
**IPRS for Innovation in Information Technology and Cumulative
Impact on Developing Countries**

Peerzada Shaista Saleem,

Research Scholar,

Shri Venkateshwara University,

Uttar Pradesh, India

Dr. Vipin Kumar,

Associate Professor, School of Law,

Shri Venkateshwara University,

Uttar Pradesh, India

ABSTARCT

This article tends to understand the role of intellectual property rights with reference to information technology which needs stringent laws and policies due to rising infringement in the contemporary scenario of the present legal system. It is now the time for the change in understanding the issues related to innovations via considering the effects on the intellectual property rights owners in the global world. Intellectual property is the human mind product borne out of the creativity which formulates the innovations. The Innovations are the source for the developments which enables the developing countries to rise in this fast moving space. We can thus call it as the information technology impact on the intellectual property rights domain in the context related specifically for industrial development of the nation's calling for the need of dissemination in the developing countries. This article will analyse the position of India as a developing country and the need for the dissemination of intellectual property rights in innovations required for the growth of IT sector. And suggest various advantages through which intellectual property rights can prove to give a cumulative impact to various developing countries.

Keywords:

Developing countries, Information technology laws, Intellectual Property Rights, innovation, industrial, technology.

1. INTRODUCTION

“What goes around, that comes around” Which is a universal law and not just words but it is still the gospels for the moderns ear. The growth of the information technology has brought into technological inventions which lie new age perils. The growth in IT industrial sector is one such peril where society is heavily reliant on computers and internet.

Nowadays there is a need for enforcement and protection of Intellectual Property Laws and safeguarding them for the society created virtual world which happens to create an overlapping effect on the e-commerce and e-business. This virtual world has played an integral role for functioning of today’s life style.

We as neitzen are used to connect to the virtual world through the mediums of computers and communicating devices. And hence while dealing with innovations we need to comply with the information technology laws and cyber ethics for globalization.

There is need which has created a rapid increase in the B2B approach for the development and advancement of the technology. Intellectual Property Rights plays a significant role in the commercialization and economic growth of the nation. Enforcement of Intellectual Property Rights in today’s economy is one of the core enabling conditions for creativity, innovation and development of the information technology Laws.

World Intellectual Property Organization (WIPO) has suggested about the laws to enforce intellectual property rights worldwide. And when we speak about the intellectual

property rights we refer to the way it is used, accessed and distributed in IT industrial sector as a medium for the growth of the nation.

The innovations have granted the right of monopoly to owners by virtue of this claim to disseminate intellectual property rights as its core nature. The innovations made by the private IT sector are involved as contractors; then as suppliers for national agencies; then for intergovernmental. This tradition followed explains the very need for the national legislation on intellectual property rights to bridge the gap between the international intellectual property laws and the international public law.

2. THE ROLE OF IPR AND IT LAWS

The IT sector needs to use laws, policies and educational training in the field of information technological innovations effectively. We need to understand, analyse and reduce the lacunas related to Information Technology Laws to improve quality of life by protecting life and property; reducing, detecting and solving crime; reducing fear of crime; and enhancing safety in cooperation with the community.

The innovations made in the IT sector depend upon the sound functioning of the laws and policies formulated worldwide which would enhance the development and deployment of new growth in information technology. At present, Legal system and framework are inadequate to address all the aspects of Information Technology (IT).

As and when new computing technologies walks into the life style, law has to learn the changes. A lot of grey areas exist in the legal system which is billion dollar questions to the software innovations, space innovations, telecommunication innovations, medical innovations and many more other forms of innovations which are interlinked with the information technology laws.

All the countries are working hard on these grey areas to address various problems. Presently, the law (statutory or otherwise) providing answers to these problems or dealing with the information Technology is termed as 'Computer Laws' or 'Information Technology Laws' or 'Cyber Laws'. In a cyber space, there are significant areas to be

investigated such as E-commerce, Protection of intellectual property, issues relating to morality, freedom of expression, and law relating to privacy, cyber jurisdiction and cybercrimes.¹

Under the Information Technology Act, 2000 there are many grey areas that require attention for the better development of developing nation's which are moving towards innovations in information technology. The issues concerning the cyber jurisdiction refers to a real world government's power and a normally existing Court's authority over Internet user and their activities in the IT sector. However, information Technology Act does not cover the important issues of the jurisdiction which is very important legal aspect in deciding the place of filling the cases for infringements related to the innovation made.

Another important aspect which related to the e-record which is digitally or electronically signed is the only evidence to prove the research or innovation. The concern is that the emails used are not digitally or electronically signed. Hence there is a need to understand if in circumstance of such the e-mail authenticity would be proved as an evidentiary value in the hands of the receiver.

Under the proviso of Section 81 of the Information Technology (Amendment) Act, 2008 related to the restriction on persons from exercising any right conferred under the Copy Right Act, 1957 or the Patent Act, 1970, but does not contain special provisions for the intellectual property rights in innovations related to the digital medium. It is an important issue specifically copyright issue of innovations in digital medium, trademark issues of innovations in digital medium and patent issues of innovations in digital medium which requires Information Technology Act, 2000 to take considerable actions.²

The concept of e-commerce is specifically dependent on domain name. The Information Technology Act, 2000 is silent on the aspects related to the domain name infringements,

¹ Dr. Mrs. Pratibha Rasal, "CYBER LAWS – A WAY AHEAD", International Conference on Cyber Law and Information Technology by Indian Law Institute, New Delhi, 2001", International Conference on Cyber Law and Information Technology by Indian Law Institute, New Delhi, 2001.

² Section 81 of Information Technology (Amendment) Act, 2008 the provisions of this Act shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force.

cybersquatting, typo squatting, spamming and security of information at various levels of innovations being made in IT sector.

The globalization which has brought into international trade and taxation policies act as paramount importance for the innovation made. Thus, in due course the issues related to the taxation policy at international level during the international contracts signed on-line have to be addressed.

Under Section 33 of the Information Technology Act, 2000, when licences issued for the innovations made by the certifying authority is suspended or revoked, then he (innovator) must immediately surrender his licence to controller. And if it fails to surrender his licence to the controller there are provisions under the Act for punishments.

Therefore, for the proper implementation of this Act, for the innovations made in information technology there is a need for dissemination of intellectual property rights laws through the judiciary and the police officials.³

3. NEED FOR FORMULATION OF LAWS AND POLICIES

For Intellectual Property Rights and the need for the law and policy formulation in information technology Laws there are objectives that need to be addressed. They are a need to reduce the crimes and disorders; E-commerce difficulties; solve more cases; improve the public's trust of law enforcement; reduce cost on litigations; improve law enforcement competencies to respond on incidents and events more effectively.

The specific conventional necessities required to be addressed for formulation of the laws and policies, are of understanding the operational objectives. Secondly, to understand the real world problems those occur during the crisis and the need to meet the contemporary issues of innovations.

Even though there is tremendous growth in the intellectual property rights there is dependence on the Internet and Information and Communication Technologies (ICT)

³ Dr. JOYTI RATTAN, CYBER LAWS & INFORMTION TECHNOLOGY (BHARAT LAW HOUSE PUBLISHING 2014).

which has increased the difficulties in the detection and protection for any infringements in the virtual space. The data created and stored online is a medium for the infringement which can be accessed, copied and transferred and create an ambiguity in the cyber space.

The use of the Intellectual Property Rights in the cyber space are related to the access of data in relation to the unauthorized or unlicensed use of Trademarks, Trade names, service marks, images, music, or any literary matter used from computers or communication devices. The information technology has also created different infringements which all together make a different category of matrices, including Hyper Linking, Deep Hyper Linking, Framing, Meta tags, Digital Copyrights violations and spamming and similar other concepts.

Thus the violations in the innovations made through information technologies have become one of the crucial issues of the intellectual property rights. For which there are international treaties which govern for the protection of the intellectual property rights and help to provide protection through Trade Related Aspects of Intellectual Property Rights (TRIPS)⁴, Berne Convention, Hague Agreement, Madrid Agreement, Patent Co-operation Treaty and the WIPO Copyright Treaty (WCT)⁵.

The policy measures are required to bring in innovations related to the information technology parse can range from the strategies of individual projects to the standards of international law:

First, there are general policies and strategies for the management of intellectual property at the institutional or project level which are particularly dealing with the innovations and in such cases there is need to make the practical choices of whether or not to file for a patent, and, if so, where; and how to ensure the ensuring rights. Second, the national innovations policy settings, including integrated incentive initiatives, and policies for the management of publicly funded research. Third, the National legislative settings

⁴ Hereinafter, referred to as "TRIPS".

⁵ Hereinafter, referred to as "WCT"

include intellectual property laws and their interaction with other aspects of the regulatory system and the specific international initiatives, cooperation including the innovations which are beyond the scope of research⁶.

There are many policies which prioritise India for the development on global trade from the time of independence and have been duly scrutinised. The various important issues prioritised and policies that India has adopted have brought the cumulative impact of the economy of the country. India has been a model for other countries like South Africa and Brazil.⁷

The developing countries have the similar issues which are of the economic leadership status, the structural socioeconomic convoluted system and the governmental interest is to bring equilibrium in the economic issues with social justice.

There are various issues pertaining to the innovations in information technologies for today's economies to be discounted, the wisdom of prioritizing innovation issues to the imminent national social and economic conditions remain questionable.

The intellectual property right laws which are made for the developed and the least developed countries need to be understood. The innovations in IT sector need to cumulate an impact on the nation's rising in technological innovations. India in 1994 joined the WTO; the nation's patent policy⁸ would heavily rely on the Ayyangar Committee recommendations⁹. The Report recommends that the innovation in the patent system is the "most desirable method of encouraging investors and rewarding them."¹⁰ The Ayyangar Report theorized that local realities in underdeveloped nations cause patent regimes to operate differently than in developed nations.¹¹ Hence, the

⁶WTO and WIPO book on Promoting Access to Medical Technologies and Innovation (2012)

⁷Srividhya Ragavan, PATENT AND TRADE DISPARITIES IN DEVELOPING COUNTRIES (OXFORD UNIVERSITY PRESS 2012) 14.

⁸The Ayyangar Report, as modified by the Report of the Joint Committee of Parliament in 1966, forms the backbone of the Indian Patent System.

⁹N. RAJAGOPALA AYYANGAR, REPORT ON THE REVISION OF THE PATENT LAW (1959) [hereinafter "AYYANGAR REPORT"].¹⁰*Id.* 5.

¹¹"For developing countries, however, the economic calculus is different." See Arvind Subramanian, *Medicines, Patents, and TRIPS: Has the Intellectual Property Past Opened a Pandora's Box for the Pharmaceuticals Industry?* Fin. & Dev., <http://www.imf.org/external/pubs/ft/fandd/2004/03/pdf/subraman.pdf> accessed 24 April 2017.

Report recommended understanding the patent policies required for the growth of the industrialised nations and differing from such policies.¹²

Considering the Report recommendations there is need for the developing countries to evolve from the traditional methods of innovations in information technology. New policies are to be developed to promote the innovators to deal with research with intellectual property as a means for sustainable development.

Elite and special rights can be given to increase research in the process of manufacturing, developing new process which is an inducement to the innovation of new processes. Such innovation will be conducive to the economic growth of the information technologies. Industrialisation has affected developing nations as the foreign patent owners use their inventions in-house / indigenously. This deprives the developing countries of their know-how when the patent is open to the public domain.¹³

The innovations related to product patents can stimulate research in different ways for producing a product. Thus the impact on the developing countries for their progress would be depended on process innovation, ultimately bringing in fair participation and competition.

In India the Patent Act, 1970 made laws for inventions which are qualified for patents need to be new and useful. Thus, the inventions which were of primary use or contravenes law or injurious to public health were not patentable. This law formulated an exception to the subject matter of TRIPS which includes and protects software's. In India this exception has excluded the scope for software's for product patents protection.¹⁴

We can understand the issues by relating to the present scenario and cases addressed by the pioneers of the Information Technology; Senior Vice President Mr Vinton G. Cerf is known as the Father of the internet is of the opinion that the policy problems are the most

¹²AYANGAR REPORT, supra note 5.

¹³ Srividhya Ragavan, PATENT AND TRADE DISPARITIES IN DEVELOPING COUNTRIES (OXFORD UNIVERSITY PRESS 2012), 42-43.

¹⁴Patents Act, 1970.

difficult issues which cannot be solved easily and that the policies have to be understood in depth to get to the root cause.

Taiwan is ranked the third largest in IT products manufacturing country world-wide with US\$15 billion production value in 1995. The promotion of IPR awareness and computer literacy has brought increased prosperity to the computer-related market¹⁵.

Mr Richard Parsons, CEO of Times Warner had given his views on the impact of Napster case¹⁶ which was the landmark Intellectual Property Right Case. Napster had to shut down its entire network to comply with the injunction. The Napster's Case is the most famous peer-to-peer networking which has made change in laws and evolved significantly in matters related to nature of the work in the way of Copyright Infringements.

The above case and scenario highlights on the importance of protecting Intellectual Property Rights and the need to have good information technology laws and policies. However, it is important for Intellectual Property Rights Preservation which would save time & money and litigations would be avoided by having policies dedicated to owner of their Intellectual Property.

The way forward in the Indian context, lies in educating the masses, introducing new self and co-regulatory measures, and arriving at a well thought out legislation in order to adequately deal with the issues related to dissemination of IPRs for innovations in information technologies.

4. Issues related to Intellectual Property Rights

The Intellectual Property Rights is treated globally which would ultimately in future shape and formulate the laws and policies relating to Information Technology. As a result the concern related to intellectual property right has become of paramount importance to the legislators.

¹⁵ Jyh-sheng Ke, Institute for Information Industry, Taiwan, "SOFTWARE INDUSTRY IN TAIWAN".

¹⁶ A&M Records, Inc. v. Napster, Inc., 239 F. 3d 1004 (2001).

Updating the laws and policies of the information technology and the intellectual property rights to meet the challenges of the networked environment has to be the key focus of the Government, the Courts and the State Legislatures. The Information Technology Act 2000, the Intellectual Property laws (the Patents Act 1970, Trademark Act 1999, Indian Copyright Act 1957, Design Act 2000, The Geographical Indications of Good (Registration & Protection) Act 1999) and more are the efforts enhancing the Indian laws and policies thereby bringing greater transparency in the work and facilitate the role of Government in development of the nation.

In addition it is required that there has to be positive action to be taken towards eliminating counterfeit which are of importance by means of policies and laws that would balance the advancement of technologies, innovation and protect the infringement of the intellectual property rights.

The government's use of modern surveillance technology devices offers potential benefits and costs, which would enable the society to understand the pros and cons of the trade-off between efficiency and efficacy of the law enforcement techniques.¹⁷

The rapid development of internet and computer technology globally has led to the growth of new forms of worldwide crimes especially on the internet. These crimes have virtually no boundaries and may affect any country across the globe. Thus, there is need for awareness and ratification of necessary legislation specifically in all developing countries for the prevention of cybercrimes.¹⁸

The Privacy rights related to protection of personal data and information which has been not specifically implemented by the provisions of the information technology laws which are otherwise protected under Article 21 of the Constitution needs to be specifically

¹⁷Paaul Larkin, The Fourth Amendment and New Technologies, <http://www.heritage.org/research/reports/2013/09/the-fourth-amendment-and-new-technologies> accessed 23 April 2017.

¹⁸ Manish Lunker, "Cyber Laws: A Global Perspective" <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan005846.pdf> accessed 22 April 2017.

addressed for formulating laws and policies for enforcement of intellectual property rights.¹⁹

In the developed and the developing countries which are interdependent on each other, there is the need to address the critical issues of Internet access and Telecommunication. Enforcement of intellectual property rights need laws and policies to protect their innovators in issues related to E-commerce which is of jurisdiction, fraud, development of electronic trade and cost incurred into the compliance of businesses.

The above mentioned few issues are the factors required to be focused on intellectual property rights in reference to information technology innovations that needs a revision of laws and policies formulated due to rising infringement in the contemporary scenario which questions the adequacy of the present legal system.

Intellectual property may assist innovations in almost every aspect of business development and competitive strategy from; product development to product design; delivery to marketing; raising financial resources to exporting or expanding business abroad through licensing or franchising.

Number of patent applications filed by IT sector in Indian industries is relatively low compared to the number filed by multinational companies. Number of factors that discourage innovations in IT sector from filing IP includes the lower level of familiarity with the procedures involved, the high costs of filing and maintaining an IP, uncertainty about the protection offered by an IP and the uncontrollable and unpredictable costs of litigation.

Large multinational companies have IP departments to maintain their own IP assets and benefit from already established technology and markets to generate continuous stream

¹⁹NandanKamath, Law Relating to Computers Internet & E-commerce (New Delhi: Universal Law Publications Fifth Edition 2013), 360.

of IP knowledge. In contrast information technology industry usually focuses on cutting edge technology and still need to find a market for its innovations.²⁰

Innovators in IT sector lack financial means to maintain an in-house IP department and lack financial strength to mount successful legal challenges to rivals infringing their IP rights. As a result there is a need to assist local IT sector with the IP filing procedures to facilitate the acquisition of tangible protection for their IP and to secure IP protection at a broader international level.

The identification of IP assets is a first step. Protection is the next, and the last one is effective management of IP assets. Effective IP management for innovations means more than just protecting an enterprise's inventions, trademarks, designs, or copyright. It involves company's ability to commercialize such inventions;; market its brands,; license its know-how; conclude joint ventures and other contractual agreements involving IP and - effectively monitor and enforce its intellectual property rights.

A company's IP portfolio must be viewed as a collection of key assets that add significant value to the enterprise. Making technocrats and innovators of Information technology aware and informed of the costs and benefits of the use of IP system, and through it, protection of new and original ideas. IP management is essential for reaping the benefits of improved product quality, in an increasingly competitive market place and knowledge-driven global economy.

Intellectual property issues can be avoided by making detailed and elaborate contracts in the very beginning of any innovation which is to be carried out. The advancements in the field of information technology research being conducted need to be patented. The treaties signed on international level for dissemination of intellectual property rights so far are silent on arbitration as a dispute resolution mechanism; they only speak of consolation procedure. Evidently arbitration is found to be binding in nature for the new technologies being carried out through the innovations in information technology sector.

²⁰ Roodney D. Ryder, *Guide to Cyber Laws* (SAGE Publications Inc., 2007)

The innovations in the information technology need to make its own domain for its growth and a sub agency must be formed under the WIPO to look after such cases encompassing both the elements of intellectual property and information technology.²¹

5. BUSINESS STRATEGIES IN INFORMATION TECHNOLOGY SECTOR

Intellectual property rights have gained importance in Information technological segment. Intellectual property rights require greater understanding and attention by the information technology sector of industries in India. The objective is to enhance the awareness about IP; to take measures for protecting their ideas and business strategies; assist them in technology up-gradation and enhancing competitiveness. The hurdles typically faced by the IT sector in India for garnering their IP and exploiting it fruitfully are lack of awareness, financial restraints, inferior technical know-how, lack of competitive strategy and business acumen.

For an innovation in information technology business or Industries, IP strategy is about matching IP protection to the business strategy in an informed way, so that the company's IP rights help the business meet its strategic aims. A good IP-business strategy can be about selecting the right brands at an early stage so that registration is straightforward and conflicts do not arise as the brand becomes better known; or matching patent protection to the product features that matter to customers.

Maintaining a clear understanding of the ownership of the business copyright for the innovations made and is required so that problems do not arise when negotiating. Thus, an innovation that has a strong IP-business strategy makes better decisions about IP protection and avoids wasting money by timing the intellectual property budget to match its current and future needs.

When the strategy is understood and adopted by the business leaders - the business as a whole makes consistent IP decisions and capitalises fully on its investment in IP

²¹ Vakul Sharma, Information Technology, Law and Practice, (Universal Law Publishing Co., 2010).

protection. In the face of larger competitors with greater market power, innovation protected by strong IP may be the only thing that enables the business to succeed.

There is a need to create win-win situation for the developments made through innovations and business. This is the new business model of today era which demands changes in every aspect of innovation being developed in information technology industries.

The traditional methods used for communication have changed in the digital era. The innovations have brought higher capacity of traditional and new services which can be used through the same mediums through integrated consumer devices. For instance news, telephony or computers have brought innovations to a new horizons called as convergence. The innovations in information technology sector have used convergence as an effective tool to develop different network platforms through a similar kind of services.

The innovation in information technology through internet has played a vital role in this new change. Convergence has brought considerable market change and a change in consumer requirements which instigate innovations in information technologies. Such innovations will grow the IT market and be the catalyst for enhancing the next level of developing nation's economy.

Under the Intellectual Property Laws there have been various changes in technologies. Copyright laws have brought into provisions for the new technological innovations and are protected through the courts through statutory interpretations and doctrines on common laws. The courts using the copyrights laws for the development of innovation in information technology have enhanced artistic creativity and provided public domain literature, music and other arts.

The courts have supported the trades in IT sector for the innovations and developments. There has been a digital revolution due to the new information technological developments which demand the use of fair doctrine in all their applications. The technology has provided for valuable methods to the innovators to protect innovations in

information technology. Therefore, there is need for technology to have the legal protection against circumvention of technology measures. Under the WCT, 1996 and WPPT, 1996 circumvention of technology measures provide legal protection through the international law.

Under Article 11 of WCT, 1996 there are obligations concerning the technological measure taken in consideration. It provides the contracting parties with adequate legal protection and effective legal remedies against the circumvention of effective technology measures that are used by the author in the connection to exercise their rights under the treaty of the Berne Convention and that restrict acts, in respect of their work which are not authorised by the author or permitted by law.²²

Similarly, under the Article 18 of WPPT, 1996 there are obligations concerning technology measures to be taken into consideration. It provides the contracting parties with adequate legal protection and effective legal remedies against the circumvention of effective technology measures that are used by the performers or producers of phonograms in connection with exercising their rights under this treaty and it restricts acts, in respect of their performances or phonograms which are not authorized by the performers or producers of the phonograms concerned or permitted by law.²³

Therefore, adequate legal protection and remedies against circumvention of technology measures are provided under the international law which is required for developing the business strategies in IT sector. Although, as regards to the Indian laws relating to circumvention of technology measures for protection which is provided under the WCT, 1996 and WPPT, 1996 are not provided under the Copyright Act, 1957. It is the need of today's economy which is not providing adequate legal protection against circumvention of technology measures and should be amended as mentioned in the WCT, 1996 and WPPT, 1996.

6. CONCLUSION

²² Article 11, WIPO Copyright Treaty, 1996.

²³ Article 18, WIPO Performance and Phonograms Treaty, 1996.

Today we need to enlighten ourselves with the issues in innovations under the intellectual property rights and information technology laws. The Intellectual Property Rights and information technology laws with their modified changes in the laws for protection and enforcement would bring into a paradigm shift in analysing the legal environment globally.

On the other hand, intellectual property rights and information technology laws are critical. The central issues of innovations which have posed hitherto unmatched challenges are in all disciplines including Telecommunication, information security, Biotechnology, etc. At present, Information Technology has intersected all the disciplines and subsists as an essential part.

The societies today have become dependent on the information technologies which have led to cybercrimes. There is a need for guidelines for the online communities and social network sites in relation to their intellectual property and information technology laws to curb the arising crimes.

Although Scholars have advocated for the protection of infringement of intellectual property rights in the virtual world by means of adopting legal initiative, sociological and technological approach, for bringing the change in innovations. The e-information society needs to take interest in the challenging digital era for the protection and infringement of the intellectual property rights.

The role of intellectual property right in relation to innovations in information technology laws and policies are of paramount importance which needs to be addressed; firstly it would require the coordination that focuses on the development, dissemination and education of the laws and policies. Secondly, it would require the present laws and policies to be reviewed and analysed for the continued applicability and effectiveness. And lastly, there is need to formulate the policies and laws related to specific issues, situations and incidents.

Thus the protection of cybercrimes by means of information technology laws is very important for the nation's growth by e-trade and e-commerce. Though there are many

traditional laws which have proved to help in protection of the intellectual property owners.

Quality of IP is directly proportional to the value it can provide for business innovations. The greater its value, the higher value it can provide and vice versa. Innovations can derive value from their intellectual assets only, if they can build a portfolio of quality IP, which can provide real, rather than perceived, value.

To sum up, the objective is to enhance awareness of Information Technology industries in India about intellectual property rights to take measure for protecting their innovative ideas and business strategies. Awareness is mainly on two fronts. First, protect their creations and secondly, how they can avoid violating intellectual property rights of others. This increased awareness will encourage innovators to make better use of intellectual property right system and make it an integral part of their business strategy.

BIBLOGRAPHY

Dr.Mrs.Pratibha Rasal, "CYBER LAWS – A WAY AHEAD", International Conference on Cyber Law and Information Technology by Indian Law Institute, New Delhi, 2001.

Dr.JOYTI RATTAN, CYBER LAWS & INFORMATION TECHNOLOGY (BHARAT LAW HOUSE PUBLISHING 2014).

N.RAJAGOPALA AYYANGAR, REPORT ON THE REVISION OF THE PATENT LAW (1959).

Arun Kumar B.R, "Issues of Cyber Laws and IPR in Software Industry and Software Process Model"
<http://research.ijcaonline.org/volume44/number16/pxc3878544.pdf> accessed 25 April 2017.

Srividhya Ragavan, PATENT AND TRADE DISPARITIES IN DEVELOPING COUNTRIES (OXFORD UNIVERSITY PRESS2012).

Conference on Internet Governance And Cyber Security held in New York City n 14-15 May, 2015 by the Italian Academy,
ColumbiaUniversity https://sipa.columbia.edu/system/files/Proceedings_ColumbiaSIPA_InternetGovernance_Cybersecurity_Conference2015.pdf accessed 26 April 2017.

NandanKamath, Law Relating to Computers Internet & E-commerce (New Delhi: Universal Law Publications Fifth Edition 2013).

Chris Reed, INTERNET LAW (Universal Law Publishing 2010).

Dr. Prankrishna Pal, Intellectual Property Rights in India (REGAL PUBLICATIONS 2007).

Domestic legislation

Trade Marks Act, 1999.

Patents Act, 1970

Copyright Act, 2000

The Information Technology Act, 2000

The Information Technology (Amendment) Act, 2008