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An Analysis of Techno-Legal Framework in Intellectual Property Rights

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ABSTRACT

In today's globally aggressive surroundings, Intellectual property has located itself on a pedestal within the context of financial boom and is becoming more and more vital. Intellectual property (IP) is the fuel that powers the engine of prosperity, fostering invention and innovation. Indian laws to be had wherein one could take help in case of infringement of his or her IP Rights. The intellectual belongings regulation permeates all appreciate of development opportunities occasioned with the aid of the commercialization of facts generation. Indian legal guidelines offer for each civil and criminal remedies for IP enforcement. The government has taken powerful steps in any respect degrees to put in force IP rights. The legal, administrative and enforcement machinery has been reinforced. The customs and police enforcement machinery has been streamlined and the measures for curbing piracy and counterfeiting associated activities have become steadily more effective. India has a completely huge copyright-based totally innovative enterprise. The Copyright Act is comprehensive and with the current amendments, the rights of creators had been strengthened This paper highlighted technological provision regarding intellectual property (IP) rights.

Keywords: IPR, Technology, legal framework.

I. INTRODUCTION

India's range of intellectual creations is as various as its human beings, from patents to plant varieties, trademarks to standard expertise, copyright to designs and geographical indications. It has sturdy intellectual property (IP) legal guidelines and a strong IP jurisprudence. The legal framework does mirror

the underlying policy orientation and countrywide priorities, that have advanced over the years, contemplating improvement needs and worldwide commitments².

In India there are following kinds of statutes which are governing IP :-

1. Patents Act, 1970 (as amended in 2005).

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² Government of India, Report: *National IPR Policy*, (Department of Industrial Policy & Promotion and 2014), http://dipp.nic.in/English/Schemes/Intellectual_Property_Rights/IPR_Policy_.pdf

2. Copyright Act, 1957 (as amended in 2012).
3. Trade Marks Act, 1999.
4. Designs Act, 2000.
5. Geographical Indications of Goods (Registration and Protection) Act, 1999.
6. Protection of Plant Varieties and Farmers' Rights Act, 2001.
7. Semiconductor Integrated Circuits Layout-Design Act, 2000.

The above said Intellectual property rights are valuable for firms to help and guard their funding in innovation. If the new era has productivity-improving consequences whilst used in monetary pastime, these too may be retarded by the safety of the original innovation. The nodal department for trademarks, patents, designs and geographical indication is the DIPP which features beneath the Ministry of Commerce and Industry; copyright is run with the aid of the Ministry of Human Resource Development; semiconductor Integrated Circuits Layout-designs by Department of Information Technology; plant varieties and farmers' rights by the Ministry of Agriculture.

II. INTELLECTUAL PROPERTY RIGHTS

Intellectual Property Rights (IPRs) are distinct rights over such intellectual property granted to creators / holders which protect their rights from misusing by third parties without their consent³. There are two supreme legal tools via which

proprietors may additionally commercialize their intellectual property (aside from in-house exploitation): To promote or assign the IP; and to license the IP rights. whilst rights are assigned (aside from in part), the recipient or assignee acquires ownership of all rights which formerly belonged to the assignor, even though the assignor may also take a license back from the assignee. This will be executed among impartial parties, however it could also be done on an inner level and shape part of employment agreements and agreements with experts or contractors.

Assignments of intellectual property rights can be achieved either through income or through transfers, i.e. without or with direct economic compensation. Licenses allow patent proprietors to proportion innovations or other intellectual property in a controlled manner and to get hold of revenue e.g. royalties or different welfare e.g. get admission to another company's knowledge. A patent for instance is licensed while the owner of the patent (the license or) offers permission to one or more entities (the licensee(s)) to apply the patented invention for at the same time agreed purposes in a collectively agreed way. In such instances, a licensing settlement is generally signed between the two events, specifying the phrases and scope of the agreement. In a few international locations, intellectual property legal guidelines require licensing agreements to be registered with the national registry⁴. Digital era plays an increasingly critical role in cutting-edge society and software program-associated

³ Cluster level IP Awareness program, IPINDIA, India, available at http://www.ipindia.nic.in/iponew/IP_Awareness_Program_17July2013.pdf

⁴Awareness Program for Industry & Academia, http://ipindia.gov.in/ipr/IP_Awareness/ConferenceReport_Guwahati_

inventions are patent-able situation count if they have a technical person or contain technical teaching, i.e., an guideline addressed to someone skilled within the artwork on a way to solve a selected technical problem using precise technical means⁵. The development in the statistics region has given upward push to new type of threats and risk to the rights of human beings. The maximum not unusual kinds of violation that occurs within the international in the global for information technology are: -

- Unapproved reproduction.
- Software piracy.
- Theft of data and information.

To avoid the existence of such illegal activities, intellectual property rights perform a important role. Intellectual property rights provides incentive the inventor of the work. This will be inside the shape of copy rights, trade mark, and patent. Amongst these patents is essential to advance technological development. Copy right is essential for computer software and internet⁶.

III. TECHNOLOGICAL AND LEGAL DEVELOPMENT IN INTELLECTUAL PROPERTY

Within the rapid growth of technology has opened new route for human both in term of opportunity and infringement of rights. There are a few measures underneath technological and legal development in intellectual property.

1. Computer programme.
2. Biotechnology.
3. Reprography.
4. Communication Technology.
5. Block chain Technology.

1. Computer Programs:

The implication of this categorization of computer programs as literary works (writings) depends on relevant provisions of the respective laws and on the practice adopted in subsequent court decisions. In appropriate manner, the right of duplicate, the right of distribution of copies and the right of communication to the public have to be applicable, country wide laws might also permit replica of literary and artistic works in sure unique cases, provided that such duplicate does no longer war with a normal exploitation of the work and does now not unreasonably prejudice the valid pursuits of the author⁷. The owner of a computer programme ("CP") has the absolute right to do or authorize third parties to do the such works likes replica of the CP, issuing copies to public, carry out / talk it to public, to make translation or adoption of the work, to sell or give commercial rental or offer for sale . But, the commercial rental provision does not apply if the CP isn't always an crucial part of the rental.

⁵ *Intellectual Property Handbook: Policy, Law and Use*, WIPO <http://www.wipo.int/about-ip/en/iprm/pdf/ch7.pdf>

⁶ *Intellectual property in information technology*, <http://www.iplawsindia.com/ip-in-information-technology>

⁷ *supra* 5 at, 438.

Any violation of these specific rights amounts to an infringement⁸.

The Indian Copyright Act bring that any person who purposely makes use on a computer of an infringing copy of computer program will be punishable for a minimal duration of six months and a most of three years in prison⁹.

- **Software Piracy:** With the occurrence of internet and the growing use of internet, the software piracy has grown rapidly in latest years. Through internet program are uploaded to bulletin board systems or commercial on-line services which, in turn, may be downloaded or sent through email to individuals that won't hold a license to use these¹⁰. In 2016 the nation of Telangana installation India's first intellectual property crime unite, to fight the risk of internet piracy. In 2017, Maharashtra accompanied suit by setup the virtual crime unit (MCDCU) and has taken down many sites that convey infringing contents. The MCDCU is the first public personal partnerships unite for the regulation enforcement organization in all of India. As of 2019, they've blocked over 250 websites that convey predominately infringing content material. In 2018 Mizoram have become the third state to announce the setting up of a virtual crime unite to fight virtual fraud and copy right theft¹¹.

- **Digital Publishing & Piracy:** Digital piracy is **the process of remaking, using, or distributing information products**, in digital formats and/or using digital technologies, without the consent of their legal owners. Digital publishing is a process where activities relating to publication such as submission of manuscript, formatting, editing, printing and even distribution are carried out with the help of computers and telecommunication technologies¹².

2. Biotechnology:

It consist of any method that makes use of living organisms or part of organism to make or changed product, to improve plant or animals or to devolve bacteria for specify uses¹³. It consists of the area of medicine sciences, genetics molecular biology, Biochemistry, immunology, stem cell related studies embryology and cell biology, bio-remediation and bio-degradation. The latest development of organic techniques is recombinant DNA, cell fusion and monoclonal anti body generation which as raised fundamental social and moral questions and created troubles in intellectual property rights¹⁴. There are some huge sections of the patent act 1970 which plays a vital position inside the patenting of the innovations within the field of Biotechnology. According to 3(i) of the Indian

⁸Nishith Desai, *Intellectual Property Law in India*, pp.14 http://www.nishithdesai.com/filleadm in/user Uphold/pdfs/Research%20Papers/Intellectual_Property_Law_in_India.pdf

⁹ The copy Right Act, 1957(Act14 of 1957).

¹⁰ *Study of copyright piracy in India*, <http://copyright.gov.in/documents/study%20on%20copyright%20piracy%20in%20india.pdf>

¹¹ *India-IPR*, India, available at <http://www.export.go>

v/article?id=India-Protecting-Intellectual_property

¹² supra 10

¹³ *Biotechnologies*, India, available at, <https://en.m.wikipedia.org/wiki/Biotechnology>

¹⁴ *Protection of Biotechnology*, India, http://www.mondaq.com/india/x/506468/patent_und er_Indian_laws/Enforcement+of+Foregin+Decreases+And+Awards+In+

patent act 1970 are any process for the medicinal, surgical, curative, prophylactic (eliognostic therapeutic) or other remedy of people or any manner for a similar treatments of animal to render them free of sickness or growth their monetary fee that of their merchandise shall not be considered as invention and for this reason isn't patent-able¹⁵.

3. Reprography:

Graphics can be reproduction via mechanical and Electrical manner like photography, xerography etc. Reprography is commonly used in archives and catalogs as well as in the engineering, architectural, and construction Industries¹⁶. Reprography may have reciprocation in protecting copyright works and thus conflict the circulation of knowledge. The reproduction, photocopying downloading optical scanning are the new challenges in the intellectual property right¹⁷. Under section 13 of the copyrights act 1957, copyright protection is conferred on literary works, dramatic work, musical works, artistic works, cinematography films and sand recording. For example, computer programs and books are protected under the copyright act as literary works. Under the section of 14 of the act, Copyright refers to a bundle of exclusive rights vested in the owner of copyright¹⁸. Under section 33 of the copyright Act ,1957 a organization was established named as Indian Reprographic

Rights in the year 2000. It performs the rights of authors and publishers' literacy works and has worldwide affiliations with international organization. The Indian Reprographic Rights organization (IRRO) is exclusively allowed to commence the copyright business of "reprographic rights in the field of Literacy works" as per Ministry of Human Resource Development, Government of India. It is the one and only licensing authority to issue licenses to works of copyrighted works of its members. It also collect royalties on the behalf of rights owners and distribute them. The organization also provide license to content users on behalf of the creators¹⁹.

4. Communication Technologies:

It is also known as information technology; it refers to all gadget and program which may be used to process and transmit the information. Experts in the communication technology like hardware and software system are specialize in the development, set up and service area. There are basically four kinds of IPRs applicable to software program; patents, copyrights, trade secrets and Trademark. In these four kinds, trademarks don't protect technology, however the names or logos used to differentiate a product in the marketplace²⁰. The most sophisticated communication methods via satellite and cable were important development. Intellectual

¹⁵ The Patent act, 1970(39of 1970)

¹⁶ *Reprography*, India, available at <https://en.m.wikipedia.org/wiki>

¹⁷*Reprography regulation mechanism*, India, available at <http://www.legalservicesindia.com/article/930/Reprography-Regulatory-Mechanism.html>

¹⁸ *copyright law in India*, India, <http://www.Legal-serviceindia.com/article/195-copyright-Law-in-India.htm>

¹⁹ *What is IRRO and how it works*, India, <https://www.irro.org.in/what-is-irro-ad-how-does-it-work/>

²⁰ Intellectual property Rights in software-what they are and how to protect them, India <https://freibrun.com/intellectual-property-rights-software-protect/>

property in ICT approach a agency or individual owns the rights to some type of technology, for example a new method of creating silicon chips. IP is included by having a patent that's a felony instrument maintaining they have ownership over the concept/technology²¹.

5. Block chain Technology:

A block chain, is linked with cryptography. In block chain, each block contains a cryptography hash of the previous block, a timestamp, and transaction data. Block chain versions includes financial transactions based on block chain technology. It is used as digital currency and for payments, for example Bitcoin. It is the new concepts like smart contracts, small computer programs that “live” in the block chain²². Possible impact on Block chain in IP include as given below²³:-

- Authentication of Innovation and birth place enrollment and granting of IP rights.
- Control and tracking the circulation of unregistered IP.
- Digital management of Rights.
- Regulations of IP Licenses agreements.

Transfer of funds to IP owners in real time.

Aside from the above point-out factor the impact of block chain on intellectual property is such that it may also be used for the purpose of authentication as well as provenance in detecting

or recovering the stolen fund back, fake or parallel imported goods.

IV. LEGISLATIVE FRAMEWORK FOR SECURING INTELLECTUAL PROPERTY RIGHT

1. Patent Act:

India Patent Act was introduced in the year 1856 which remained in force for over 50 years, which was thereafter modified and amended and become referred to as "The Indian Patents and Designs Act, 1911". In the year 1970 a complete bill on patent rights become enacted and called "The Patents Act, 1970"²⁴. As per patent act 1970, “Invention” means a brand-new product or process involving an inventive step and capable of industrial applications. And, New invention means any invention or generation which has no longer been expected by booklet in any report or used inside the country elsewhere in the world earlier than the date of filing of patent application²⁵. Every body who has internet facility can be able to read/download the whole text of published patent documents through free of rate databases or commercial data bases. These databases is not restricted across country wide borders, so users globally can easily access patent files through Interne²⁶. An invention is the solution to a technical problem’s and it must be protected via patents. The patent (modification) act 2005 changes the previous patent system of India where in patent became prolonged to all

²¹ https://www.teach-ict.com/glossary/L/intellectual_property.htm

²² Blockchain, at <https://en.m.wikipedia.org/wiki/Blockchain>

²³ Block chain impact on intellectual property is such that it has the ability to safeguard crypto currencies

India, <https://iptse.com/understanding-the-significance-of-blockchain-technology-in-the-field-of-ipr/>

²⁴ The Patent act, 1970(39of 1970)

²⁵ Supra 15

²⁶ <https://www.icsi.edu/docs/webmodules/Publications/9.4%20Intellectual%20Property%20Rights.pdf>

subjects of technology which includes meals, drugs, chemical and micro-organism and it also introduces under section 3(d) pharmaceutical products patent first time in India²⁷.

2. Copy right Act:

The Copyright Act, 1957 protects original literary, dramatic, musical and artistic works and cinematographic films and sound recordings from unauthorized uses. The vital amendments of Copyright Act in 2012 are extension of copyright safety inside the digital environment including consequences for circumvention of technological protection measures and rights control information, and liability of internet service provider and creation of statutory licenses for cover version and broadcasting; ensuring proper to receive royalties for authors, and track composers, exclusive financial and moral rights to performers, equal membership rights in copyright societies for authors and other right proprietors and exception of copyrights for physically disabled to approach any works²⁸.

3. Trademark:

The trade Marks Act was passed in the year 1958²⁹. Since then it had been amendment several times. Moreover, in view of development in trading and commercial practices, increasing globalization of trade and industry, the need to encourage investment flows and transfer of technology and the need to simplify and

harmonize trademark management systems, it was considered necessary to bring out a comprehensive legislation. The trademarks act 2010 amend the previous act and consider the new provision for safety of Indian trade marks in other international locations, in line with the Madrid protocol. In the Madrid protocol, the marks are protected in many jurisdictions by filling an application for intentional registration³⁰.

4. Designs Act, 2000:

The Designs Act of 1911 by the British government in India after that it is replaced in 2000. It considers to provide more effective protection to registered design and to promote design activity in order to promote design element in an article of production, it had become necessary to make the legal system of providing protection to industrial design more efficient³¹.

5. Semi Conductor Integrated Circuits Layout Design Act, 2000:

This act was introduced to provide for the protection of the semiconductor integrated circuit layout design³². The layout design means a layout of transistor, and other circuitry elements, and includes lead wires connecting such elements and expressed in any manner in a semiconductor integrated circuit³³. Under section 2(h) of the semiconductor integrated circuit layout design act, 2000 gives recognition to a

²⁷ The Patent (amendment) Act, 2005(15 of 2005)

²⁸ *Introduction copy right, India, available at* <http://copyright.gov.in/>

²⁹ *Trade Mark Brief background*, <http://www.ipindi.a.nic.in/trade-marks.htm>

³⁰ The Trade marks (amendment) Act, 2010 (40 of 2010).

³¹ Dr B.L.Wadehra, Law relating to Intellectual property, fourth edition, Universal law publishing co., Delhi, feb 2007.

³² The Semi Conductor Integrated Circuits Layout Design Act, 2000(37 of 2000).

³³ supra` 31 at 483

new form of intellectual property mainly the layout design use in semiconductor integrated circuit³⁴.

6. Geographical Indications of Goods (Registration and Protection) Act, 1999:

This Act is to provide for the registration and safety of geographical indications relating to goods like agriculture goods, natural goods, manufacture goods or any goods of handcraft or goods of industry including food stuff.

This act is adequately protecting the interest of producers of such goods for prevent unauthorized use or misusing. According to this act the owner of the geographical indication and the authorized user, has exclusive right to use of geographical indication in relating to goods to which the registration is obtained³⁵.

7. Protection of Plant Varieties and Farmers' Rights Act, 2001:

This Act is to be enforced for the protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants. it is necessary to acknowledge and protect the rights of the farmers in respect of their contribution made in conserving, improving and making plant genetic resources for the growth of new plant varieties; whereas for advance agricultural development in the country. It is also necessary to protect plant breeders' rights to stimulate investment for

research and development. Invention of new Terminator technology is the genetic modification of plants to make them produce sterile seed, It is used for protection of intellectual property rights³⁶. The terminator gene is a particular genetic arrangement added by the scientist into a seeds DNA that renders the seed and crop it produces sterile. The seed industry introduces the terminator process before selling the seeds by adding an inducer. Former's plant seeds grow plants and the harvest matures but the seeds are sterile. This technology is Patented by the United States Department of Agriculture (USDA) and Delta and pine Land Industry, now owned by Monsanto³⁷.

V. CONCLUSION

Technology is usually a two-edged sword and may be used for both the functions – proper or terrible. The technology and applications in IT region alternate very rapidly, so the provisions related to parameters that may alternate occasionally were amended via the government of India. This paper highlights technological and legal development of IPR (patent, copyright, Trademark, Semi-Conductor included Circuits layout design etc). The more dramatic effect of technology is however unfolding in the domain of procedure. I analysis that, there may be a willing to border necessary “techno legal framework” to stop the electronic offences under IPR. The legal responsibility of internet service

³⁴ Atul Gupta, “*Integrated circuit and IP rights in India*”, vol. 10, Journal of Intellectual Property Right, pp. 474, (2005)

³⁵ The Geographical Indications of Goods (Registration and Protection) Act, 1999(48 of 1999)

³⁶ Protection of Plant Varieties and Farmers' Rights

Act, 2001(53 of 2001)

³⁷ What is Terminator Gene Technology, Times of India, <http://m.timesofindia.com/home/sunday-times/what-is-terminator-gene-technology/articleshow/4598832.cms>

provider for copyright violation. The IPR need to be corrected time to time on the basic of technology so that our national litigation policy is strengthen for every challenge and trade competition. There should be effective enforcement of the IP legal guidelines so that the issues of piracy and counterfeits can be mitigated in throughout the country.
