the mark so nearly resembles that other mark as to be likely to deceive or cause confusion. If two marks are so deceptively similar that the consumer is

unable to distinguish one from the other, the whole object of the law of trademarks is lost. Hence, if a mark is deceptively similar to a mark that is already in use, the registrar will not allow the registration of the latter mark. This is to ensure that the public are not confused regarding the origin of the mark or of the goods. In fact, the test to decide whether a particular mark is deceptively similar or not is to see whether it causes confusion in the minds of reasonable consumers.

Some of the factors that have been identified to cause deceptive similarity are:

a) ***Phonetic similarity***: Phonetic similarity is said to occur if the names /sound of the mark are so similar that a customer who is aware of a product only by name will not be able to appreciate the difference between the two names/marks. In a country like India where the rate of illiteracy is very high, phonetic similarity can be extremely misleading.

Some examples of such similarity are: i) Wipro and Epro ii) Arista and Rysta iii) Mathura Ghee and Mathurang Ghee iv) Gluvita and Glucovita v) Lakme and Likeme[174]

b) ***Visual similarity***: Visual similarity is where marks of two products are so similar that a consumer is lead to believe that the good bearing both the marks belong to the same manufacturer. The similarity sought here is distinguishable from a mere resemblance between the two marks.

For example, McDowells Ltd is the registered proprietor of a mark bearing the picture of the Kingfisher bird which was used for the beer marketed by McDowells. A mark bearing a picture of the same bird facing each other was sought to be introduced. This was rejected by the court.

One of the more famous cases of visual similarity is that of the 'bounding cheetah' and 'bounding puma' from outside the jurisdiction of the Indian courts. Puma AG is the registered proprietor of the mark of a bounding puma. The trade mark was used in respect of jewelry, leather goods, clothing and other fashion accessories. The company had filed a case in

174 1996 PTR 202 3. APTN Set1, No

the German courts against an application by Sabel B V to register a 'bounding cheetah' device together with the name of SABEL in respect of similar goods.

The German court referred the matter to European court of Justice. The issue before the ECJ was whether there was no likelihood of direct or indirect confusion, but only a likelihood of association (i.e. where perception of the mark calls to mind the memory of an earlier registered mark but the two are not confusing).The court held that there was no confusion between the marks on the following grounds:

i) The concept of likelihood of association was not an alternative to that of likelihood of confusion, but served to define its scope.

ii) As the average consumer usually perceives a mark as a whole and without analyzing its various details, the more distinctive the earlier mark, the greater the likelihood of confusion.

iii) In the case in question, the earlier mark (PUMA) was not especially well known and consisted of an image ('bounding puma') with little imaginative content. The court therefore held that the by the mere fact that the marks were conceptually similar was not sufficient to give rise to a likelihood of confusion.[175]

c) ***Similarity in idea***: The object of disallowing marks bearing similar ideas is to ensure that one manufacturer does not copy the idea of another manufacturer intelligently and pass it off, thereby acquiring benefits on account of illiterate or ill-informed customers.

Some examples of these are: i) Watermatic and Acquamatic[176] ii) Surya and Sun[177] iii) Temple Blue and Gopuram Blue[178]

d) ***Nature of the marks***: In most situations, the court considers the type and nature of the industry and of the product, the market for the

175 *Id*, pg 15, April 1998

176 1958 RPC 387

177 AIR 1967 Mad 148

178 APTN Set 1, No. 2, Dec 1997, p 15

goods, the competition and nature of the customers and the impact of the marks on the customers before it concludes whether two marks are deceptively similar.

For example, in the case of pharmaceutical industry, the court considers the type of the drug and the purchaser and such other aspects before it reaches a decision. In the case of *Win -Medicare Ltd V. DUA Pharmaceuticals Pvt Ltd*,[179] Diclomol was used by the plaintiff and Dicamol was used by the defendant. The court held that the two products were similar and considered the factor that these drugs are sold without prescription. Therefore these drugs can be bought off the counter by illiterate customer and therefore restrained the use of the trademark by holding that they are similar.

Similarly, the Delhi High Court granted an *ex-prate* injunction to Smithkline Beecham Ltd which was the registered owner of the mark Crocin against the use by Apar Pharma of Hyderabad and Cyper Pharma[180] of Delhi against the use of the word Crocinex. Both the marks were sought to be used for paracetamol tablets. The Court held that the words were so similar that the it attempt was to deliberately mislead the public. (Here the issue of phonetic similarity was also conceded).

On the other hand, in *Calida Lab v. Dabur Pharma Ltd*,[181] Calida alleged that Zexate was deceptively similar to Mexate in respect of a particular injection used to treat cancer. The Court based its conclusions only on the fact that the drugs were specialized drugs which could only be purchased showing the prescription of a cancer specialist. It was felt that the prescriptions were made by specialist doctors who are knowledgeable and are capable of distinguishing the names and therefore court held that the trademarks can be allowed.[182]

The same logic was followed in the case of *Biofarma V. Sanjay Medical Store,*[183] the question was with reference to Flavedon and Trivedon for a

179 1997 PTR 152

180 APTN Set 1 No 3 April 98 p 13

181 APTN Set 1 No2, Dec 97, p 12

182 *Id*

183 1997 PTR 97

drug that was prescribed for heart disease. The court gave importance to the fact that the drug was a Schedule H drug under the Drugs and Cosmetics Act, which meant that the drug cannot be bought off the counter. The Court held that the two drugs need not be considered to be deceptively similar on the same logic followed in the above mentioned case.

Some of the other examples where the nature of the marks were considered are:

i) Amritdhara and Laxmandhara[184]

ii) Lion and Tiger.[185] Here, though the court conceded that the names Tiger and Lion are not phonetically similar, it considered whether an unwary and innocent purchaser could be persuaded to purchase the goods of the defendants as those of the plaintiff. The court placed importance to the factor that the product is usually purchased by carpenters who are barely literate. Both the words are known by the same word "SHER" in Hindi. Considering the entire getup of the labels, the court held that the marks cannot be allowed.

Deceptive Similarity And Different Description: The description of the goods become very important where the marks are deceptively similar. Even though the marks *per se* may cause confusion, if the goods over which the mark is used are so diverse, the use of both the marks may be in their respective markets.

There are instances where the goods are of different description and the Registrar opines that the marks are similar, however, the mark may be still be allowed if the goods in question over which the marks are used are so diverse that the likelihood of causing confusion to the customer is minimal. In order to decide whether the goods are of the same description or not, the following are the criteria normally considered:

a) Nature and composition of goods

b) Uses and functions of the goods

c) Trade channels through which the goods pass

184 AIR 1963 SC 449

185 APTN Set 1, No 2., April 1998, p.15

Based on the above criteria,

a) Shoe and Shoe polish were held to be goods of different descriptions

b) Tires for auto mobiles and cycles were held to be goods of different descriptions

c) Ayurvedic and Homeopathic medicines were held to be goods of same description

d) Hair oil and soap were held to be goods of different descriptions (for trade mark 777)

However, even if the goods in question are diverse and different, in cases where the Registrar feels that the trademarks in question is popular and well known, or if the mark is owned by a multi-product company thereby the likelihood of the public getting confused is very high, he may still disallow the mark.

Some examples of famous trademarks that were sought to be registered for diverse products are:

a) Kodak for cycles

b) Caltex for Watches

c) Bata for Lungis

In some cases, similar / same trademarks have been allowed to pass through similar trade channels in spite of the popular image of the trademark on the consideration that the goods were of so diverse a descriptions that he is completely assured that there is absolutely no likelihood of the customer getting confused regarding the identity of the manufacturers of both products. For example 'Titan' is a registered name for watches. It is also a famous brand for watches. However, the same was allowed for food products based on the fact that the names fell within different classes of the Act (in the fourth schedule which talks about the classification of goods detailed below) and that the chances of a customer believing that the manufacturer was the same was very less.

In some cases, however, the Court has acknowledged that the goods are of different description, but has still refused registration of the same/ similar names. The name Essel was refused registration for Essel Tea Exports because there was already an Essel Packaging Ltd. The Court based it conclusions by examining the trademark from the point of view of the state of mind of a reasonable customer looking at the trademark.[186] Based on the above, the logic seems to go as follows:

a) Where the marks are not distinctive, it may be held to be deceptively similar to other mark.

b) Where the marks are deceptively similar to each other, it may be allowed if the goods on which the marks are sought to be used are of different description.

c) An exception to the above is:

i) Where the mark is very popular or if it is a multi product company.

ii) Where the court concludes that inspite of the products bearing the marks being different, confusion will prevail in the mind of the consumer considering the issue from the state of a reasonable consumer.

Concurrent Registration:

Normally concurrent use by two or more persons of the same trademarks is not allowed. Under exceptional circumstances where two people have honestly used the trademark the same has been allowed. Concurrent use can be established if the following is proved:

a) The adoption and use of the trademark by both the parties was honest

b) The degree of confusion is likely is minimal

c) The relevant hardship that may be caused to the user of the trademark is not great and the hardship caused to public is minimal.

186 1997 PTR 92

Concurrent registrations can also occur because of the following:

a) Non-opposition by registered proprietor at the time when the other user was seeking to register the mark. Then both the marks prevail in the market and slowly each gain its own consumers and distinctiveness by virtue of use.

b) Use/ registration with consent of registered proprietor. This is a more common phenomenon in the liberalized era today. More companies enter in to a registered user agreement licensing the use of their trademark for a royalty or for other specific gains. This happens in the case of joint ventures and other foreign collaboration Agreements.

Some examples are:

i) Titan oils

ii) Philip Chariol watches in India

iii) BT and Wipro agreement for Wipro BT.

c) Long user of the mark with evidence of use without resistance from registered proprietor of the mark. This may happen either because the other party may have been an unregistered user and therefore the registered proprietor was not aware of the use by the other party.

d) Nature of the goods could have been sufficiently different to warrant the registration in the same class. Here the class being referred to is the class under the trademark rules-detailed under the subhead 'classification of goods'

e) Improper search facilities in the registry because of which inspite of two people applying for the same mark, the search does not reveal this. As a consequence, both marks get registered.

Normally, the registration of concurrent trademarks if either due to long use or by an agreement between the parties, will be subject to conditions especially if both the parties are operating in the same area or if the goods are similar and within the reach of the same customers. Identical marks have been registered in the same international class by

different proprietors. The pharmaceutical industry has some interesting examples of such concurrent registrations:

a) Durex-Durex Products Inc, USA and The London Rubber Co, UK

b) Kerocleanse-Scientific Pharmacals Ltd, UK and Patel Brothers Service & Eng, Mumbai (Class 5)

c) Nifecard-Lek Tovarna Farmacevtskih, Yugoslavia; Biochem Pharmaceutical Industries, Mumbai (Class 5)

d) Taktic:- The Boots Co Ltd, UK and Eskayef Limited, Bangalore[187]

Classification Of Goods: It is difficult and impossible to ensure that a mark used by a proprietor for one product is never ever is used anywhere in any other product. Hence a balance is sought to be achieved to avoid duplication of the marks in same or similar products while at the same time ensuring that the mark is available for totally diverse products, in certain circumstances.

Based on the International Classification of goods, goods have been classified under the Fourth schedule of the Trade and Merchandise Marks Rules, 1958 into 34 classes. Each class has names of a few goods. Once a trademark is registered under a class, the same trade mark cannot be used for any goods that falls within the same class. However, it may be used in goods that falls in another class. Companies that have products falling with in more than one class may register the trademark in the classes.

However, with the development of commerce, trade and the diversity of economic activity, the courts have sometimes been forced to take more liberal views and allow marks that are similar/ same for products that fall within the same class. For example, the name Charminar was a very popular name for the cigarettes manufactured by Vazier Sulatan and Co. The same name was sought to be used by another manufacturer for Zarda. Zarda and cigarettes fell with in the same class. However the person who proposed to use it in cigarettes argued successfully that the two goods

187 APTN Set 1, No 2, Dec 31

were so diverse that it is very unlikely that a reasonable consumer would assume that the Zarda was also being manufactured by the cigarette maker. This however, is a judgment of the Madras High Court and the question of the same name being registered by goods within the same class is yet to be taken to the Supreme Court.[188]

Trademark Becoming A Generic Word: It should be noted that unless a trademark is carefully protected it will lose its significance. This essentially means that the trademark will degenerate in status to a generic word. The consequence is that the trademark will start referring to goods of that variety rather than serve as a link between that product and the manufacture. Hence the manufacturer/ owner will not be able to claim any proprietorship /ownership rights over the trademark. This may occur if the owner fails to take action against the infringor or because of the use of the mark in a descriptive sense. Some examples of these are: Asprin, Refrigrator, GripeWater, Xerox etc. in which the goods fall.

Remedies For Registered And Unregistered Owners: The rights of the registered and the unregistered owners differ vastly when it comes to the remedies available for the owner of the trademark against a third party trying to use the same trademark or the trade name. The registered proprietor can sue against infringement of the mark. This is a statutory remedy.

A suit for infringement can be filed in the District Court having jurisdiction or in a High Court having original Jurisdiction to entertain the suit so long as the infringement has taken place within the territorial jurisdiction of the Court. The period of limitation is 3 years from the date of infringement. It is for the plaintiff to produce the relevant proof of infringement. In the cases of an unregistered proprietor, an infringement suit cannot be filed against the person.

An unregistered proprietor can only avail of a remedy under common law. This remedy is called the 'passing off'. Any person suing under passing off must prove the ownership of the trademark.

188 1996 PTC 152

A suit for passing off raising out of any trademark must be instituted in a court not inferior to District Court having jurisdiction to try the suit. The plaintiff in a suit for passing off must be the owner and the trademark must have accumulated some good will in relation to the business.

Interim remedies in the form of injunctions are available to ensure that no injustice occurs to the plaintiff during the pendency of the litigation. In the case of *Win-Medicare Ltd V. Dua Pharmaceuticals Pvt Ltd.,*[189] Diclomol was used by the plaintiff and Dicamol was used by the defendant. Here the Court took note of the visual as well as phonetic similarity, and considering the fact that the names were used for medicines that were sold off the counter, issued an ad-interim injunction restraining the defendant from using the trademark.[190]

In trademark disputes, it should be noted that the priority of use / registration of the trademark is of primary importance and is a major factor to be considered. Priority of registration gives prima facie validity for the mark. In the case of two unregistered users, priority of use will prevail. Where there is a prior unregistered user but a subsequent registered user, it is most likely that concurrent use will be allowed. In the case of prior registered user and a later application by a person seeking to use the same mark, the later user will be asked to cease and desist from using the trademark. This will essentially depend on the facts of each case. In *Bio Chem Pharmaceutical Industries V. Bio Chem Synergy Ltd*,[191] both companies were engaged in the business of selling pharma and medical products. Biochem Synergy was engaged in bulk drugs whereas Biochem Pharma were selling their drugs in strips of 10 which were available with the chemist and druggist. Here it was argued that the name Biochem was a combination of BIO and CHEM and therefore was not distinctive. The court considered that the name Biochem was registered by Biochem Pharma and that there were 28 trademarks of the company beginning with that name. Biochem Pharma had also been in the business for the past 35 years, thereby acquiring a reputation. Hence the court held that Biochem

189 1997 PTR 152

190 *Id*

191 APTN Set 1, No 2., April 1998, p.13

Synergy desist the use of the word Biochem in order to ensure that the consumers are not unnecessarily avoid.

However, even in cases where the trade mark has been registered, if the owner does not use it for the period prescribed under the Act, the doctrine of non-use will apply and applicant can, on this basis seek to remove the registration from the register. This doctrine however, cannot be applied if the registration is a defensive registration of the trademark. This doctrine applies even to very well known trademarks. Recently, in UK the ELLE trademark, registered by Boots Plc, UK was removed by an application for revocation made by Safeways (a super market) stating that though the name was being used in relation to the magazine, the name as not used for toiletries for which there was a separate registration. The court accepted this argument and the registration was revoked.[192] Earlier defensive registration was permitted for well-known trademarks. Defensive registration is the registration of trademarks in classes where the company does not have any goods in the market. This was done essentially for well-known trademark. The reason this was permitted was to essentially to protect the brand images of multi product companies. The Act abolished the system of defensive registration. Instead, registration of trademarks that are imitations of well known trademarks are not permitted any more. In order to accommodate this, the Act enlarged the grounds for refusal to register a trademark. The registrar has been vested with the duty to protect a well-known trademark against identical or similar trademark.[193] The Act also defines a well-known trademark.[194] In order to determine whether a trademark is well known the Registrar will consider the knowledge or recognition of that trade mark in the relevant section of the public including knowledge in India obtained as a result of promotion of the trade mark.[195] The Registrar will also consider the duration, extent and geographical area of any use, promotion and publication of the trademark and the record of successful enforcement of the rights in that

192 APTN Set 1, No 2., April 1998, p.15

193 Section 11 (10)

194 Section 11 (6)

195 Section 11(6)

trademark.[196] This amendment for well-known trademarks also has international impacts.

With liberalization, there were a lot of multinational companies that have entered into India for business. Similarly, exposure of the Indians to foreign brands as well as the trade names have become very high. Hence there are more chances for copying the foreign brand names and using them either for the same or for a different product. The net result however, was that there was beneficial infringement which India as a responsible member of the international community needed to avoid. Such use of foreign names will deter foreign investments to some extent. Even before the amendments were made, some of the High Courts were already considering cases in relation to well known trademarks and took a stand. For example, the Delhi High Court refused the registration of the name Whirlpool in India considering that the name was internationally well known and was registered by Whirlpool Corp., the name has not been registered in India under our laws.[197]

Recently in, *Allergen Inc V. Milment Optho*,[198] the Supreme Court of India considered the issue of trans-border reputation. Allergen Inc was the manufacturer of eye care products under the trademarks Ocuflox, and has registered the mark in over nine countries. Allergen had applied for registration of its mark in India. It contended that Milment Optho which also manufacturers eye care products was using the same mark in India for similar goods. The Single Judge of the Calcutta High Court had issued an interim order restraining Milment from using the mark, which was vacated after hearing the Indian Company. The case went on appeal to the Supreme Court. The Court considered certain remarks that were made by the Division Bench of the Calcutta High Court where the Calcutta High Court had mentioned that these foreign brand names were no more alien to the Indians on account of the higher rate of travel and the increased advertisement in India. Eventually, Milment has offered to change its name in the Supreme Court.

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196 Section 11 (6) (ii)

197 1996 PTC 16

198 IPR Vol 4 No 8, August 98, pg 5

Registration Of Trademarks: The relevant application for the registration of trademark is Form TM-1. The application is submitted to the Registrar for the registration of a trademark. The 1999 Act has simplified the procedure for registration of the trademarks. Under the 1958 Act, every application for the registration of a trademark can only be in respect of goods comprised in one class only of the Fourth Schedule. The present Act has provided for a single application for registration in more than one class. However, applications for the registration of the same trademark in different classes shall be treated as separate and distinct applications for the purposes of fees. If any goods are not specified in any of the classifications, the Registrar is the final authority to determined the classification of the goods/service as the case is. In doing so, the registrar will strive to follow the international classification of goods. The Registrar may refuse to accept the application unless he is satisfied that the specification is justified by the use of the mark which the applicant has made or intends to make if and when it is registered. The Registrar may also require the applicant to file an affidavit along with adequate proof testifying the use of the mark by the applicant earlier. Every application for the registration of a trade mark, shall contain a representation of the mark in the concerned space. Additional representations may also be required. All representations of trade marks shall be of a durable nature, and each additional representation required to be filed with an application for registration shall be mounted on a sheet of strong paper of the size of approximately 33 centimetres by 20 centimetres, leaving a margin of not less than 4 centimetres on the left hand part of the sheet. Where a trademark contains a foreign word or letter, the registrar may require a translation. A trade mark is registered with effect from the date of filing of an application and is valid for a period of 10 years. Thereafter it can be renewed every seven years by payment of renewal fee. Earlier it was 7 years and this has been increased by the 1999 Act.

Upon the application, the Registrar on an examination of the application has the right to raises objections. If the objects are overcome then the mark is advertised in the trademarks journal. Upon advertisement of a trademark in the Trade Marks Journal it can be opposed by any person within a period of four (4) months from the date of advertisement.

Oppositions are normally filed on the ground that the mark advertised is conflicting with any of your marks, registered or not. In some cases, like drug industry, oppositions are filed on the ground that the applicant should not be granted any monopoly. Notice of opposition setting out the pleas should be filed. This may contain details of the mark, the reason for seeking monopoly and explanation why exclusivity should not be jeopardized. Counter-statement should be filed within two months from the date of service of the notice of opposition by the Trade Marks Registry. If the counter-statement is not filed within the prescribed time, the application may be deemed to have been abandoned. Then both parties are allowed to present evidences and other material proof. The 1999 Act has also provided for an Appellate Board for the speedy recovery of the appeals from the decision of the registrar. Earlier these were taken up by the respective High courts. This Act has also enhanced the punishment for the offences and has made them on par with the punishment under the Copyright Act, 1957. This has been included to prevent the sale of spurious goods. The offences relating to trademarks are cognizable. The court also has the power to grant *ex parte* injunction to prevent continued misuse of the registered or unregistered mark within a short period of time.

Conclusion: It is extremely important to be aware of and protect ones trademarks for today's business. The need for ensuring that customers identify a product with the trademark of the manufacturer has become important for every industry today on account of the following reasons:

a) There is a high level of customer awareness of the goods and the manufacturer. There are more alternatives available for every product. In every product, the customer demand and expectations are directed to individual specialized functionalities of a product.

b) The onus has been shifted to the manufacturer to educate the customers on the unique features of their products as against products of other manufacturers performing the same or similar functionalities. This has not only increased the expectations of the customer, but has also increased the need for an assurance of quality and a mechanism to rectify the same if the assurance fails.

c) With the growth in International trade, it has become easy to pass off goods that are similar or spurious or same by spurious manufacturers. This is especially so in the international scene where manufacturers in one country can try to pass off goods in other countries.

Trade Marks in Internet

As discussed earlier, Trade Marks as a tool of IPR is country specific in its operations and process. Such country specific regimes are also varied in the sense that some insist on registration as the only way to protect them and in common law countries usage or prior user is a method by which the mark can be protected. It is also to be noted that in the physical world of Trade Marks, the marks are varied – where it could be words, numbers, logo, label and so on so forth which has started including smell marks and even touch marks. Hence there are numerous methods where by marks can be created without infringing existing ones and allows a level playing field for new entrants into the world of trademark. Added to this there is also the classification of goods and services where the marks can qualify even though they are similar but denote different products and may not be considered as infringement under certain conditions. The only exception to the territorial trade mark regime is that of the trans-border reputation. Here a mark though not registered in a country can still have a defence under the principle of the trans-border reputation. For e.g. Sony Corporation of Japan may not be manufacturing goods of a particular class or may not be a registered user in a country but still can claim protection based on the trans-border reputation it enjoys.

In Internet, trademark has no jurisdiction by the very nature of its construct. The conventional trademark regime having territorial rights gets obliterated. Thus any enterprise using Internet as a Trade Mark not only will enjoy a universal monopoly but will also overlap the traditionally protected trademark system, which is in vogue. To illustrate if there is a trademark registration 'Pro Life' in India for a company based in India, it cannot claim the trademark in Singapore unless it is registered there separately. If a company in Singapore named 'Pro Life' takes up a domain name (web site registration at the top level) it will enjoy worldwide monopoly and also be accessed in India.

It is not just the monopoly alone, the issues of who will get such registrations and on what basis – first come first served or prior use? How to decide an infringement in Internet? If there is a case of infringement what will be forum for deciding the same? And a host other issues needs to answered.

Understanding Domain Name System

Internet is an operation between computers/server worldwide. For such operation there has to be communication between the computers. Such communication is possible only if the computers have an identity of themselves. Each computer/server has an identity by way of an all-numeric number called IP or Internet Protocol. The communication by numbers and remembering numbers when operating in Internet is cumbersome and hence the numbers are equated to names, which are called Domain names. Thus if a domain name is typed in the address bar of the browser, it identifies the relevant all-numeric number of the computer and connects it to the surfer.

To illustrate, if some one wants to communicate to Nalsar proximate education through Internet, they need to communicate to the computer/ server of Nalsar Pro which has the IP number 206.78.251.252. This IP number denotes that 206 is the network number, 78 and 251 denote to sub the complete numbers to reach the nalsarpro computer/server and interact. It is difficult for an average person to keep remembering this number and a host of other numbers for interacting in the net. Hence the address of nalsarpro is converted as a name and registered as a site nalsarpro.org. the registered name nalsarpro.org is the domain name, which is a substitute to the numeric IP address of its server. Thus any one typing the address nalsarpro.org will be taken to the server. The desired person now can communicate by the address www.nalsarpro.org. Here www means World Wide Web, nalsarpro.org is the assigned name, which denotes the all numeric IP address where the computer in located in a network. The name address is called a URL or Universal Resource Locater.

This domain name registration process is called as the Domain Name System or DNS. Thus DNS carries the routing function of finding the IP

addresses of computers with the alphabet equivalent of addresses. The DNS only links the matching addresses with IP numbers and in a sense the domain names are not technically equivalent to the IP addresses. The Domain names can be removed and reassigned where it will locate the new computer for which it has been reassigned.

The domain names system operates through a structured hierarchy, which can be of 1) territorial in categorization or 2) functional in categorization. It should be remembered that here territorial means identification of the location of the IP for convenience and yet the IP is universal or world side. IN territorial categorization, the first or Top Level Domain ends with a two-word suffix along with the registered web address denoting the country where the IP is located. For e.g. www.Griffith.au will indicated that the last suffix .au will mean that the IP is located in Australia. Similarly if the suffix is .fr it will mean France or .uk will mean it is United Kingdom.

On the other hand if the site is www.princeton.edu it means that the entity is an educational institution or www.usis.gov will mean it is the governmental organization.

Similarly .com will mean commerce, .org will mean non-governmental organization, ,biz will indicate trade and commerce classification. This system leads to the following aspects:

- In this domain name system what ever could be the categorization either country based top-level domain names or functional top-level domain names, the registered address is universal.
- Only one applicant gets the registration for a particular name as name to be used worldwide registration.
- Such a registration is based on first come first serve bases without proof from the applicant for a desired category of registration. Thus if two entities are in the same business in different parts of the world, the first to approach for registration will receive the specific name as his address.

Domain Name System-Organizational and Registration Process

The Domain Name System and its administration began in US by virtue of its lead in the Internet growth. Currently there is a registry named Network Solutions Inc that is contracted under the National Science Foundation for administering the domain names. The Network Solutions Foundation for administering the domain names. The Network Solutions Inc (NSI). Apart from NSI there is the Internet Corporation for Assigned Names and Numbers (ICANN) –a non-profit corporation that has been entrusted with the various responsibilities like domain name management system, root server system, protocol parameter assignment, space allocation and other functions. The NSI administers the registration of domain names as follows:

- In US the NSI assigns a multi-level domain name system called as the 'Top Level Domain' and 'Second Level Domain' referred as TLD and SLD respectively.
- The TLD is a worldwide assignment, which is 'generic' in operation where the allocation indicates suffixes such as .com for commerce, .org for organizations, .net for Internet companies and other categories.
- Outside USA, the Network Information Centers or NICs assign the registration of TLDs, which are country specific with a suffix of two- words such as .in for India, .fr for France, .au for Australia. .uk for United Kingdom and similar suffixes for other countries.
- The country level TLD again use second-level domain names with suffixes. In India for example as .ac for academics, .co for companies .re for research. .mil for military etc.
- The registration can bypass country level TLDs and can be registered directly with NSI for 'generic' TLDs without suffixes for countries. For e.g. www.nalsarpro.org is registered with NSI directly apart from a registration of www.nalsarpro.ac.in through the Indian registration arm.

- Similarly, there could be multiple registration for e.g. nalsarpro can also register in UK as www.nalsarpro.uk
- The applicant desiring to register a domain name has to approach through a service provider to the authorized ICANN administrator for a TLD. The requested TLD will be assigned if it is not assigned to anyone without any proof of ownership or trademark.
- Though the domain name is allotted without proof of trademark, the allotted applicant should ensure the name is not violating other trademarks. The organization merely allots names that are free.
- In Indian context, the National Centre for Software Technology (NCST) allocates the country specific TLD. .in for applicants.
- In India second-level domains (SLD) is allotted on categories of .ac for academics, .ernet for academic and research network, .nic for the Government network, .gov for Government offices and establishments, .mil for military, .net for Internet service providers, .org for other organizations not covered in the above categories.

Domain Name Disputes

As discussed above, Domain names are assuming great importance with the explosive growth of e-commerce and also other sectors, which are using Internet as a global platform. The Domain names have assumed an equivalence of trademark for corporations and other commercial entities. The Trade Mark regime in the 'physical world' gives an opportunity in terms of product classifications and service classification, which average around 42 types in most regimes and also protected the signs based on a territorial classification. Whereas the domain names are universal and has few functional categories for operational reasons and the disputes over acquiring domain names have new ramifications. The moot point is whether the traditional trademark principles are applicable in the domain name disputes? If not what set of standards, mechanisms and rules to be in place to resolve the disputes in Internet.

The disputes, which arise in Internet, are of varied types:

- In the first place, due to the first-come-first serve method of assigning names which are available freely, many players have taken advantage of getting the addresses and negotiating with those who desire them or have similar marks in the regular trade and commerce for a profit called as 'cyber squatting'
- Getting names assigned which could of reputed companies and may be used to services in Internet to lower the business interests or bring disrepute to the rival business interests.
- Getting near name matches by misspelling addresses thereby taking a fee ride on other registered names.
- Hyper linking names of other sites there by popularizing a site
- Framing, where the other site can be pulled into the frame of a site thus increasing the hits of a site
- Meta-tagging, where, Site using popular words though unrelated in their sites so that search engines may throw the results to a searcher which popularize the site.
- Conflict of two entities, which are popular in two different countries and may contend for the same name.

Let us see how these types of disputes arise and what could be the possible solutions to the same.

- Cyber squatting- These types of cases has been resolved in courts where there is a completely exploitative intention of registering names in order to extract gains from firms or entities. The registration of the name of celebrities like Julia Roberts, Madonna, Daler Mehendi have been resolved in favour of the celebritites.
- There are other operators who do not extract money but used popular names to have more traffic to their sites, which could lower the reputation or damage the business interests of others. In one case of Princeton Management Corp v Stanley H Kaplan

Educational Centre, Ltd,[199] a site registered as Kaplan.com by Princeton Review Management Corporation used the site to deride the services of Kaplan center and praised Princeton services. The suit filed later was resolved by arbitration in favour of Kaplan.

- In another case of Hasbro Inc v. Internet Entertainment Group. Ltd[200], Hasbro is a famous children's game CANDY LAND. Internet group registered a site candyland.com to put up explicit adult materials in the site. The US courts used the principle of dilution of trademarks to favour Hasbro Inc.
- In the third type of cases misspelling is deliberately used to register a site and there by taking advantage through search engine results or users defaults. Registering reebuk.com is aimed at the surfers of rebook.com and these disputes are similar to the deceptive trademark infringement.
- Hyper linking, which was a common phenomenon all along the usage of net, is now increasingly questioned by commercial site owners where they contend that before linking their permission has to be sought. In the case of the Ticketmaster Corp, v. Microsoft Corp. where the linking was questioned as an act of diverting the advertising revenue potential which may accrue to the petitioner.
- Similarly, in Framing another website is brought into the frame of a site browsed and there by taking advantage of the customer choice and making them to visit a site. This practice will confuse the viewer of the origin of a site and may be a clear case of infringement as in traditional trademark laws.
- In meta-tags it is deliberate attempt to use words not connected with the content of site so that search engines pick up and throw them to viewers and there by generating visibility. This king of

199 94. Civ.1604 (MGC) (S.D.N.Y., March 9, 1994)

200 No. C 96-3381 CW, 1996 U.S. Dist. Lexis 17090 (N.D. Cal. Oct.29, 1996)

practice may be violative if one applies the principle of passing off in traditional trademark laws.

Domain name Dispute Resolution – WIPO initiative

The domain names have thrown challenges, which could not be solved in many cases evoking the traditional trademark solutions. In this context the some of the dispute resolution mechanisms stressed on defence positions like whether the domain name registration predates the traditional trademark registrations or the domain name holder has a trademark registered already and in absence of both, the name should be put on hold. These solutions have ramifications as where the trademark is registered and how territorial prior use could be used in Internet terrain.

World Intellectual Property Organization took an initiative of consultations on domain name disputes and has initiated a settlement mechanism. Accordingly:

- The registration authorities should procure correct and detailed data on those who have registered domain names and the same to be made available, so that if there is a case of infringement, they could take action to enforce their rights.
- In case of non-compliance of such data and details the registrar should cancel the domain name on a notice from those affected or whose rights are infringed.
- The report recommended for a uniform dispute resolution policy for all TLDs and the disputes to be settled online in cases of bad faith and abusive registration of domain names
- Adopting the trans-border reputation principle in the trade mark regime, the report calls for enforcement of rights of well known and famous trade marks on direct infringement as well as infringement of deceptively similar and derivative domain names.

Indian Context

In Indian context there are few cases arisen on trade mark infringement in Internet one such case is listed below:

Yahoo Inc v. Akash Arora & Anr

Facts of the case:

1. Akash Arora and another registered a domain yahooindia.com as a regional section on India.
2. petitioner Yahoo! Inc., sought injunctive relief against defendants against using Internet services

Contention of the petitioners

1. The petitioners contended that they are using the domain name as TLD worldwide and also regional sites such as yahoo.ca in Canada and other places.
2. The petitioners contended that the defendants have used the deceptively similar domain name and also has used the colour scheme, get up, layout and source code of the petitioners website.
3. The regional site on India by the defendants is to be perceived as a series of their other regional sites according to the petitioners.

Contention of the defendants

1. The world Yahoo was a dictionary word and hence a generic one and not distinctive of the defendants.
2. The defendants have placed a disclaimer on the site distinguishing the site from that of the plaintiff's.

Findings of the of the Court:

1. Though the world is a dictionary word it has achieved distinctiveness due to the use of the defendentant's site in the Internet world.
2. The case to be treated as a 'passing off' action there is sufficient grounds on the relief sought by the defendants.

3. Due to the usage of the petitioner for a prolonged period it has to have maximum protection.

4. Ordering for interim injunction on the common law remedy of Passing Off till the disposal of the case.

The courts in India and US have been interpreting the Domain Names Dispute akin to Trade Mark situations in spite of other issues involved. One important issue is that the existing trademark decides on the bases of classification of goods, trans-border reputation of brand names, invented words and related principles to decide about infringement and passing-off and only in such contexts the internet disputes on domain names can be decided by Indian courts.

CHAPTER V

DATABASES

Databases in Information Technology

Databases are compilation of information on various data of persons, addresses, functional habits, income groups, choices of consumers, ownership of goods, homes etc. In fact a governmental function like Census is a creation of certain details of the population in a country. Such databases have been there for countries for various purposes of governance, commerce, education and even as documentation for war and aggrandizement.

In the conversational evolution of databases it is specific to the need of those who are complaining and also as a utility for it was desired due to manual constitution of the database and also the difficulty to interpolate it for other purposes. However, computers and their evolution have revolutionized databases beyond imagination. In a fundamental sense computing is about the speed of information processing and thus the whole concept of databases has changed from the traditional sense to that of modern day's competing. Today databases of various consumers can be stored in the computer, retrieved, researched and new utilities can be charted out. With electronic governance taking strong roots one finds huge databases of vital information on various aspects could be created with the information technology. The Government Departments like Police Dept., Income Tax Dept, social welfare dept., have huge databases built which were sensitive and needed protection. In the E-commerce world databases

are of huge importance for banking sector, credit card business, White goods promotion, holiday and airlines industries, hospitals and similar industries. These databases today are valuable financial propositions to net the customers and with internet, it is economical and easy propositions. The Databases are also mere information compilation but have given way to specific software production to manage the database and their desire uses. Thus databases in information technology age assumes importance as follows:

- Databases in IT are a radical transformation for the traditional database concept.
- Databases serve as vital tool in administration and governance processes.
- Databases being the dynamic marketing approach in e-commerce.
- Databases are integrated effort of software programming
- Databases are financially sound products in the market
- Databases of sensitive areas and related privacy issues need protection under law
- Databases creation needs protection law for their effort and financial inputs.

Databases and legal protection

As discussed in the earlier section, databases in the age of information technology argues for protection on two basic promises.

(1) Protection of the creator or those who commission the creation of databases and

(2) Protection of the consumers on whom the databases is built on their privacy.

Here we shall look into the premise under the intellectual property regime. The second issue of privacy will be dealt in the module of Cyber crimes and privacy.

Under the traditional regime of Intellectual property regime, the rights of intellectual creation, inventions, discovery and business interest are protected under copyright, patents and trademarks. Databases as a content to be protected under patents often runs into rough weather as they are not inventions in the strict sense and the contents are nothing but information already available in the universe. It may have some element of novelty in its construction but nevertheless has no industrial utility. On the other hand dabases per se has no grounds to be protected as signs or trademarks. May be a software for databases with a particular name may get a registration for trademark but the database per se will not qualify for the rights of trademark. Where as the databases and its compilation if it involves sufficient skill, labour and originality about it may get protection under the copyright regime.

Yet to qualify for a copyright for database, a great degree of skill and expression is needed and a mere data and its content will not qualify for a copyright protection and the basis of the content are in the public domain and thus one can create a identical database with changes in the lists, categorization or by adding some additional information. Hence there is no clear legal construct to protect the databases in Infotech era under IPR and the protection in absence of clear laws.

DATABASE PROTECTION IN USA

United States a frontrunner in the information technology industry has faced the problems and several court cases have given some precedence on protection of databases. The protection in USA is sought after the routes of Copyright, Trade Secrets and Contract Law.

Under the Copyright regime, the principle of the protection to an author of a work he has created and which is original is used. The US Courts have used the doctrine of the sweat-of-the-brow, where a number of cases were decided to grant protection to databases. The databases protected were pronounced as works arising out of the creative input that has into the work and hence will come under copyrightable literary work. There was also strong opposition that such kind of approach will keep even simple data out of the reach for public and further research work.

In such context the case decision of Fiest Publications Inc v. Rural Telephone Company[201] assumed great importance on the arguments against the sweat-of-the-brow doctrine. In this case on the compilation of telephone directory and subsequent claim for copyright protection brought out a different view point on the automatic copyright protection of compilation of databases. The courts here held that the protection is available only for the work added by the author and to distinguish the previous materials which have gone into the compilation and could claim protection of the same as data input may not be counted as an act of 'originality'. It interpreted the constitutional position on copyright as one which has a creative input and mere sweat of the non creative variety not to get copyright protection. This has reversed the position of an easy proposition of copyright protection of compilations.

Another method of protection of database has been the route of the trade secrets. Here the protection is sought under the Uniform Trade Secrets Act, which considers the database as a compilation with an economic value and deserves protection under trade secrets. The Act Sec. 1(4) – 'Information, including a formula, compilation, program, device, method, technique or process that:

(a) derives independent economic value, actual or potential, not being generally known to or generally ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and

(b) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.'

However such protection will also demand the protection of trade secrets to undertake efforts of secrecy in employment conditions and other contracts related to business.

The contractual law route is not an IPR related route and yet resorted to strict contract norms between the database owner and the buyer on the

201 499 US 340, 111 SCt 1282, 113 L Ed 2d 358 (1991)

license agreement. Such license and violations are enforceable under the contract laws.

DATABASE PROTECTION IN EUROPE

The European Initiative on Databases has resulted in the European Commission directive, which defines database as a 'collection of independent works, data or other material, arranged in a systematic or methodic way and individually accessible by electronic or other means'.[202]

The salient features of the EU Directive on protection of Databases is as follows:

- Databases are collection of independent images of motion pictures and individual bits which make up the database of a computer programme.
- The Directive is a sui generis initiative, which is applicable in European Commission.
- The Directive does not include computer programmes used in creation of the databases, which are protected under a separate software directive of the commission.
- The Directive includes all forms – electronic and non-electronic databases and not mere data but all collection of works.
- The Directive defines the author of a database as one who has created it and member states have the freedom to form alternative rules in defining the authorship in their respective states.

The Directive prescribes the following rights of the author:

- The right to temporary/permanent reproduction in any form/ means of the database in whole or in part which includes translation, adaptation, arrangement or any alteration.
- Sale or distribution with the exhaustion of the right in the first sale and communication, display or performance in the public.

202 Article 1(2) EC Database Directive

- Production, distribution, communication, display to the public of any translation, adaptation, arrangement or other alteration of the database.
- The Directive permits the following with the express permission of the author of the database.
- Non-electronic databases can be reproduced for private purpose.
- Use for teaching or scientific research with due acknowledgement and to satisfy the justification of non-commercial purpose.
- Application of other exceptions of copyright law of the state.
- The Directive has provided for a sui generis extraction right where the author can show qualitatively or quantitatively substantial investment in obtaining, verification, or presentation of the contents to prevent extraction and/or reutilization of the whole or substantially whole or of a part evaluated qualitatively and/or quantitatively of the database.
- The Directive states that the protection of the database for 15 years from the first day of the year following the year in which the database was made completely available to the public.

DATABASES IN THE INDIAN CONTEXT

In the Indian context there is no specific statute dealing with databases like the European Directive. At the best the Copyright protection is only available for any creative compilation. This again could only be used if there is a new method of compilation technique and may not actually protect raw data as it may be interpreted locking in any originality and, and a content in the public domain. To an extent it can be protected in contract law which may through a form of shrink-wrap contract or other types of customized contract terms. Thus the situation is akin to the US situation.

ANNEXURE 1

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ANNEXURE 2

ANNEXURE TO MODULE – CASES AND MATERIALS

(See, http://www.austlii.edu.aulformsisearch1.html?&mask=&) (Condensed Version)

ROCKWELL GRAPHIC SYSTEMS, INCORPORATED, Plaintiff-Appellant, v. DEV INDUSTRIES, INCORPORATED; PRESS MACHINERY CORPORATION;

Case: Definition of secret.

UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT *925 F.2d 174*

Appeal from the United States District Court for the Northern District of Illinois, Eastern Division. No. 84 C 6746; Ann Claire Williams, Judge.

PROCEDURAL POSTURE: Appeal from the United States District Court for the Northern District of Illinois, which granted summary judgment for defendants and against plaintiff in plaintiff's action for misappropriation of trade secrets and a related claim under the Racketeer Influenced and Corrupt Organizations statutes, *18 U.S.C.S. § 1961* et seq.

OVERVIEW: Plaintiff, a manufacturer of newspaper printing presses and supplier of parts, sued defendant corporation, a competing manufacturer, and defendant president, a former employee of plaintiff, for misappropriation of trade secrets. The district court granted summary judgment for defendants based on a magistrate's conclusion that plaintiff had no trade secrets because it

had failed to take reasonable precautions to maintain secrecy. Pointing out that plaintiff had made some efforts to keep its piece part drawings secret, the court reversed and remanded. The court held that the mere fact that plaintiff gave piece part drawings to vendors who made parts for plaintiff did not forfeit trade secret protection. The court said that only in an extreme case could what was a reasonable precaution be determined on a motion for summary judgment, because the answer depended on a balancing of costs and benefits that would vary from case to case.

OUTCOME: The court reversed the district court's summary judgment and remanded, because plaintiff had taken some precautions to maintain the confidentiality of its piece part drawings.

POSNER, Circuit Judge

This is a suit for misappropriation of trade secrets. Rockwell Graphic Systems, a manufacturer of printing presses used by newspapers, and of parts for those presses, brought the suit against DEV Industries, a competing manufacturer, and against the president of DEV, who used to be employed by Rockwell. The case is in federal court by virtue of the RICO ("Racketeer Influenced and Corrupt Organizations") statute. *18 U.S.C. § § 1961 et seq*. The predicate acts required for liability under RICO are acts of misappropriation (and related misconduct, such as alleged breaches of fiduciary duty) committed by the individual defendant, Fleck, and by another former employee of Rockwell and present employee of DEV, Peloso. These acts are alleged to violate Illinois law, and in pendent counts Rockwell seeks to impose liability for them directly under that law as well as indirectly under RICO. The district judge granted summary judgment for the defendants upon the recommendation of a magistrate who concluded that Rockwell had no trade secrets because it had failed to take reasonable precautions to maintain secrecy. *(730 F. Supp. 171)*. Therefore there had been no misappropriation, which in turn was the foundation for the predicate acts; so the RICO count had to be dismissed. With the federal claim out of the case, the district judge relinquished jurisdiction over the pendent counts, resulting in a dismissal of the entire case. *730 F. Supp. 171 (1990)*.

When we said that Rockwell manufactures both printing presses and replacement parts for its presses — "wear parts" or "piece parts," they

are called — we were speaking approximately. Rockwell does not always manufacture the parts itself. Sometimes when an owner of one of Rockwell's presses needs a particular part, or when Rockwell anticipates demand for the part, it will subcontract the manufacture of it to an independent machine shop, called a "vendor" by the parties. When it does this it must give the vendor a "piece part drawing" indicating materials, dimensions, tolerances, and methods of manufacture. Without that information the vendor could not manufacture the part. Rockwell has not tried to patent the piece parts. It believes that the purchaser cannot, either by inspection or by "reverse engineering" (taking something apart in an effort to figure out how it was made), discover how to manufacture the part; to do that you need the piece part drawing, which contains much information concerning methods of manufacture, alloys, tolerances, etc. that cannot be gleaned from the part itself. So Rockwell tries — whether hard enough is the central issue in the case — to keep the piece part drawings secret, though not of course from the vendors; they could not manufacture the parts for Rockwell without the drawings. DEV points out that some of the parts are for presses that Rockwell no longer manufactures. But as long as the presses are in service — which can be a very long time — there is a demand for replacement parts.

Rockwell employed Fleck and Peloso in responsible positions that gave them access to piece part drawings. Fleck left Rockwell in 1975 and three years later joined DEV as its president. Peloso joined DEV the following year after being fired by Rockwell when a security guard caught him removing piece part drawings from Rockwell's plant. This suit was brought in 1984, and pretrial discovery by Rockwell turned up 600 piece part drawings in DEV's possession, of which 100 were Rockwell's. DEV claimed to have obtained them lawfully, either from customers of Rockwell or from Rockwell vendors, contrary to Rockwell's claim that either Fleck and Peloso stole them when they were employed by it or DEV obtained them in some other unlawful manner, perhaps from a vendor who violated his confidentiality agreement with Rockwell. Thus far in the litigation DEV has not been able to show which customers or vendors lawfully supplied it with Rockwell's piece part drawings.

The defendants persuaded the magistrate and the district judge that the piece part drawings weren't really trade secrets at all, because Rockwell

made only perfunctory efforts to keep them secret. Not only were there thousands of drawings in the hands of the vendors; there were thousands more in the hands of owners of Rockwell presses, the customers for piece parts. The drawings held by customers, however, are not relevant. They are not piece part drawings, but assembly drawings. (One piece part drawing in the record is labeled "assembly," but as it contains dimensions, tolerances, and other specifications it is really a piece part drawing, despite the label.) An assembly drawing shows how the parts of a printing press fit together for installation and also how to integrate the press with the printer's other equipment. Whenever Rockwell sells a printing press it gives the buyer assembly drawings as well. These are the equivalent of instructions for assembling a piece of furniture. Rockwell does not claim that they contain trade secrets. It admits having supplied a few piece part drawings to customers, but they were piece part drawings of obsolete parts that Rockwell has no interest in manufacturing and of a safety device that was not part of the press as originally delivered but that its customers were clamoring for; more to the point, none of these drawings is among those that Rockwell claims DEV misappropriated.

It is immaterial that Rockwell affixed the same legend enjoining the user to confidentiality to its assembly drawings as it did to its piece part drawings. Perhaps thinking of the doctrine of patent misuse (on which see *USM Corp. v. SPS Technologies, Inc., 694 F.2d 505, 510-12 (7th Cir. 1982),* and cases cited there), DEV suggests that if a firm claims trade secret protection for information that is not really secret, the firm forfeits trade secret protection of information that is secret. There is no such doctrine — even the patent misuse doctrine does not decree forfeiture of the patent as the sanction for misuse — and it would make no sense. This is not only because there are any number of innocent explanations for Rockwell's action in "overclaiming" trade secret protection (if that is what it was doing) — such as an excess of caution, uncertainty as to the scope of trade secret protection, concern that clerical personnel will not always be able to distinguish between assembly and piece part drawings at a glance, and the sheer economy of a uniform policy — but also because it would place the owner of trade secrets on the razor's edge. If he stamped "confidential" on every document in sight, he would run afoul of what we are calling

(without endorsing) the misuse doctrine. But if he did not stamp confidential on every document he would lay himself open to an accusation that he was sloppy about maintaining secrecy — and in fact DEV's main argument is that Rockwell *was* impermissibly sloppy in its efforts to keep the piece part drawings secret.

On this, the critical, issue, the record shows the following. (Because summary judgment was granted to DEV, we must construe the facts as favorably to Rockwell as is reasonable to do.) Rockwell keeps all its engineering drawings, including both piece part and assembly drawings, in a vault. Access not only to the vault, but also to the building in which it is located, is limited to authorized employees who display identification. These are mainly engineers, of whom Rockwell employs 200. They are required to sign agreements not to disseminate the drawings, or disclose their contents, other than as authorized by the company. An authorized employee who needs a drawing must sign it out from the vault and return it when he has finished with it. But he is permitted to make copies, which he is to destroy when he no longer needs them in his work. The only outsiders allowed to see piece part drawings are the vendors (who are given copies, not originals). They too are required to sign confidentiality agreements, [**9] and in addition each drawing is stamped with a legend stating that it contains proprietary material. Vendors, like Rockwell's own engineers, are allowed to make copies for internal working purposes, and although the confidentiality agreement that they sign requires the vendor to return the drawing when the order has been filled, Rockwell does not enforce this requirement. The rationale for not enforcing it is that the vendor will need the drawing if Rockwell reorders the part. Rockwell even permits unsuccessful bidders for a piece part contract to keep the drawings, on the theory that the high bidder this round may be the low bidder the next. But it does consider the ethical standards of a machine shop before making it a vendor, and so far as appears no shop has ever abused the confidence reposed in it.

Under the first approach, at least if narrowly interpreted so that it does not merge with the second, the plaintiff must prove that the defendant obtained the plaintiff's trade secret by a wrongful act, illustrated here by the alleged acts of Fleck and Peloso in removing piece part drawings from

Rockwell's premises without authorization, in violation of their employment contracts and confidentiality agreements, and using them in competition with Rockwell. Rockwell is unable to prove directly that the 100 piece part drawings it got from DEV in discovery were stolen by Fleck and Peloso or obtained by other improper means. But if it can show that the probability that DEV could have obtained them otherwise — that is, without engaging in wrongdoing — is slight, then it will have taken a giant step toward proving what it must prove in order to recover under the first theory of trade secret protection. The greater the precautions that Rockwell took to maintain the secrecy of the piece part drawings, the lower the probability that DEV obtained them properly and the higher the probability that it obtained them through a wrongful act; the owner had taken pains to prevent them from being obtained otherwise.

Under the second theory of trade secret protection, the owner's precautions still have evidentiary significance, but now primarily as evidence that the secret has real value. For the precise means by which the defendant acquired it is less important under the second theory, though not completely unimportant; remember that even the second theory allows the unmasking of a trade secret by *some* means, such as reverse engineering. If Rockwell expended only paltry resources on preventing its piece part drawings from falling into the hands of competitors such as DEV, why should the law, whose machinery is far from costless, bother to provide Rockwell with a remedy? The information contained in the drawings cannot have been worth much if Rockwell did not think it worthwhile to make serious efforts to keep the information secret.

The remedial significance of such efforts lies in the fact that if the plaintiff has allowed his trade secret to fall into the public domain, he would enjoy a windfall if permitted to recover damages merely because the defendant took the secret from him, rather than from the public domain as it could have done with impunity. It would be like punishing a person for stealing property that he believes is owned by another but that actually is abandoned property. If it were true, as apparently it is not, that Rockwell had given the piece part drawings at issue to customers, and it had done so without requiring the customers to hold them in confidence, DEV could have obtained the drawings from the customers without committing any

wrong. The harm to Rockwell would have been the same as if DEV had stolen the drawings from it, but it would have had no remedy, having parted with its rights to the trade secret. In the first case, a defendant is perfectly entitled to obtain the property by lawful conduct if he can, and he can if the property is in the hands of persons who themselves committed no wrong to get it. In the second case the defendant is perfectly entitled to obtain the property if the plaintiff has abandoned it by giving it away without restrictions.

It is easy to understand therefore why the law of trade secrets requires a plaintiff to show that he took reasonable precautions to keep the secret a secret. If analogies are needed, one that springs to mind is the duty of the holder of a trademark to take reasonable efforts to police infringements of his mark, failing which the mark is likely to be deemed abandoned, or to become generic or descriptive (and in either event be unprotectable). The trademark owner who fails to police his mark both shows that he doesn't really value it very much and creates a situation in which an infringer may have been unaware that he was using a proprietary mark because the mark had drifted into the public domain, much as DEV contends Rockwell's piece part drawings have done.

Obviously Rockwell took some precautions, both physical (the vault security, the security guards — one of whom apprehended Peloso *in flagrante delicto*) and contractual, to maintain the confidentiality of its piece part drawings. Obviously it could have taken more precautions. But at a cost, and the question is whether the additional benefit in security would have exceeded that cost. We do not suggest that the question can be answered with the same precision with which it can be posed, but neither can we say that no reasonable jury could find that Rockwell had done enough and could then go on to infer misappropriation from a combination of the precautions Rockwell took and DEV's inability to establish the existence of a lawful source of the Rockwell piece part drawings in its possession.

This is an important case because trade secret protection is an important part of intellectual property, a form of property that is of growing importance to the competitiveness of American industry. Patent protection is at once costly and temporary, and therefore cannot be regarded as a perfect

substitute. If trade secrets are protected only if their owners take extravagant, productivity-impairing measures to maintain their secrecy, the incentive to invest resources in discovering more efficient methods of production will be reduced, and with it the amount of invention. And given the importance of the case we must record our concern at the brevity of the district court's opinion granting summary judgment (one and a half printed pages). Brevity is the soul of wit, and all that, and the district judge did have the benefit of a magistrate's opinion; but it is vital that commercial litigation not appear to be treated as a stepchild in the federal courts. The future of the nation depends in no [**21] small part on the efficiency of industry, and the efficiency of industry depends in no small part on the protection of intellectual property.

The judgment is reversed and the case remanded to the district court for further proceedings consistent with this opinion (including reinstatement of the pendent counts).

REVERSED AND REMANDED.

E.I. duPONT deNEMOURS & COMPANY, Inc., Plaintiff-Appellee, v.

Rolfe CHRISTOPHER et al.,

UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

431 F.2d 1012

Rehearing Denied and Rehearing En Banc Denied August 25, 1970.

Defendant photographers moved for interlocutory appeal under *28 U.S.C.A. § 1292*(b) of a trial court's judgment, which held plaintiff company had stated a claim upon which relief could be granted in an action for misappropriation of trade secrets.

OVERVIEW: Defendant photographers were hired by an unknown third party to take aerial photographs of new construction at plaintiff company's plant. Plaintiff subsequently filed suit against defendants, and alleged defendants had wrongfully obtained photographs revealing

plaintiff's trade secrets, which they then sold to the undisclosed third party. Defendants moved to dismiss for lack of jurisdiction and failure to state a claim upon which relief could be granted. Plaintiff filed a motion to compel an answer, and defendants moved for summary judgment. The court denied defendants' motions, but granted plaintiff's motion to compel. On defendants' motion for interlocutory appeal under *28 U.S.C.S. § 1292*(b) the appellate court held that plaintiff had a valid cause of action to prohibit defendants from improperly discovering its trade secret. The court further concluded that aerial photography, from whatever altitude, was an improper method of discovering the trade secrets exposed during construction of plaintiff's plant. Accordingly, the decision of the trial court was affirmed, and the case remanded for proceedings on the merits.

OUTCOME: The decision of the trial court that plaintiff company had stated a claim for the misappropriation of its trade secrets was affirmed, where aerial photography was considered an improper method of discovering trade secrets, and the case was remanded for proceedings on the merits.

GOLDBERG, Circuit Judge:

This is a case of industrial espionage in which an airplane is the cloak and a camera the dagger. The defendants-appellants, Rolfe and Gary Christopher, are photographers in Beaumont, Texas. The Christophers were hired by an unknown third party to take aerial photographs of new construction at the Beaumont plant of E. I. duPont deNemours & Company, Inc. Sixteen photographs of the DuPont facility were taken from the air on March 19, 1969, and these photographs were later developed and delivered to the third party.

DuPont employees apparently noticed the airplane on March 19 and immediately began an investigation to determine why the craft was circling over the plant. By that afternoon the investigation had disclosed that the craft was involved in a photographic expedition and that the Christophers were the photographers. DuPont contacted the Christophers that same afternoon and asked them to reveal the name of the person or corporation requesting the photographs. The Christophers refused to disclose this information, giving as their reason the client's desire to remain anonymous.

Having reached a dead end in the investigation, DuPont subsequently filed suit against the Christophers, alleging that the Christophers had wrongfully obtained photographs revealing DuPont's trade secrets which they then sold to the undisclosed third party. DuPont contended that it had developed a highly secret but unpatented process for producing methanol, a process which gave DuPont a competitive advantage over other producers. This process, DuPont alleged, was a trade secret developed after much expensive and time-consuming research, and a secret which the company had taken special precautions to safeguard. The area photographed by the Christophers was the plant designed to produce methanol by this secret process, and because the plant was still under construction parts of the process were exposed to view from directly above the construction area. Photographs of that area, DuPont alleged, would enable a skilled person to deduce the secret process for making methanol. DuPont thus contended that the Christophers had wrongfully appropriated DuPont trade secrets by taking the photographs and delivering them to the undisclosed third party. In its suit DuPont asked for damages to cover the loss it had already sustained as a result of the wrongful disclosure of the trade secret and sought temporary and permanent injunctions prohibiting any further circulation of the photographs already taken and prohibiting any additional photographing of the methanol plant.

The Christophers answered with motions to dismiss for lack of jurisdiction and failure to state a claim upon which relief could be granted. Depositions were taken during which the Christophers again refused to disclose the name of the person to whom they had delivered the photographs. DuPont then filed a motion to compel an answer to this question and all related questions.

On June 5, 1969, the trial court held a hearing on all pending motions and an additional motion by the Christophers for summary judgment. The court denied the Christophers' motions to dismiss for want of jurisdiction and failure to state a claim and also denied their motion for summary judgment. The court granted DuPont's motion to compel the Christophers to divulge the name of their client. Having made these rulings, the court then granted the Christophers' motion for an interlocutory appeal under *28 U.S.C.A. § 1292*(b) to allow the Christophers to obtain immediate

appellate review of the court's finding that DuPont had stated a claim upon which relief could be granted. Agreeing with the trial court's determination that DuPont had stated a valid claim, we affirm the decision of that court.

The only question involved in this interlocutory appeal is whether DuPont has asserted a claim upon which relief can be granted. The Christophers argued both at trial and before this court that they committed no "actionable wrong" in photographing the DuPont facility and passing these photographs on to their client because they conducted all of their activities in public airspace, violated no government aviation standard, did not breach any confidential relation, and did not engage in any fraudulent or illegal conduct. In short, the Christophers argue that for an appropriation of trade secrets to be wrongful there must be a trespass, other illegal conduct, or breach of a confidential relationship. We disagree.

It is true, as the Christophers assert, that the previous trade secret cases have contained one or more of these elements. However, we do not think that the Texas courts would limit the trade secret protection exclusively to these elements. On the contrary, in *Hyde Corporation v. Huffines, 1958, 158 Tex. 566, 314 S.W.2d 763,* the Texas Supreme Court specifically adopted the rule found in the Restatement of Torts which provides:

"One who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if

(a) he discovered the secret by improper means, or

(b) his disclosure or use constitutes a breach of confidence reposed in him by the other in disclosing the secret to him * * *."

Restatement of Torts § 757 (1939).

Thus, although the previous cases have dealt with a breach of a confidential relationship, a trespass, or other illegal conduct, the rule is much broader than the cases heretofore encountered. Not limiting itself to specific wrongs, Texas adopted subsection (a) of the Restatement which recognizes a cause of action for the discovery of a trade secret by any "improper" means.

We think, therefore, that the rule is clear. One may use his competitor's secret process if he discovers the process by reverse engineering applied to the finished product; one may use a competitor's process if he discovers it by his own independent research; but one may not avoid these labors by taking the process from the discoverer without his permission at a time when he is taking reasonable precautions to maintain its secrecy. To obtain knowledge of a process without spending the time and money to discover it independently is *improper* unless the holder voluntarily discloses it or fails to take reasonable precautions to ensure its secrecy.

In the instant case the Christophers deliberately flew over the DuPont plant to get pictures of a process which DuPont had attempted to keep secret. The Christophers delivered their pictures to a third party who was certainly aware of the means by which they had been acquired and who may be planning to use the information contained therein to manufacture methanol by the DuPont process. The third party has a right to use this process only if he obtains this knowledge through his own research efforts, but thus far all information indicates that the third party has gained this knowledge solely by taking it from DuPont at a time when DuPont was making reasonable efforts to preserve its secrecy. In such a situation DuPont has a valid cause of action to prohibit the Christophers from improperly discovering its trade secret and to prohibit the undisclosed third party from using the improperly obtained information.

We realize that industrial espionage of the sort here perpetrated has become a popular sport in some segments of our industrial community. However, our devotion to free wheeling industrial competition must not force us into accepting the law of the jungle as the standard of morality expected in our commercial relations. Our tolerance of the espionage game must cease when the protections required to prevent another's spying cost so much that the spirit of inventiveness is dampened. Commercial privacy must be protected from espionage which could not have been reasonably anticipated or prevented. We do not mean to imply, however, that everything not in plain view is within the protected vale, nor that all information obtained through every extra optical extension is forbidden. Indeed, for our industrial competition to remain healthy there must be breathing room for observing a competing industrialist. A competitor can

and must shop his competition for pricing and examine his products for quality, components, and methods of manufacture. Perhaps ordinary fences and roofs must be built to shut out incursive eyes, but we need not require the discoverer of a trade secret to guard against the unanticipated, the undetectable, or the unpreventable methods of espionage now available.

In the instant case DuPont was in the midst of constructing a plant. Although after construction the finished plant would have protected much of the process from view, during the period of construction the trade secret was exposed to view from the air. To require DuPont to put a roof over the unfinished plant to guard its secret would impose an enormous expense to prevent nothing more than a school boy's trick. We introduce here no new or radical ethic since our ethos has never given moral sanction to piracy. The market place must not deviate far from our mores. We should not require a person or corporation to take unreasonable precautions to prevent another from doing that which he ought not do in the first place. Reasonable precautions against predatory eyes we may require, but an impenetrable fortress is an unreasonable requirement, and we are not disposed to burden industrial inventors with such a duty in order to protect the fruits of their efforts. "Improper" will always be a word of many nuances, determined by time, place, and circumstances. We therefore need not proclaim a catalogue of commercial improprieties. Clearly, however, one of its commandments does say "thou shall not appropriate a trade secret through deviousness under circumstances in which countervailing defenses are not reasonably available."

Having concluded that aerial photography, from whatever altitude, is an improper method of discovering the trade secrets exposed during construction of the DuPont plant, we need not worry about whether the flight pattern chosen by the Christophers violated any federal aviation regulations. Regardless of whether the flight was legal or illegal in that sense, the espionage was an improper means of discovering DuPont's trade secret.

The decision of the trial court is affirmed and the case remanded to that court for proceedings on the merits.

ON PETITION FOR REHEARING AND PETITION FOR REHEARING EN BANC.