



IPR Management: Emerging Cyberspace Issues in Knowledge Society: A Critical Analysis

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ABSTRACT

Information and Communication Revolution (ICR), now under way throughout the world, is challenging established institutions and practices in a manner difficult to comprehend. The systems of socio-economic organization and political governance are undergoing unprecedented changes compelling Governments to enact laws relating to management of knowledge in society. In India, the existing intellectual property regime that deals with the protection of computer software is the Indian Copyright Act, 1957. The Act does not have any sections that deal with the piracy of computer software from the Internet. The paper discusses about serious dangers to financial and commercial transactions, national security system, and banking and communication networks inherent in the new technology. In the hands of unscrupulous people it can create havoc to individuals, institutions and the nation. Government regulation of the Internet is indeed inevitable. The Information Technology Act, 2000 is just a beginning of a series of innovative laws needed to replace the existing legal regime in a number of areas. Digital signatures and electronic commerce will bring in hitherto unknown varieties of fraud and cheating. Electronic crime can be committed with unimaginable ease. Global standards on preventive action and remedial measures are yet to be evolved. Cyber law has to be on constant review and revision for a long time to come.

Keywords: Intellectual property (IP), cyber space

1. Introduction to IPR

Intellectual property (IP) rights are rights awarded by society to individuals or organizations principally over creative works: Inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. They give the creator a right to prevent others from making unauthorized use of their property for a limited period. IP is categorized as Industrial Property (commercial innovations), and Artistic and Literary Property (cultural creations). Current technological developments are blurring this distinction, and some hybrid sui generis systems are emerging. The industrial revolution brought its own set of laws regulating business and commercial activity as also the governance of post-industrial society. Industrial revolution affected certain parts of the world leaving behind the former colonies, the legal systems of the so-called developing countries could not, equip themselves to the challenges of industrialization. Meanwhile, the ICR has overtaken the world, demolishing economic barriers and political boundaries and challenging established laws of the industrialized world. Most developing countries of the world have to make a quantum jump in law making to develop capacities to protect national interests and to avoid

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exploitation by those who own technology, the limits of which are still unknown. This is a dilemma that world faces today by the advent of Internet Information Highway and Cyberspace.

2. Rationale for Intellectual Property Rights

Rationale of IPR can be classified under two categories;

- Philosophical approach
- Pragmatic approach

Legal scholarship lacks a satisfactory theory establishing justification of intellectual property rights (IPRs). Theories advanced by legal scholars including that of economic incentive rationale can be considered inconsistent in the radiance of rapid technological developments and increasing competition amongst industries. A recent decision by the European Court of Justice against Microsoft encourages revisiting the very underlying principle for IPRs.

Philosophical approach is well established in the tradition of the British philosopher John Locke (1632-1704), Thomas Hobbes (1588-1679) and the 18th century German philosopher Georg Wilhelm Friedrich Hegel (1770-1831). John Locke is an exemplary theorist of property as right. Property right like all rights according to Locke is derived from which it follows that God gave the world to all humanity in common, then how is that any one person can acquire an exclusive property right in the worldly subject. Locke provided an excellent solution that leads us to notion of private property rights. Locke manages this demonstration by drawing a distinction between human kind's common property given by the Creator and the individual's acquisition in the property.

Different philosophical approach to intellectual property was built on Hegel's emphasis on the possession of property as a mark of free man. German philosopher, George Wilhelm Friedrich Hegel. (1770-1831) Tradition of property enables individuals to establish and realize their full human personalities. From this approach it has been extensively argued that intellectual property should be unalienable. A basic argument against IPRs in the context of natural rights and moral rationales is that, technological inventions are mostly a social creation of collective, cumulative and interrelated work to which we all contribute and therefore no one person or firm should be able to claim the property.

Pragmatic approach was propounded by Jeremy Bentham (1748-1832), Adam Smith (1723-1790), Jean Baptiste Say (1767-1832) John Stuart Mill (1806-1873) and John Bates Clark (1847-1938). The basic proposition of these classical economists is that IPRs provide "the prospect of reward", which in turn encourages creative and technological advance by providing increased incentives to invent, invest in and further develop new ideas and without which the invention inducement would be weakened. The rationale being that carrying out R&D and bringing an invention to market often is a lengthy and expensive process, with no guarantee of success being achieved at the end of the tunnel.

Various empirical studies have indicated that patents positively impact the economy. It has been established that patent procurement increases the rate of innovation for industries such as pharmaceuticals and chemicals, which rely primarily on patents for intellectual property protection. Simon Rose has shown that there is a direct correlation between patents adjudicated and patents filed and a strong statistical correlation between patents filed and GDP. It has been observed that within a short time following a cycle of hostility, the number of patent applications decreased in technological innovation, negatively impacting the economy. Conversely, when the appellate courts favored patents, the number of patent applications increased which then positively impacted the economy.

IPR-induced incentives to invent rationale for the IPR system rest on two assertions:

- Not enough inventions will be made without effective incentives. In other words neither invention nor exploitation of inventors will take place unless and capitalists believe that they yield profits which makes it worthwhile for them to put their efforts and risk their money in it.
- IPRs are the cheapest and the most effective way for society to hold out these incentives.

Robert Merges and Richard Nelson are of the view that, even though patents motivate invention by providing incentives, unless they are liberally licensed, other firms deter themselves, from undertaking any of the wide variety of follow-on inventive work that improves or varies on an initial invention. They demonstrated how inventions happen along multi-product trajectories that are cumulative, path dependent and complex in the sense that each innovation along trajectory relies on own or others current past ideas. Although there are many arguments against patents as an incentive to invent, use and allocate resources more efficiently, the conventional astuteness amongst economists, lawyers and many public officials is heavily weighted towards the proposition that rights are conducive to economic progress.

3. Digital Environment and Copyright

Digital technologies have become principal tools for creating and storing information for its speed and easy access. Today, digital information plays an astonishingly vital role in the global markets, and in every facet of daily life. An application of copyright law to digital information has become critical. A prominent feature of our time, the internet, may be best characterized as a digital means to disseminate information and promote free expression on a scale that was never possible before. Users interested in collecting resources related to a particular subject no longer need to obtain or maintain actual copies, but can, alternatively, make these documents available (without the author's knowledge) to the Internet by writing a web document that contains pointers (hypertext links) to the identified references. A critical distinction between new Internet technology and other traditional means of communication is its decentralized nature that allows users to publish to a vast audience, heretofore unavailable because of the restricted character of conventional publishing.

4. Internet and Intellectual Property Rights

Intellectual property rights apply on the Internet but the difficulty is to make them enforceable. The ease of reproducing works if they are in digital format is inexpensive and there is a near-perfect quality of copies. Publishers and other copyright holders argue that the Internet impairs their intellectual property interests by fundamentally transforming the nature and means of publications and thus making their works extremely vulnerable to Internet piracy. The decentralized nature of Internet's management makes it possible for any user to widely disseminate a work on the electronic network termed as Cyberspace through any number of channels. A user can easily distribute a work to news groups through e-mail or on personal website.

5. Protection of Computer Software: The Existing Regime

Computer programmers and communications software are growing a market size and economic value, the nature of protection to be provided is extremely important. Software is easily reproducible and can be copied cheaply. It can easily be converted from one computer language to another. In the absence of devices that inhibit copying, the cost of copying software package for most system is low. Even where direct copying is not possible, resourceful programmers and engineers can often reverse engineer the programs.

Intellectual Property Rights Law has presented problems for new technologies such as computer programmers. The law assumes that something is either in writing protect able through copyright or a machine protect able by a patent but not by both simultaneously. However, computer programmers have both aspects of authorship and invention. Such problems lead us to question the applicability of Intellectual Property Rights law. Sui Generis approach is seen as alternative to Intellectual property paradigm

allowing tailoring of protection. They depend on legislative action or treaty negotiation. Their doctrinal development is also a slow process.

6. Indian Scenario

Indian Copyright Act kept track of international conventions, the current copyright law lags far behind the west. As India did not sign the "WIPO Internet Treaties" there is no equivalent legislation in India to the US DMCA or EU directive implementing the WIPO Internet Treaties! The present Copyright Act of India does not have provisions regarding the 'technological protection measures' nor the protection of 'electronic rights management information'. Some provisions of the Indian Penal Code, 1860 (IPC) may suffice to provide for legal protection for technological measures. Section 23 of the IPC speaks of 'wrongful gain or wrongful loss. This Section may be relied upon in the case of unauthorized access to the 'protected work'. Section 28, which speaks of 'counterfeiting', may be effectively utilized to arrest the copying of protected works.

India is one among the top 20 countries in the utilization of the Internet. Though it has a low Internet penetration percentage, India has become the software development hub of the world and has become a favorite destination in this area. The increase in the utilization of the Internet, problems in copyright protection related to digital transmission have become worse. It is a paradoxical situation. If India provides stronger legal protection for technological protection measures with limited fair use exceptions, it will end up in depleting public domain and harming public interest principle of copyright. If it does not provide for legal protection for technological measures, the Internet may create havoc in enforcement of copyright protection.

India enacted, the Information Technology Act (IT Act) 2000 to address problems created by 'cyberspace' regarding conduct of electronic commerce. The IT Act does not lay down any concrete framework for dealing with specific copyright violations of the Internet. There are provisions that may be construed to be seeking to address some aspects of copyrights as is obvious from the Section 43 which relates to penalty for damage to computer, system.

Non-profit organizations like NASSCOM (National Association of Software and Service Companies) have been actively working as a partner with the Government of India and State Governments in formulating IT policies and legislation in India. Its work is commendable as it launched the country's first 'anti-piracy' hotline and India's first anti-piracy toll-free hotline. State Governments are establishing special police cells for arresting the piracy of copyright works.

Copyright owner's concerns about the threats posed by the digital revolution are legitimate. The technological protection systems have tilted the balance in favor of the right holders at the cost of public domain. It created a new and powerful "Access right" deployed to prevent infringing reproduction, reproduction that is permitted under existing copyright exceptions. Technical protection systems can be used to prevent infringing reproduction, reproduction permitted for educational and archival purposes or reproduction necessary for research permitted under fair dealing principles. Concerning Indian position, new provisions are to be added to the present copyright laws to provide legal protection for 'technological protection measures' and 'digital rights management'. Reconciling the private interest and the public interest is very challenging; India cannot ignore the public interest principle underlying the copyright laws. It can follow the Japanese example, i.e., treatment of 'non-commercial' use as fair use.

There is no perfect solution to the problem of protecting copyrighted works in the digital environment; fair use can be used as a counterweight to maintain the appropriate balance between the public and private interests. The issue of computer software piracy is itself not a new one. This paper attempts to address

issues that arise out of having computer software on internet, manner in which piracy occurs, the rights and liabilities of various parties and steps to be taken to curb it. Under Indian copyright Act, 1957, the term "computer programmer", is defined by section 52(I)(ad), as ".. a set instruction expressed in words, codes, schemes or in any other form, including a machine readable medium, capable of causing a computer to particular task or achieve a particular result".

The above is based on the definition of World Intellectual Property Organization; Draft Models Provision for Legislation in the field of Copyright. The definition, under 1977 Model Provisions for the Protection of Computer Software, comprises of three components:

- Computer Programmers;
- Programmer description, and;
- Supporting material.

Copyright law protects only the expression of the idea of the holder of the copyright and not the idea. In India, Computer software falls under copyright law and therefore, only the expression of the idea behind the software can be protected.

7. Piracy in the Digital Era

The entertainment industry in India is finding it difficult to keep pace with rapidly evolving digital technologies that challenge existing laws on intellectual property rights and business models. Globally, technology continues to evolve making it possible for individual users to record, duplicate and transmit films or music in digital form with ease and without loss of quality. The piracy of creative works by organized groups spawned by such advances is a universal concern. It has pitted producers of films, Music and broadcast programming against consumers and rights advocates fear that industry lobbying is leading to unfair copyright protection loaded in the producer's favor.

There is a consensus on the need for reasonable protection of copyright, but differences have sharpened over the level of safeguards. While these debates go on, file-sharing using the peer-to-peer (P2P) model on the Internet has opened up a new area of confrontation between music lovers and film buffs, and the respective industries. Using a particular P2P service enables unfettered sharing among members.

Internationally, the problem of illegal sharing of copyrighted content has promoted producers to look for technological solutions. In Western countries that have strong copyright laws and are affected by piracy over broadband Internet, new business models for music sales have emerged. One of these was pioneered by Apple Computer's iTunes for a la carte music downloads and this was quickly followed by similar services from other big names in the business. This stands in contrast to the virtual refusal by many copyright owners in India to acknowledge the emergence of digital innovation that makes it possible to compress a large number of songs for download or sale on compact discs, incorporating software to secure the content.

India's piracy problems are real but the entertainment industry has not made a serious effort to solve them with a market-oriented approach. An estimate by the U.K. Trade and Industry Department two years ago found that piracy represented 60 per cent cannibalization of India's film industry revenues. Some states are trying to tackle copyright infringement by taking recourse to tough laws that empower police to detain alleged pirates without trail while the film industry has been advocating that State Governments must help get audiences back into the theaters through tax sops.

Whatever the impact of these measures, it is clear that film and music industry, one of the largest in the world, is caught in a time warp. Unlike the more developed markets, the entertainment sector in the country

is affected not so much by the use of the Internet by P2P services but by organized groups that have used technology to rake in big profits through illegal duplication and sale of compact discs. The technological changes in television and radio brought about by digitization, coupled with wider broadband access, are poised to throw up more challenges: the entrainment industry can have to suffer further erosion of profits. The law alone may ensure success in the digital future

8. Conclusion Remarks

An analysis brings forth two important points: that Internet as a medium is here to stay and that it has to be taken seriously; and that existing intellectual property regime fails when it deals with computer software on the Internet. The latter point needs a greater focus. There is a strong regime that protects computer software, off-line, but existing regime fails when faced with problems that Internet throws up. An issue that arises is whether one wants to extend existing intellectual property regime to Internet or let Internet find solutions for itself, as it does in certain cases, with concepts like shareware. There has to be a new system of law that may govern intellectual property on the Internet? The author holds a view that it does not make sense to have a new or a sui generic system of law that would take care of these problems. While idea that Internet can govern itself and take care of the problems that it faces is appealing, one has to take into account the quantum of commerce that is being done on the Internet. This aspect cannot be ignored and in order to facilitate and to protect this large financial interest, it may be best to have some law in a form that would deal with the issues of protection of software on the Internet. The question is whether to enact a whole new system of laws that deal with the Internet in particular or to modify the existing regime. The enactment of a new system of laws does have its supporters, especially among the software lobby, but it poses certain problems. It would mean a creation of a new system to enforce these laws. Moreover, this would lead to destruction of the very concept for which the Internet has been created, that is, the freedom of information.

Therefore, one will have to look into other option and see as to how one can modify the existing regime that deals with the protection of computer software. The American government is the first to enact a series of laws that put this idea into motion. These legislations attempt to empower the American copyright laws to take into account the Internet. Numerous other jurisdictions have followed this lead. In India, the existing intellectual property regime that deals with protection of computer software is the Indian Copyright Act, 1957. The Act does not have any sections that deal with the piracy of computer software from the Internet. Though the Act, when it comes to computer software takes care of problems of off-line piracy, fails when it has to deal with on-line piracy. The IT Act, 2000 has made significant amendments to other enactments such as the Indian Penal Code, the Indian Evidence Act and the Code of Criminal Procedure. However, one area that has remained untouched by the law is copyright. Although there are views taken that the existing principles of copyright may be applied to the Internet through analogy. It is true that the medium does pose new challenges which analogy may not be able to deal. There are proposed amendments to the Copyright Act, 1957, to deal with various issues that arise. The Indian government may review the Copyright Act, 1957, in accordance with WIPO treaties, and on the lines of the Digital Millennium Copyright Act. It may be noted that cyber law will soon become a prescribed course of study for all law students. The subject has assumed great priority in legal research as well. The West Bengal National University of Juridical Sciences at Calcutta, has on its agenda both teaching and research activities around information technology and related science. It is strongly recommended that law teachers, lawyers and students to quickly educate themselves with cyber laws and the technology underlying them. The industrial Revolution passed by without affecting India. The nation had to pay a heavy price in the process. The Information Revolution may not be allowed to bypass India and in this respect the legal regime has to play its legitimate role.

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