Intellectual Property Rights And The Internet World

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Abstract:

In the online world, Intellectual Property Rights protected information music, computer programmes, databases can be easily copied and pirated using instantaneous means of reproduction, publication and dissemination causing serious financial loss to rightful owners. In most cases the impact of loss on the internet is greater because internet is borderless and infringing materials can travel across different geographical regions within few seconds. Detecting infringement of Intellectual Property Rights is fairly a complex task. Both online as well as offline world. In the Information Technology Age, the protection of Intellectual Property Rights (IPR) requires even greater attention and dedicated strategy for its protection. On the internet, protection of intellectual property has an important bearing on the growth of e-commerce. It may be easy to detect infringement of intellectual property rights on the internet, but effective law enforcement poses a challenge while combating infringements of intellectual property rights in digital space. As we know, with the growth of information technology age internet is used for transacting business. When more activities start to happen on internet, offences are bound to occur in the internet. For this suitable legislation needs to be drafted in order to curb the offences on the internet. A multi-prolonged approach is needed to encompass technical, social and legal measures will be required to adequately protect intellectual property rights in cyberspace.

Keywords: Intellectual Property Rights, Information Technology Age, Infringement, Internet

I. INTRODUCTION

An important asset for any business is its intellectual property assets which require substantial investment of time, money and creative input and may or may not be tangible. In the information technology age and dedicated strategy for its protection of Intellectual Property Rights (IPR) requires even greater attention and dedicated strategy for its protection.

Rights Protected As IPR:

In the online world, IPR protected information including music, computer programs, databases can be easily copied and pirated using instantaneous means of reproduction, publication and dissemination causing serious financial loss to rightful owners. In most cases the impact of loss on the internet is greater because internet is borderless and infringing materials can travel across different geographical regions within few seconds. Detecting infringements of Intellectual Property Rights is a fairly complex task both in the online as well as offline world. However, search engines on internet may make this task simpler with the help of keyword searches. Once infringements are detected, enforcement of IPR may have jurisdictional issues to invoke legal actions and financial implications.

Unauthorized use of a person's words, trademarks, service marks, literary work, images , music constitute an infringement of the owner's intellectual property rights. Traditional principles of Intellectual Property Law which apply to the real world also apply to the virtual world. Internet has introduced a hybrid of

versions of infringement including linking[1], framing[2], and meta-tagging[3] as new forms of infringement of intellectual property rights in cyberspace. The prime reason for rampant piracy of intellectual property on internet is because it is very easy to copy proprietary and intellectual property protected materials and the anonymity that exists in the cyberspace does not deter a party from using the protected materials without due permission from the owner. The law of copyright aims to protect original forms of expression and includes protection of literary work, music, computer software, sound recordings amongst categories of works. The Law of Patents confers protection to inventions, including product and process, non-natural plants amongst other inventions. Of late biotechnological products and the processes and certain computer software have been protected by patent law. Another branch of law protecting Intellectual Property is Trademark Law that grants protection to words and logos but typical colour combination. The law of unfair competition or trade practice puts an embargo on restrictive and unfair trade practices and the law of trade secrets protects sensitive business information. The Law of Industrial Designs protects unique and original designs used for products including machinery equipment and utility items. Every country through some legislation seeks to protect these intellectual property rights of people and entities.

II. EASY INFRINGEMENT OF IPR IN INTERNET AGE

With the growth of Information Technology Age, Internet is used for transacting businesses as well as for entertainment purposes. It is very easy to replicate data in the electronic form and piracy of music using CD Rom orP2P sharing networks is so very common. In the case of CIT v. Oracle Software India Ltd[4], the court held that duplicating CD at home may amount to piracy and violation of Section 14 of the Copyright Act, 1957. Duplicating is a process of copying data from source medium to a destination medium which has the physical form. For instance copying a music file from one CD to another is duplication. New gadgets including scanners, digital cameras, recording soft wares, e-mail-applications, I-pads, I-pods, mobile phones and web TV, data mining and other software tools enable easy reproduction and circulation of infringing materials. According to the recent report of the Indian Federation of Phonographic Industry (IFPI), music piracy has reached unacceptable levels in India, China, Brazil, Indonesia and Pakistan.[5]

[1] Also known as hyperlinking, it is a term used to describe the practice of linking or connecting information on the web page that is shown in highlighted text which contains link to another website to allow a user to efficiently browse the required information on the web. When it takes user to a homepage of another website, it is termed as surface linking and if it takes user to a page inside website, it is known as deep linking and both require prior permission of owner whose website is to be linked.

[2] On internet framing takes place when a website uses its own frame but takes the reader to the content of another website while displaying the content to another in its own frame to create false impression that the content belongs to the website that frames. Framing is a form of copyright infringement.

[3] Metagging is done to meta-tag which is source code which stores information about the page it is displaying, its title and description. This assists web search engines to correctly list the webpages in its search results against relevant keyword search inserted by a user for search.

[4] 2010 (2) SCC 58

[5] See http://www.zdnet.com/ top-10-countries-for-music-piracy

III. THEORIES TO PROTECT IPR

It is necessary to regulate internet as it will that will keep it under reasonable control so that the medium is not misused. The concept of freedom and speech and expression is emphasized and one argues this medium should be a free space where one can express one's views freely without any restrictions. Both excess of regulation or no regulation seems to be harmful and contrary to the objects that internet was introduced to achieve. Freedom of Speech should be curtailed to the extent that any theft of protected materials would be considered punishable. This will ensure that creativity is not hampered but is rewarded through recognition of one's efforts and financial rewards that accompany it. The attribution of an author's content is also justified as its unauthorized use will be infringing the author's intellectual property rights.

There are various theories that describe the need to protect intellectual property rights. One of the earlier approaches in this regard is the 'utilitarian approach.' According to this approach, the inventors should be bestowed with such rights that encourage inventors and authors to create intellectual property protected materials so that it offers maximum benefit to maximum number of people. Another approach is that a person who puts efforts to research on something that no one owns or which is "already held in common", owns the intellectual property of his efforts which states must respect and enforce. This approach was propounded by John Locke's works. Thirdly, Kant and Hegel propagated a new approach that is the intellectual property rights constitute private rights of authors or inventors and entitle them to unique rights. For example, an author alone has the right to reproduce, adapt, and publish his works or to grant any permission for the same. The fourth approach is based on the concept that the intellectual property rights must be shaped in such a manner that it 'achieves an attractive culture.' This approach was propagated by political and legal scholars namely Jefferson, Marx and certain ancient political and legal theorists. This approach is slightly different from the utilitarian approach as it does not emphasize on 'greatest good of the greatest number.' This theories may not provide a Utopian solution to justify and guide us what is not an attractive solution. These theories have been examined while examining while discussing 'the right of publicity' that is the right of celebrities to prevent any person from commercial use of any feature of their identity such as face voice among other traits. The right has found its place either in the legislations or through emanating from courts' decisions.

IV. INDIA'S NEW INTELLECTUAL PROPERTY RIGHTS POLICY

The new national policy on Intellectual Property covers all kinds of Intellectual Property such as Patents, Trade Marks, Copyrights, Industrial Designs, Geographical Indication of Goods, Protection of Plant Varieties and Farmer Rights, Semiconductor Integrated Circuits Layout Design and Biological Diversity in a single framework. It effectively protects the right owners. It provides various incentives to IP owners by granting them monopoly rights according to India's new IPR Policy, IPR should be protected so that it

encourages innovation and growth. The policy is expected to impact many sectors like pharmaceuticals, software, electronics and communications, seeds, environmental goods, renewable energy, agricultural and health biotechnology and information and communications. The policy aims to boost intellectual property growth in research laboratories, universities, technology researchers and institutions through licensing and commercialization of IPR. The policy also refers to open innovation as integral to the promotion of corporate social responsibility. It states that government will engage in the negotiation of international treaties and agreements.

V. PROTECTING COPYRIGHT IN THE E-WORLD

- ***Easy Infringement Of IPR Online***

On the internet, Intellectual Property works in the form of music, literary work, images are transformed into binary language of 0 or 1's. The electronic works are stored in bits and bytes and processed by computers. The human readable content is converted into machine readable language. The digital representation of the work could mean reproduction of the work itself. In the light of this fact the Copyright Law has evolved when used or read in conjunction with computers and internet. It is a myth that any work published online carries with it an implied consent that it can be reproduced, modified or circulated to others. Under the Indian Copyright Act, 1957 confers on the author of a work including literary, artistic and cinematographic work the right to prevent a party from unauthorized reproducing, modifying or distributing the copyright work. Computer programmes are also protected as copyright work and the web page if uniquely may be protected as artistic work combined with literary work or as trade dress particularly for virtual offices. Because internet has no boundaries, the copyright works may be easily infringed online because the copyright protection is terror specific. However, Conventions and Treaties like the TRIPS Agreement and Convention on Protection of Copyrights do not require mandatory registration of copyright to enforce this right to member countries. As long as a country is a signatory to the convention or treaty for copyright protection, if rights are infringed in another member country it can be legally enforced. However in *Dhiraj Dharamdas Dewani v. M/s Sonal Info Systems Pvt. Ltd. And ors.*[6] The court took the view that Copyright Act, 1957 clearly denotes that in absence of registration under Section 44 of the Copyright Act, 1957, by the owner of copyright it would be impossible to enforce remedies under the provisions of Copyright Act, 1957, against the infringer for any infringement under Section 51 of the Copyright Act, 1957, that is, registration of copyright is mandatory to seek legal redress for copyright infringement. The court was of the view that "unless such person (the infringer) knows that there is any particular owner of copyright in India or that such owner of copyright has registered his work under Section 44 of the Copyright Act, 1957 before he did, attributing infringement by him or on his part intentionally or unintentionally would be preposterous.

[6] 2012 (3) ALL MR 209, 2012 (2) Bombay CR 842.

- ***New Verities Of Hybrid IP Infringements***

On the internet, apart from conventional infringements of intellectual property, hybrid infringements such as framing, deep linking, sale of pirated products poses a high challenge to the law enforcement authorities. Many websites today offer freeware installations, sell pirated software copies and engage in other criminal activities. Despite technological measures and legal framework, combating copyright infringements continues to be a major challenge in cyberspace.

- ***Need For Homogeneity***

To achieve homogeneity in IPR law is fairly challenging task because IPR rights are territorial in nature and different countries adopt different approach on requirement of registration, protection of moral rights,[7] term of protection and other issues. In some countries performer's rights or compilations, databases or business methods may not adequately protected by the traditional IPR Legislations. This either calls for adoption of multilateral treaties and conventions to streamline the varying approaches to protect IPR. The Berne Convention for Protection of Literary and Artistic works is one of the most important conventions addressing copyright issues. Despite the fact that this Convention has received wide acceptance, its interpretation by different countries has not been consistent. For example, there are glaring disparities in the duration of copyright protection and treatment of digital copyrights from jurisdiction to jurisdiction. In 'click wrap agreements'[8], while certain jurisdictions will uphold all disclaimers, other jurisdictions may consider a term to be unconscionable or opposed to public policy. One jurisdiction may recognize moral rights of authors and other jurisdictions may decline to recognize such rights. Therefore, in order to protect copyrighted works in cyberspace a multidimensional approach is required which includes adopting legal, social as well as technological measures. The legislative framework to protect copyright needs stringent and social awareness must be spread amongst the general public to combat problems of piracy.

- ***Definition Of Fair Use In It Age***

The authors hold exclusive rights in their works for a particular term subject to right to use work for fair use. After the term of protection expires, the copyrighted work is available in the public domain and the rights of the author terminate. The definition of 'fair use' varies from jurisdiction to jurisdiction. The definition of 'fair use' is generally a narrow definition and strictly interpreted by most countries. It generally includes citing of literary works or music for academic research and teaching.

- ***Definition Of Copyright Needs To Be Re-Evaluated***

The definition of copyright infringement itself needs correct and objective interpretation. On debatable issue

[7] In India, Section 57 protects the moral rights of the author.

[8] An agreement formed by a confirmed acceptance online given a user by accepting the terms published on a website by clicking on the 'I Agree' or similar button denoting his consent to formalize the agreement and abide by terms of use mentioned for a transaction or web service.

in this connection is formation of temporary copy when a copyrighted work is transmitted across the computer network or temporary copy when a copyrighted work is transmitted across the computer network or temporary copy made through catching. Different jurisdictions have adopted different approaches on whether an involuntary copy of a copyrighted work amounts to a copyrighted infringement. Hence, not only the scope of copyright law but also the meaning of infringement needs to be revisited in the cyberspace.

- ***Clarification On Liability Of Intermediaries Needed***

Another important aspect that deserves serious deliberation is the role and liability of intermediaries such as internet service provider's vis-à-vis digital copyright protection. For such infringements of IPR, it is analysed whether an intermediary has some control over data or content it publishes or serves merely as a communication service or internet access provider. Its liability is dependent on whether it has actual knowledge of infringing content or takes due diligence measures to prevent illegal activities or takes necessary action when given due notice of infringements. Different jurisdictions tend to attribute liability differently for intermediaries and principles to determine direct and contributory liability.

VI. INTERNATIONAL ORGANISATIONS PROTECTING INTELLECTUAL PROPERTY

- **WIPO**

WIPO had been instrumental in harmonizing copyright issues across many countries. United International Bureaux for the Protection of Intellectual Property (BIRPI) was an international organization established in 1893 to oversee implementation of the Berne Convention for the Protection of Industrial Property. It was the predecessor of the World Intellectual Property Organization (WIPO). The WIPO Copyright Treaty, 1996 and the WIPO Performances and Phonograms Treaty, 1996 are two landmark treaties addressing intellectual property issues. These treaties lay down guiding principles for member signatories to form laws to protect intellectual property in the offline world, yet much remains to be done to protect intellectual property in the cyberspace.

- **WIPO COPYRIGHT TREATY**

The WIPO Copyright Treaty, 1996 is a special agreement under the Berne Convention. Any member nation including those not bound by the Berne convention is required to comply with the substantive provisions of the 1971 (Paris) Act of the Berne Convention for the Protection of Literary and Artistic Works (1866). The Treaty entered into force on 6th March, 2002. India is a party to the Berne Convention but not a party to WIPO Copyright Treaty. The WIPO Copyright Treaty elucidates that copyright protection is available to original expressions and excludes from its ambit ideas, business methods or mathematical algorithms and formulas. According to Article 4 of the Treaty the computer programs stand protected as literary works and Article 5 states that compilations of data or databases are also protected as copyrighted intellectual property. It also envisages the need for drafting new laws and to clarify interpretation of existing laws dealing with

copyright, particularly in digital environment. The treaty provides that right of reproduction available to an author apply to electronic records or digital works and its exceptions as described in the Berne Convention also apply to the online world. The WIPO Copyright Treaty discusses the rights of distribution, rental right and right of communication to the general public which are exclusive rights of the author. As regards rental rights, the treaty provides that the authors have an exclusive right to authorize commercial renting of their work for computer programs. Where the computer program is not the main object of renting, this right is excluded. This is equally applicable to renting of cinematographic work as long as it does not result in unauthorized copying. It also applies to phonograms. The member countries have the freedom to decide the modalities of this right for different situations. With respect to the right of communication, the authors possess the exclusive rights to communicate to the public their copyrighted works subject to the provisions of the Berne Convention including by wire or wireless means. It covers communication to public so that the members of the public may access the work from a place and at a time that such public may individually decide. This provision reflects the on-demand programs and interactive communication using internet. Article 10 of the treaty confers signatory countries the flexibility to introduce other limitations or restrictions that may be easily stretched beyond reasonable parameters and dilute the intellectual property protection available to authors. This flexibility incorporated in Article 10 of the Treaty has been utilized by some countries to introduce digital copyright legislation in their respective countries. The Copyright Treaty envisages that member countries usually provide adequate legal infrastructure to combat technological tools used by authors unreasonably in violation of law. Some countries have also adopted the approach and curtailed the use of technology that deters 'fair use' of copyrighted works on internet. The Treaty provides that the signatory countries should establish enforcement teams to act against the infringement of copyrighted works.

- **WIPO PERFORMANCES AND PHONOGRAMS TREATY, 1996**

The WIPO Performances and Phonograms Treaty, 1996 entered into force on 20th May, 2002. It aims to protect intellectual property rights of performers (including actors, singers, and musicians) and producers of Phonograms (sound recordings). India is not yet a party to the treaty and remains non-binding on India. The Treaty elucidates the moral and economic rights of the performers including rights of reproduction (direct or indirect), distribution (through sale or other transfers of ownership) and commercial rental rights, right of making available its works. As regards live performances, it grants the performers rights of broadcasting, right of communication to the public and right of fixation. As regards to producers of phonograms, it grants rights of reproduction, rental, making available to public and broadcasting. Treaty provides right to equitable remuneration to producers and performers for various rights discussed therein including remuneration for broadcasting or reproduction. The Treaty describes 'national treatment' obligation of the member states to avail the benefit of exclusive rights conferred by treaty. The term for protection is

mentioned as fifty years. The Treaty envisages that the rights and exceptions described in the treaty apply equally to the digital world and storing any performance or phonogram in electronic format will amount to reproduction the protected work. However, clarity is lacking as regards rights of communication and broadcasting in digital medium. The member states have ample freedom to introduce new laws to create restrictions and exceptions to the provisions in the Treaty for the digital environment. The Treaty obligates the member states to create its enforcement team to implement the objectives of the Treaty, including remedies where circumvention measures are employed to infringe moral or other rights of producers or performers.

- **DRAWBACKS OF WIPO TREATIES**

WIPO has a great contribution in shaping core principles to create a sound IPR regime, it falters on many fronts. However, it fails to address the nuances of cyberspace and adopt adequate techno-legal measures to protect IPR in cyberspace. Particularly, there is absence of detailed provisions to deal with online copyright protection and enforcement issues in the extant of WIPO regime. More clarity is envisaged on various aspects, particularly, Digital Rights Management, definition of fair use and acceptability of reverse engineering in order to bring homogeneity in legislations of member states and eliminate prevalent ambiguities in WIPO regime. Also there is no strictness in terms of adoption and implementation formalities and corrective measures to check ambiguities and clarify provisions is also equally lacking.

WTO REGIME AND TRIPS

- **THE TRIPS AGREEMENT**

The WTO has contributed to protection of intellectual property rights through the TRIPS Agreement. The treaty's prime objective is to arrive at a homogeneous set of laws that promote protection of intellectual property including trademarks, copyrights, geographical indications, layout circuits, industrial designs, patents, trade secret rights and technology transfers. It seeks to benefit both producers and owners /users of IPR socially and economically and encourage creativity and innovation. Since the TRIPS Agreement was passed many countries amended their domestic laws or passed new legislation to protect intellectual property rights including copyright, patent and trademarks. India is a party to the TRIPS Agreement and is under an obligation to implement its provisions under its domestic legislations to protect IPR. Although many legal texts such as Paris Convention, 1883 for industrial property, the Berne Convention, 1886 on copyrights, laid down the basic principles to protect different forms of intellectual property, yet there are certain drawbacks as the legal texts failed to address many aspects of IPR protection. Further, these instruments also lack strategies for enforcement and resolution of disputes, impositions of trade sanctions. The TRIPS Agreement has those attributes which the earlier Conventions lacked. The TRIPS Agreement

also refers to all the earlier legislative texts such as Berne Convention[9] on copyrights and the Paris Convention[10] and incorporates its basic principles into agreement. The TRIPS Agreement prescribes enforcement mechanisms including rules for obtaining evidence, injunction orders, damages and destruction of pirated goods. International trademark or copyright violations for commercial purpose are made criminal offences. The TRIPS regime prescribes important principles governing protection of digital copyrights. According to Article 10 of the TRIPS Agreement the computer programs qualify for protection as literary works as per the Berne Convention and even databases are also copyright protected.

- **APPLICATION OF TRIPS AGREEMENT IN CYBERSPACE**

The TRIPS Agreement has achieved wide acceptance, but it may have a narrow scope as it may only concern 'trade distortion issue'. Therefore, efforts to apply the TRIPS regime's principles may not be appropriate for cyberspace. Certain scholars have advocated that a combination of the TRIPS regime with WIPO could be applied to the cyberspace. Certain scholars have advocated that a combination of the TRIPS Agreement could be useful for their enforcement. The WIPO Copyright Treaty could be embodied within the TRIPS Agreement and offer efficient enforcement environment. It is important to note that the TRIPS Agreement has provisions similar to the WTO Regime as it categorically states that its principal provisions shall not derogate from the prevailing obligation set out under the WIPO (Article 2(2) TRIPS). Another option would be to introduce detailed provisions to protect IPR in cyberspace be incorporated into TRIPS Agreement, such provisions should deal with the issues of fair use, treatment of anti-circumvention techniques, licensing and commercial exploitation.

VII. COMPUTER DATABASE AND COMPUTER PROGRAMS- INDIA AND EUROPEAN UNION APPROACHES

A computer programme is protected as literary work written, recorded or reduced in material form provided sufficient effort expended by the author. A computer program that only produces multiplication tables or alphabets is not entitled to copyright protection. A computer database comprises of collection of information that is recorded on a computer and it may include a list of clients, their address, a drawing, or other work is immaterial if the work has not been reproduced on paper and is stored only on computer. Databases are generally managed using a database management system which is an integrated software system that facilitates entering, altering or deletion of data. According to the EU Database Directive, a database comprises of a unique class of literary work. It grants sui generis right to databases which do not qualify for copyright protection. In India, computer database is defined in Section 43, explanation (ii) of the IT Act, 2000 as "representation of information, knowledge, facts, concepts or instructions in text, image, audio, video" which are being prepared in a 'formalized manner' or are produced by a computer and are intended

[9] Article 9 of TRIPS
[10] Article 2(1) of TRIPS

for the use in computer, computer system or computer network. In India, original databases are protected as literary work under Section 13 (1) (a) of the Copyright act, 1957.

As per Section 3 of the UK Copyright Designs and Patents Act, 1988, literary work includes a table or compilation, a computer program, a preparatory design material for a computer program and a database. As per Section 3A of the UK Copyright, Designs and Patents Act, 1988 a database is 'collection of independent works' which are systematically arranged and are 'individually accessible by electronic or other means'. An original database is protected as literary work under copyright law. The UK Law also creates a new *Sui Generis* right known as database right with a term of 15 years. This right will subsist in database whether or not database and its contents form copyrighted work if there is substantial investment, financial, human or technical resources.[11]

VIII. COPYRIGHT ISSUES ON INTERNET

- **DOWNLOADING AND UPLOADING**

On the internet, software programs or files can be downloaded to the hard disk of one's computer. Downloading involves producing a copy or reproduction of the file copied. It is prudent to check if a website allows downloading the files or programs and any restriction it places on its commercial use. Uploading means sending of data from a personal computer/mobile device to another system as a server to remotely store a copy of the data. For example users upload their pictures in server of Picasa or upload their videos on you tube.

- **CACHING**

While surfing the internet 'caching' refers to the storage of a copy of the file being transmitted so that the next time is viewed it may be easily and more quickly accessed. 'Caching' means temporary copy generated by the RAM at user's end and 'proxy caching' occurs at the server's end. The concept of caching falls under the exceptions of infringement of copyright as fair dealing. A client cache gets stored in the browser's software of a client. It may be of two kinds namely, persistent and non-persistent cache. A non-persistent cache clears the memory when has a large retention potential to allow quick access to users. Caching may have legal implications as it enables copying of materials from websites and has a commercial down turn effect. It may open an un-updated page for a viewer, whereas the updated page may have certain advertisements which are missed by users. It is generally accepted that caching should be out of purview of copyright infringement as it lends greater accessibility and speed to net surfers.

- **MP3 REVOLUTION (DERIVATIVE WORKS)**

MP3 stands for MPEG audio layer 3. It is a compressed audio file and the quality of an audio file may

[11] See http://www.legislation.gov.uk/ukpga/1988/48/contents

become inferior if it is compressed beyond a particular point. There are many companies like Napster that allow Peer to Peer (P2P) file sharing of digital music which is copyright protected. Napster faced legal action for copyright infringement in cyberspace. The court considered the fair use exception for P2P file sharing and liability of its service providers allowing such file sharing and liability of its service providers allowing such file sharing. From centralised distribution the methods of file sharing of digital music have shifted to de-centralized approach through new technology such as Bit-Torrent.

IX. INDIAN SCENARIO- COPYRIGHT INFRINGEMENTS OF MUSIC AND VIDEO FILES

In India, if a website such as Napster functions to enable users to share and circulate music files, video files and films, such company shall be liable user Section 51of the Copyright Act, 1957 which provides that if a person does anything which violates the exclusive right of the author of a work or in other words of the copyright holder, it shall amount to infringement of copyright. According to section 14 of Copyright Act, 1957 making copies of any work through any medium and communicating it to public is an exclusive right of copyright owner. Hence, if a Napster like network operates in India it would be liable for the offence of copyright infringement. In case it is argued that it is not transferring any files but provides only an indexing or listing service, nevertheless, Section 63 of Copyright Act, 1957 states that any person who 'knowingly infringes or abets the infringement of copyright in a work or other rights conferred by the act excluding right under Section 53A shall be punishable with imprisonment for a term not less than six months but may extend to three years and fine of not less than rupees fifty thousand which may extend to rupees two lakhs. Section 51 (a) (ii) of the Copyright Act, 1957 provides that if any place is used to communicate a work wherein communicating the work amounts to an infringement, such person shall be liable for copyright infringement. This section does not limit its application to the convention medium of communication and could also cover the cyberspace. The persons who make available or download the copyrighted files infringe rights granted to authors under Section 14 of the Copyright Act, 1957. Section 14 provides that issuing copies of the copyrighted work or communicating it to the public will constitute copyright infringement. The downloading of the copyrighted work amounts to reproduction of the work unauthorized infringing copyright holder's account. According to section 51 (b) (ii), distribution for the purposes of trade which negatively affects the interest of copyright owner amounts to copyright infringement. It is important to mention herein that as per the amended IT Act, 2000, Section 79 (3) clearly states that exclusions of liability available to intermediaries are not available to intermediaries in case an intermediaries in case an intermediary has conspired or abetted or aided or induced, whether by threats or promise or otherwise in the commission of unlawful act. Hence, as per Section 79 (3) of IT Act, 2000 such network will be held liable that conspire, abet or aid in copyright infringements committed by its users.

X. DIGITAL RIGHTS MANAGEMENT

The WCP and WPPT are two treaties of WIPO that elucidate the law of anti- circumvention and Digital Rights Management. Digital Rights Management means the technologies used by copyright holders to control access or use of copyrighted works in digital form and restriction s on such electronic works and devices. Although India is not signatory to the WCT or the WPPT, it contains provisions to permit reverse engineering in limited circumstances similar to the provisions of these treaties. It is important to mention that Articles 11 and 12 of WCT and Articles 18 and 19 of WPPT are important to discuss the anti-circumvention law and digital rights management. The main objective of these articles is to provide legal remedies in case anyone attempts to circumvent the technical measures employed by authors to exercise their rights over copyrighted works. It further seeks to protect a copyright holder if any one attempts to destroy or change electronic rights management information unauthorized or distribute or communicate unauthorized copyrighted work with full knowledge that an alteration or change has been made without any authority. According to WPPT, similar protection exists against circumvention of technological measures used by performers or producers of phonograms for the exercise of their rights under treaty. Whereas article 11 of the WCT and Article 18 of WPPT explain anti-circumvention measures and grant legal protection against circumvention of technical measures used by copyright holders, article 12 of WCT and likewise Article 19 of WPPT prescribe provisions for protection of rights management information. It provides legal protection and redress against deliberate deletion ort change of electronic information that describes copyright holder's name, time of work and terms of use information. In India different viewpoints exist on this aspect. On the other hand, it is suggested that a prohibition should be placed on the technology used to circumvent technological measures subject to a specific exceptions, the other approach is to prohibit the use of technology when used for infringements except for a few exceptions. While the music industry is in favour of adopting the first approach the academic and scientific fraternity advocate that the second approach is better.

XI. REVERSE ENGINEERING IN INDIA

Fair use sections in India including aspect of reverse engineering and decompiling are found in Section 52 of Copyright Act, 1957. Section 52 (1)(aa) of the copyright act, 1957 specifies certain acts such as 'making copies or adaption of computer program by lawful processor of a copy of such program from such copy is not infringement when it is done to 'utilize the computer program from such copy' is not infringement when it is done to 'utilize the computer program for the purpose for which it was supplied or to make backup copies as protection against loss or damage to use it for purpose it was supplied. A person who knows or on reasonable enquiry ought to have known a software is pirated, is injuncted from using such software and is directed to deliver up the infringing copies. Section 52 (1) (ab) clarifies acts done which are necessary to obtain information for interoperability of an independently created computer program with other programs

by a lawful processor of a computer program is not infringement if the information is not readily available. Section 52 (1) (ac) further states that it is not infringement of copyright if to determine ideas that underlie any elements of a program one studies or test its functionality. Section 52 (1) (ad) states 'making of copies or adaption of the 'computer program' 'for non-commercial purposes' from a copy that is legally procured computer program for 'personal' use does not amount to copyright infringement.

XII. COPYRIGHT (AMENDMENT) ACT, 2012

The Act has introduced new independent rights to lyricists, composers and singers as the authors of literary and musical works in films and sound recordings which entitle them to receive royalties and other benefits. Rights to royalties from such works, when used in any form apart from films or sound recordings, will vest with creator and will be assignable to heirs or copyright societies. Earlier, the right to receive royalty vested with music films and producers. The act introduces a system of compulsory licensing of copyright works for disabled. It also aims to protect performers' rights by permitting them to record their sound or video recordings and reproduce them in any form for commercial purposes. The amendment also allows free import of copyright works from other countries. It prescribes penalties for persons that circumvent technologies that are used in protecting copyright works. It also inserts provision for issuance of statutory licenses to broadcasters and producers for version recordings. The Copyright (Amendment) Act, 2012 inserted Section 65A in the Copyright Act, 1957, wherein protection of technological measures has been provided. According to Section 65A, any person who circumvents an effective technological measure applied for the purpose of protecting rights conferred by the act with the intention of infringing such rights, he shall be punishable with imprisonment that may extend to two years and liable for fine. Section 65A (2) lists certain activities that form exceptions to Section 65A (1). Any act in Section 65A (1) that is not expressly prohibited by the Copyright Act, 1957 provided a complete record of such person is maintained to identify him and purpose for which he has been facilitated forms first exclusion in Section 65 (2)(a). Doing anything necessary to conduct encryption research using lawfully encrypted copy is permitted as exception in Section 65A (2) (B). Conducting any lawful investigation is also permissible as per Section 65A (2) (c). Doing any act necessary for the purpose of testing the security of a computer system or a computer network with the authorization of its owner is permitted as per section 65A (1) (D) , or by operator (section 65A (1) (E) or doing anything necessary to circumvent technological measures intended for identification or surveillance of a user (Section 65A (1)(f)) or taking measures necessary in interest of national security. Section 65B provides for protection of rights management information. Any person who knowingly removes or alters any rights management information without authority, or distributes, imports for distribution, broadcasts or communicates to the public, without authority, copies of any work or performance knowing that electronic rights management information has been removed or altered without authority shall be punishable with imprisonment which may extend to two years and also be liable to fine.

The proviso to Section 65B of the Copyright Act, 1957, inserted by amendment, provides that an owner of copyright in a work whose rights management information has been tampered may also avail civil remedies against persons infringing his rights.

XIII. PATENT PROTECTION AND COMPUTER SOFTWARE

- PROTECTION OF PATENTS AND FILING REGIMES- EU, PCT, INDIA

Patents are territory specific and individual applications need to be filed in countries where an applicant seeks patent protection. In U.S. three types of patent are popular i.e. design patent, utility patent and plant patents. Utility patents (for inventions or discoveries of "any new and useful process, machine, article of manufacture or composition of matter, or any new and useful improvement thereof), design patents (for new and original designs) and plant patents (for new plant varieties). The term of protection for a utility patent is 20 years. However, for an application filed with European patent Application, single application can lead to protection in all European member countries. Also, Patent Cooperation Treaty offers a procedure that facilitates international registration of patents in member countries designated by the applicant. In the Indian Legal framework, computer software is generally not patentable and is granted protection under copyright law. Computer software falls under 'literary work' as per Section 2(o) of the Copyright Act, 1957, amended by the Copyright Amendment Act, 1994. According to the Patent Amendment Act, 1970 only such computer software's are granted patent protection that lead to something tangible which is 'capable of industrial application'. Section 2(1) (j) defines invention as 'a new product or a process involving an inventive step and capable of industrial application'.

- US APPROACH TO PATENT PROTECTION

Before 1980's, the US Patent Office rejected most important patent applications in case the invention was based on mathematical formulae or calculations performed by a computer. According to USPTO's view, patents provided protection to products and process, composition of matter but do not grant protection to scientific formulae or facts or mathematical calculations. A computer program was not considered an invention as it was considered to be based on mathematical algorithms.

- POSITION IN UK

In UK, Section 1(2) of the Patents Act provides that a subject matter is excluded from the purview of invention if a program relates to a program per se. The UK Patent Courts confirmed that a software that leads to a technical effect and is capable of industrial application will be patentable. The UK Patent Office issued a two-step test which considers firstly, identifying the advancement over the present art and what is non-obvious and can be used for industrial application and secondly, to decide whether the claimed invention satisfies both the requirements of 'new' and 'obvious' and is capable of industrial application pursuant to Article 52 of the European Patent Convention.

XIV. INDIA AND COPYRIGHT PROTECTION FOR COMPUTER SOFTWARE

- REGISTRATION OF COPYRIGHT FOR A COMPUTER PROGRAM

In India the Copyright Act, 1957 grants protection to original expression and computer software is granted protection as a copyright unless it leads to a technical effect and is not a computer program *per se*. the computer software which has a technical effect is patentable. Generally a computer software which does not have a technical effect is protected under copyright law. For a copyright protection, computer software needs to be original and sufficient skill and effort must be put in to impart it originality. But a program which only generates multiplication tables and algorithms may not suffice the degree of effort required to claim a copyright protection. Apart from being original and not copied from elsewhere, the work should be first published in India or if the work is published outside India, the author on the date of publication or if the author is dead at the time of his death should be a citizen of India. In the case of unpublished work, the author on the date of making of a work should be a citizen of India or domiciled in India. The Indian Government accords the same protection of copyright to an author's work which is published in any country which is a member of Berne Convention or the Universal Copyright Protection as it would be if the work was first published in India. In case of an unpublished work if the author at the time of making the work is domiciled or is a citizen of another country which is a member of the Berne Convention or UCC the author will be given the same protection as if he is a citizen of India.

- AUTHOR OF COMPUTER PROGRAM

The author of a work is the first owner of copyright in the work. But in case of an employee unless there is an agreement to the contrary, the contrary, the company can claim copyright over the work created by the employee during the course of his employment.

- COMPUTER PROGRAM- A LITERARY WORK

Section 2(o) defines 'literary work' and includes computer programs, tables and compilations including computer databases. Section 13 provides the categories of work in which the copyright subsists which includes original literary work.

- INFRINGEMENT OF COPYRIGHT AND LEGAL REMEDIES

Section 51 defines infringement of copyright and states that a person infringes copyright of another if he unauthorizedly commits any act which only the copyright holder has exclusive rights to do. Civil Remedies to copyright infringements are provided in Chapter XII of Copyright Act, 1957 granting injunction and damages for copyright infringements and criminal liability provisions are provided in chapter XII of Copyright Act, 1957 wherein abetment of infringement is also unlawful and punishable with imprisonment of upto three years and fine upto two lakhs. Section 62 of the Copyright Act, 1957 entitles a plaintiff to file

for a suit for injunction against infringements within district court of the jurisdiction where plaintiff resides or carries business or works for gain.

XV. BUSINESS METHOD PATENT

Business Method Patents comprise of category of patents which claim a novel method of operating business. It could involve e-commerce, banking, trading or other forms of business. Divergent views prevail across different jurisdictions on the patentability of business methods. Several critics are of the view that internet business method patents are granted, it will to a great extent limit innovation in cyberspace. This medium should be left free to innovate effective communication and business methods, as internet is still at the developing stages and still exploring the new world of Information Technology. Granting a monopoly on business methods will not promote or be in the interest of growth of e-commerce.

- THE AUSTRALIAN AND CANADIAN APPROACH TO BUSINESS METHOD PATENTS

The Australia, the patentability of a business method patent is not excluded. In Canada, business methods are not patentable. Any 'scheme, rule or method of performing a mental act, playing a game or doing business or a program for a computer' stands excluded from the purview of invention. A business method may be granted patent protection in Canada it involves an apparatus.

- EUROPEAN PATENT CONVENTION AND BUSINESS METHPOD PATENTS

According to European Patent Convention, 'scheme, rules and methods for doing businesses' are not patentable if it 'relates to the subject matter or activities as such.' In case a method provides a technical solution, it may be patentable, if it also has an industrial application, is new and displays inventive step.

- JAPAN PATENT APPROACH TO BUSINESS PATENT METHODS

In Japan, Business Method Patents are granted, provided the invention involves a technical concept through 'a new law of nature is utilized'. But the business method ought to consist of a technical matter which is tangible.

- POSITION OF BUSINESS METHODPATENTS IN INDIA

In India, Business Method Patents are not patentable. In this respect India does not comply with the TRIPS Agreement. However India has granted a few business method patents as an exception. This is possible if a business method is embedded in software which has technical effect. Google was granted patent for advertising business patent method wherein it could serve content-targeted ads in e-mail newsletter based on publisher unique content identifier in the e-mail account. There are thus two separate aspects, business methods (which on its own are un-patentable) and the software that is responsible or used for implementing them (which when seen in context of a technical effect on a machine, is patentable.

XVI. TRADE MARK PROTECTION ON INTERNET

- RIGHTS PROTECTED UNDER TRADE MARK LAW

Trade mark law protects the rights of business entities who invest time and energy and money in advertising their products and services to consumers. A trade mark or a branded name indicates the source or origin of goods and services and includes word marks, logos, symbols, specific colour combination and smell among other traits. A trademark law prescribes punishment for misuse of trademark in case a deceptively similar or identical trademark is used on similar goods and services or dissimilar goods and services which are likely to cause confusion amongst the public for association with a registered trade mark. It also provides remedies where a mark is misappropriated or diluted. On the internet a trade mark has assumed several forms including domain name, which means, a name of a website used to denote an internet protocol address and is an easy way to remember a complex numerical value. Domain names are therefore easily remembered and often coined to reflect the trademark of an organisation.

- MAJOR TREATIES ON TRADEMARK PROTECTION

Among the major trademark treaties are the Madrid system, Community Trade mark and the Trade mark Law Treaty. The Madrid system for International Registration of trademarks is centrally administered system that facilitates registration of trademarks in different jurisdictions by filing one single application from a home country. The system is based on the Madrid Agreement and the Madrid Protocol. The Madrid system is managed by the International Bureau of WIPO located in Geneva, Switzerland. The Trademark Law Treaty, 1994 aims to standardize the trademark registration procedures across different countries. The goods and services for which registration is sought is categorized in the relevant class of the International Classification based on Nice Agreement concerning the International Classification of Goods and Services for the purposes of Registration of Marks. The Community Trademark system enables one application to register trademarks for protection in whole of Europe. The Community Trade Mark (CTM) is registered with Office for Harmonization in the Internal Market. This system has however not replaced the national trade mark registration process which continues to operate alongside the CTM.

XVII. CYBERSQUATTING

This term is used to denote an illegal act whereby a person intentionally books a domain name deceptively similar to trademarks of its rightful owner and later offers the owner the domain name for purchase at a hefty amount. There have been many such cases decided by the World Intellectual Property Organization wherein its administrative panel ordered the object the subject domain names to be transferred to the rightful owners in accordance with Uniform Domain Name Dispute Resolution Policy.

XVIII. THE INDIAN TRADE MARK LAW AND LEGAL REMEDIES

According to Section 135 of the Trade Mark Act, 1999 legal remedies for suits for infringement of registered trademark or passing off includes injunction, damages or account of profits or delivery up of infringing goods or destruction of infringing goods. Section 103 provides for penalty for applying false trademarks or trade descriptions which is punishable with imprisonment for a term not less than Rs. 50, 000 which may extend to rupees two lakhs. Further, section 104 provides penalty for selling goods and services bearing a false trade mark or description, which is punishable with imprisonment for a term of not less than six months and may extend to three years along fine of not less than rupees fifty thousand which may extend to rupees two lakhs. In case a mark is unregistered, common law remedy of passing off is available to the owner of the mark but in the case his mark is registered, he also has the statutory right to file an action for infringement of mark under Trade Marks Act, 1999.

- **ICANN DOMAIN NAME DISPUTE RESOLUTION POLICY**

The WIPO established the online domain name dispute resolution system for domain name disputes commonly referred to as the ICANN Policy. This process is not only quicker but more cost effective. The WIPO'S Uniform Domain Name Disputes Resolution Policy was adopted by ICANN on 24th October, 1999. This policy provides an effective administration process to resolve disputes concerning abusive and bad faith registration of domain names. The Registrar may cancel, suspend or transfer a domain name. The plaintiff is required to file a complaint with an Approved Dispute Resolution Service Provider as on date. WIPO, National Arbitration Forum and Asian Domain Name Disputes Resolution Centre are few amongst the authorized providers. The authorized providers have the freedom to establish supplemental rules that are also applicable for domain name dispute resolution along with UDRP Policy. Every authorized provider maintains list of panel arbitrators. A party may choose one of the three panellists to decide their disputes. The UDRP Policy is used by Registrars to decide disputes concerning .com, .net, .org domains and by certain Registrars of countries specific top level domains

- Main Characteristics of ICANN Policy

The ICANN'S authorized service provider conducts a mandatory administration proceeding when it receives a complaint for domain name infringement where a domain is identical or deceptively similar to the complainant's name trade mark and the defendant has no legitimate right and the domain name is registered in bad faith. The panellists decide the dispute through online means and the procedure takes approximately 45 days and provides cost effective and speedy remedy to resolve the dispute. The registrar who registers the domain name in question does not transfer or cancel or suspend any domain name as long as he does not receive an order from the court, an arbitrator or other entities in deciding the disputes, or receives instructions from domain name holder.

- ADVANTAGES OF ICANN POLICY

The ICANN requires three essential requirements to be satisfied.[12] In this the procedure is very quick and efficiently managed. The respondents are stipulated 20 days' time to respond to respond to a complaint and the panel decides a dispute within approximately 45 days when the submission are completed.

XIX. TRADEMARK INFRINGEMENT

According to section 135of the Indian Trade Mark Act, 1999, legal remedies for suits for infringement of registered trademark or passing off includes injunction, damages or account of profits or delivery up of infringing goods or destruction of infringing goods.

DILUTION OF TRADEMARKS

In India, Section 29(4) of the Trademark Act, 1999 provides that a registered trademark is infringed by a person who, not being a registered proprietor uses in the course of trade, a mark which is identical with or similar to the registered trademark in relation to goods and services which are not similar to those for which the trademark is registered and the registered trademark has reputation in India and the use of mark without due cause takes unfair advantage of or is detrimental to, the distinctive character of registered trademark.

XX. METATAGGING AND HYPERLINKING [13]

Hyperlinking means linking a website to another website. By clicking of a website's name within the web page of another website is accessed. This concept on the internet has led to several trademark related disputes. In Digital Equipment Corporation v. Altavista Technology Inc.[14] the plaintiff, Digital Equipment Corporation sued the defendant Altavista for breach of Trademark License Agreement, trademark infringement, unfair competition and trademark dilution. The Digital Equipment operated a Search Engine service known as 'Altavist'a and purchased ATI's trademark rights in 'Altavista'. Digital later licensed back the right to use trademark 'Altavista' to the defendant as its domain name. Digital sought an injunction order against ATI on the ground that this website infringed Trademark License Agreement. The court ordered preliminary injunction in favour of Digital, restraining ATI from using the Trademark 'Altavista' in violation of terms of the Licence Agreement.

- **THE METATAGS AND KEY WORDS**

Metatags which are set within the coding of a website and in the case a user types a key word within the search engine it creates a better chance for the website to appear within its search engine results. Critics of

[12] The three requirements are:
- The Respondent's domain name is identical or confusingly similar to the complainant's trade mark or service mark.
- The respondent has no legitimate interest or any rights with regard to the domain name.
- The respondent domain name was registered by the respondent in bad faith and is being used by him in bad faith.

[13] See Karnika Seth, Second Edition 2016, at page 297

[14] 960 F Supp 456 (D Mass 1997)

metatags and hyperlinks hold the view that metatags and hyperlinks are likely to create confusion in the mind of users and infringe the trademarks. Using metatags often leads to infringement of trademarks.

- **HYPERLINKING AND FRAMING**

On the internet one website can be used to connect to another website through a hyperlink. The permission to link must be taken in case a website owner intends to create a hyperlink connecting his website to another website through placing a hyperlink on his website. Framing of a website means placing the content of another person's website in the frame of the get up of a person's own website. Framing involves misappropriation if copyright content. Framing could involve both copyright and trademark issues wherein copyright content is misappropriated and trademarks may be infringed in linking and framing on the internet.

XXI. CONCLUSION

On the internet, protection of intellectual property has an important bearing on the growth of e-commerce. Intellectual Property Rights is a gamut of exclusive rights conferred by the state upon an individual or entity for an effort made by a person using his mind, skill and judgement to create tangible and intangible property which has a special value in society. It has various species such as trademark, goodwill, copyright in original artistic, dramatic, musical, literary or other works, database rights, computer programs, patent rights in an invention, design rights, trade secrets and confidential data. Effective legal implementation is needed to combat IP infringements. Corporate entities should develop, monitor and protect their Intellectual Property including registering their domain names bearing trademarks in order to avoid cybersquatting. Use of electronic evidence should be encouraged in order to combat IP infringements in cyberspace. A multi-prolonged approach is needed to protect Intellectual Property Rights in cyberspace.