CHAPTER: ONE

INTRODUCTION
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The world has entered into an era of instant communication. A person sitting in the remotest corner of India can enjoy live performance taking place in the far away places like America or Africa, thanks to Electronic (Parallel) media. Telephone and fax have made it possible to communicate oral or written messages across the globe within seconds. The computer aided communication technologies such as E-mail and Internet have added altogether a new dimension to today’s communication process by making it more speedy, information and economical. The ways through which different types of information can be communicated have also undergone a sea change. These days a film song can be put in or accessed by a single device along with a textual message and even a painting. While all these have made communication among people more effective and efficient both in terms of time and cost, they pose the greatest threat to the copyright world. Modern communication channels, being intensively relying on a variety of copyrighted products, are liable to be pirated in large scale, if adequate precautions are not exercised (on-line).

Laws are responses to challenges. The challenges can be social economic and/or technological copyright law is no exception to this general rule as it emerged as a response to technological challenges. The technological changes always created challenges to the basic principles of copyright law. Be it the printing, sound recording, visual recording or the recent digital technology, the legal system struggled to ensure that the protection given to the authors that the work through copyright law does not turn to be detrimental to the large public interest. The legal system responded to these changes at the appropriate time and brought in necessary changes in the copyright law to ensure that a proper balance is maintained. Every time a new technology that had an impact on the reproduction distribution and transmission of works protected under copyright.
Copyright are mainly concerned with authors, publishers, librarians, person related to film industry and music industry, patents, trademarks information sources, movies, gramophone records, cassettes and computer software are directly related to Intellectual products. Persons from revenue, police, law and judiciary are actively engaged in protecting these rights. With the new inventions in science and technology, there is rapid growth in production at the equipments useful for duplicating or copying. This has resulted in malpractices, which affects the Intellectual property rights of the owners. In true sense, the Intellectual property rights & copyrights cover not only printed matter but the patents, industrial designs, trademarks, trade secrets, layout designing of integrated circuits and so on. Librarians are deeply concerned with these rights as their work is closely related to the acquisition, storage and retrieval of Information.

1. What is an Intellectual property : Loosely defined Intellectual property is a ‘Product of mind’. It is similar to any property consisting of immovable things where in the proprietor or owner may use his property as he wishes and nobody else can lawfully use his property without his permission. The convention establishing the WIPO (World Intellectual Property Organization) in 1967, one of the specializes agencies of the Intellectual property rights shall include ‘rights’ relating to :

   I. Literary, artistic and scientific work.
   II. Performance of performing artistic, phonograms and broadcasts.
   III. Inventions in all fields of human endeavor.
   IV. Scientific discoveries (No National laws or International treaties as on date give any property rights to scientific discoveries).
   V. Industrial designs.
   VI. Trademarks, services marks and commercial names and designations.
   VII. Protection against unfair competition and all other rights resulting from Intellectual activity in the industrial, scientific, literacy or artistic fields.
2. Protection of Intellectual Property:

The owner can best protect his property if he keeps it out the eyes and knowledge of the world. But in this situation the progress of the nation will be hampered and also the owner or the property will not be in a position to use his property at his will. Therefore appropriate nation legislations govern the Intellectual property rights (IPRs).

The national legislations specifically describe the inventions which are the subject matter of protection and those, which are excluded from the protection. Only preparation of laws for protection of Intellectual property rights does not fulfill the aim. Execution of the laws effectively and awareness of these role in its success. Such awareness can be effectively created by the educational institution. The Intellectual property rights and copyrights are important not only at National but also at International level. The two international conventions on copyright namely the Berne convention for the protection of literary and artistic works (1948 Brussels Text) and the Universal Copyright Convention (1952) have played an important role in creating the atmosphere useful to protect the copyright at international level. These conventions were reserved at Paris in 1971. This revision at provided certain additional facilities to enable the developing countries to grant compulsory licenses for translation and reproduction and works of foreign origin required for the purpose of teaching, scholarship or research or for purpose of systematic instructional activities. India being a number of these two International conventions has amended the copyright act of 1983 in which further amendments were made in 1984 and in 1992.

We are facing many challenges in the field of Intellectual property rights. Different countries have claimed the patents related to the agricultural products. Considering the globalization and GATT, Considerable thought and deliberation have attempted to evolve a consensus on trade related Intellectual property rights. These have also been adopted by WTO. Various laws in order to preserve
biodiversity and to safeguard our agricultural products were passed by the parliament of India. However, due to the increased number of researchers carried out in the universities and in other research institutions, it has became essential to create such environment is which there will not be a malpractice or piracy of original products.

Intellectual property rights and copyrights ensure the originators such a protection so that even a new design, logo, trademark can be protected for its misuse. Even a piece of art literature, computer programme, biological wealth and cultural heritage can be protected with the help of these acts. However, the people are not adequately aware about the Intellectual property rights and copyrights. The present study discusses all these issues in depth and I hope it will present the scenario properly.

3. Importance of the Study:

Intellectual property rights (IPRs) are intangible rights that are bestowed upon a creator or originator for protecting his creative ideas or original expression with the advent of the knowledge era, intellectual capital has gained enormous importance and consequently IPRs have become a precious commodity. Patents are one of the most important IPRs.

In India unfortunately, there is no provision for software to be patented. According to Mahesh Madan Bhat, a lawyer with J. Sagar Associates, a law firm in Bangalore, “A software program is an algorithms and patent law does not protect algorithms par-że”. The term ‘software’ includes computer programs, databases, computer files, preparatory design material and associated printed documentation, such as user’s manual.

Under Indian law computer programs have copyright protection. But the IT industry says computer programs should have patent protection, which is more
comprehensive than copyright laws. Anything under the sun can be patented provided it satisfies the test of novelty, usefulness and non obviousness. In recent times the patent law worldwide has emerged as a powerful means of protecting computer programs as a patent has inherent advantages over a copyright says A.Vinash Vashiyta, CEO, NeoIT, an e-service firm.

Patents protect software against reverse engineering, where the source code of a program is recreated from the supplied object code. In its source form, a computer program is much easier to amend. Many software and hardware companies have so far taken advantage of the copyright law’s lack of protection against creation of “Clones” through reverse engineering. Says Vashista. For example, under the Indian Copyright Act, copying from an engraving is an, infringement of copyright, but an engraving produced independently from the same picture is not. Copyright law’s generally do not protect the owner from independent creation or reverse engineering.

Patent laws eliminate this loophole by providing protection irrespective of whether the work was independently created or copied. Even if the infringing device was created without the knowledge of the original device, it is an infringement of the software patented cannot be reverse engineered and sold by another company.

A patented software code presents others from using the software algorithms without permission and also prevents companies’ people from creating software programs that perform similar functions. The copyright law, in contrast can only prevent the copying of a particular expression of an idea and can be used to prevent total duplication of a software program as well as the copying of a portion of a software code.

Unfortunately, there are no guidelines or stated procedures office with regard to computer software. The IT Act, 2000, also does not provide any lead in
this direction. Consequently, Indian firms/individuals have to go to the use for getting their products patented – a cumbersome and expensive process.

According to a report by software industry forum NASSCOM, in 2000 Indian companies introduced 122 software products in the domestic market, while foreign companies launched 158 software products. However, most Indian products don’t have patent protection.

Besides copying of software codes, the biggest challenge that law enforcing authorities face today is that of cyber squatting, that is, illegal registration of Internet domain names of famous companies, brands and personalities. In a recent case (Yahoo.Inc. vs Akash Arora Anr 78 1999) the Delhi High Court granted injunction in favour of yahoo Inc. against the defendant. The defendant had created a web-site yahooindia.com, nearly similar to the plaintiffs renowned yahoo.com., providing almost comparable services. The court granted an injunction restraining the defendants from using the name yahooindia.com.

The WIPO, UN agency, had convened an international meet to develop recommendations covering intellectual property associated with internet domain names, including dispute resolution. The recommendations have been made available to a new organization, the Internet Corporation for Assigned Names and Numbers (ICANN), which manages the Internet domain name system.

Today we live in a world of instant global communications. It is an era of fast technological developments and Information technology. In recent times technologies of reproducing documents and access to documents through faster communication has been reality. New techniques for sound recording and visual images have increased. Simple, inexpensive and readily available magnetic tape reproduction equipments with low cost tapes, cassettes have made copying of phonographs records simple. New computer technology has brought a revolutionary change. These technologies are providing unlimited opportunities for
communication between people and new tools for teaching. These have helped many people to reproduce documents and other materials illegally on a large scale causing problems to copyright owners and government agencies. A number of laws are being enacted to protect copyrights.

Librarians have an important role in protecting the rights of the patent holders, copyright holder and other in the field of industrial designs, trademarks, trade secrets, layout designers of integrated circuits etc. The librarian should keep themselves aware with the latest changes in IPR and to oversee their proper implementation while purchasing books and other materials and also when these are used in the library. It is a social obligation that the librarians have to perform.

4. Statement of Problems:

Internet and the digital revolution pose some complex problems for copyright law. The three technological advances, which have turned the economics of information upside down, namely:

I. Digitization of Information: which has changed the economics of reproduction.
II. Networking: which has changed the economics of distribution; and
III. World Wide Web (WWW): which has changed the economics of publication.

In all the three cases cited above the changes is simply mind boggling because costs have sunk to unimaginable levels as a result of which traditional of copyright was predominantly concerned with copyright piracy caused by printing press modern copyright law is predominantly concerned with the ease with which copyrighted works can be replicated in the digital medium. Briefly stated the problems posed by the digital medium are outlined below:

4.1 First Problem: Digital Medium creates difficulties in the way in which copyrighted products are distributed. In the digital medium copyrighted work
is licensed rather than sold. Before the advent of digital era copy righted material were transferred by way of sale of physical copy of a work. Sale involve complete transfer of ownership which means rights in a copy transferred from the vender to the purchaser. Copyright law recognizes this principle by recognizing the first sale rights are given to consumers so that they might sell a book they purchased to someone else licensing constitutes a limited transfer of rights to use on terms agreed between the parties the provisions upon by law contract. This prevents the copyright owner from controlling copies distributed publicly once sold in the market place. It enables the owner of an authorized copy to dispose of it without securing the copyright owners consent. The copyright owner can authorize the first distribution of a particular copy or phono record to the public, but the recipient of that copy is entitled to reuse it, resell it, loan it, display it, or give it away. Copies of most copyrighted works may be rented, for profit, again and again, without the copyright holder’s consent. All of these uses could generate revenue for copyright owner were they entitled to demand it, although that entitled to demand it, although that revenue come at a significant reduction in access for consumers who are unable or unwilling to buy it at the market price for new copies. But if the work is licensed there was no sale in the first place. In other words if a buyer owns CD with the soft ware he only has the license to use the product, not the right to resell it. Un restricted disposition is an essential attribute of ownership. Licensing effectively ends the first-sale doctrine. Dispensation of the first sale doctrine only to be replaced by the right of commercial rental, will enable the copyright owner to retain books by way of lending or otherwise free from copy right control.

4.2 The second problem posed by internet is the question of what constitutes copying in the digital medium. There is an intimate connection between access and copying in the digital medium. The essence of copyright law is to confer upon author’s exclusive work to control the reproduction of their work
in copies. Application of this right to the digital medium poses difficult questions. For a user to view a document a copy of that document must be loaded into the random access memory (RAM) of the user's computers otherwise, no image will appear on the monitor,. Whether this temporary copy in RAM should be considered a reproduction under the copyright Act is not free from controversy while reading a book or watching a movie does not involve making of copies since the effect is only ephemeral the same is not true with the digital medium because access to digital information by making ephemeral copies is inherent in the way in which computers function.

Catching is storing of the web pages at the computers memory at the local or at the server level. Transmission catching refers to store and forward transmission which consists of intermediate storage of digital packets sent over a computer networks while the packets are being transmitted from node to node. This type of forward transmission would have copyright implications would have copyright implications only in exceptional cases. Client catching is a temporary storage of previously loaded or downloaded documents by another computer of the end user triggered by the users browsers. Depending upon the users browsing pattern a document will remain cached for hours days or even months. Client caching merely facilities consumptive usage. The temporary productions made on the purpose RAM or hard disc have no other purpose than to facilitate browsing or viewing the web. Client caching does not enable or facilitate the communication of documents cached nor it otherwise instrumental in exploiting copyright works. The presence of cache files are not visible to the ordinary user and the RAM cache will be automatically emptied with the shut down of the computer and those cached on the hard disc will be regularly cleaned up after the disc space allotted to caching is exceeded. In view of the foregoing the right of reproduction is not contravened by client caching. However, it is a different matter in the case of proxy caching. Proxy server are installed in networks near the point of contracts to the internet. Proxy servers store local copy of all web pages in its
cache memory and when a request is made for the same web page it serves the web page from the local storage rather than to access the original website which will be time consuming. In other words a proxy server intercepts all requests for web pages and tries to fulfill them locally. This type of caching is known as proxy caching, system caching or server caching. It is a temporary storage of previously delivered web pages under the control of an access provider or the LAN operator. This facility speeds up the internet access and conserves valuable bandwidth. By enabling temporary storage of web pages at various local levels. Caching prevents traffic jams in cyber space. A document will remain in the proxy cache for several hours or even days. Copies made in proxy cache is privately intended for the communication of the cached works to other users and such caching will amount to reproduction even if the documents are stored temporarily.

The Berne convention does not provide for general right of distribution or right of communication to the public. The exploitation right guaranteed by the Berne convention includes the right of reproduction. Article provides that authors of literary and artistic works protected by the convention shall have the exclusive right of authorizing the reproduction of these works in any manner or form. The expression in any manner or form has been interpreted to include the storage of a protected work in the digital medium including caching which amounts to reproduction within the meaning of Article 9.

4.3 Third problem posed by internet relates to search engines. A search engines builds periodically directing of frequently visited sites and also of the meta tags which are key words which describe the content of the web page. Question arises whether a return produced by search engine links a content which contains infringing material would constitute copyright infringement.
4.4 Fourth problem posed by internet is linking, linking and deep linking pose new problems for copyright. Hyper Text Transfer Protocol (HTTP) facilitates linking of one website with another without the knowledge or consent of the owner of the linked websites. Hyper text link is an embedded electronic address that points to another internet location that points to another internet location and takes the user to that location on clicking on that link. If such link takes the user to a site which infringes the copyright, question of liability for copyright infringement. Similarly deep linking occurs when selective contents of subordinate pages of a home page are linked by another person thus by passing the top page in the hierarchy leading to loss of revenue due to taken fact users will not be aware of the real owners of the site. Deep linking raises questions about weather such linking infringes the copyright of the target site provides that four specific types of copying will not constitute copyright infringement if the service provider adopts and implements "reasonable" policies concerning terminating subscribers who transmit infringing material and does not interfere with "standard" technical measures used by copyright owners to identify and protect their works.

The copyright act 1957 though amended in 1994 and 1999 to take care of the technological changes still requires major amendments to deal with the challenges posed by internet and the digital revolution. The liability of service providers are required to be clearly spelt out as in the digital millennium copyright act 1998. The US has adopted copyright specific approach while dealing with service provider's liability for all sorts of wrongdoings like defamation etc.

The object of copyright is promotion of learning and protection of public interest in making available as much information as possible in public domain and also to benefit the author. Free exchange of ideas and public access to knowledge are equally important. Public access to published information an important goal of copyright law. Normal mode of publication
is the distribution of physical copies of work which has been effective in enabling public access. Once copies are published and works were purchased by libraries and other members of the public it becomes part of the social and cultural record of the society. Publication is irrevocable in the sense that once copies are made public it can not be unpublished excepting when the copies may be withdrawn. Old editors can be replaced with later editions but still historical record will contain its varieties. Works can be removed at the instance of the owner of the copyright and public access to works in digital medium can be controlled by technical protection means. Since copyright protection is a monopoly it is dangerous to expand the scope of copyright protection at the cost of acquisition of knowledge by the public.

5. Objective of the Study :

Copyright is a unique kind of Intellectual property and its importance is growing day by day. It is the human beings who have the capacity of creativity. They can be author, compose, artistic and designer for creating and producing original works.

In order to protect the rights of authors and artists who create and produce intellectual products various countries of the world have enacted copyright laws and India is no exception in this regard. The copyright acts have been enacted to check the piracy i.e, infringement of rights so that the fruits of the labour put forth by the authors or the copyright owner may be enjoyed by the deserving authors and copyright owners and not the pirated or plagiarists who undermine the rights of Intellectual property creators. The following are the objective of the present study :

1) To introduce the origin, trends and development of Intellectual property right.
2) To identify and assess the cyber crime.
3) To highlight the Impact of copyright in Electronic Environment.
4) To assess the role of institutions/distributors etc.
5) To suggest ways and means for controlling the Electronic Information under the umbrella of copyright law.

6. Review of Literature:

The study is based on documentary as well as non-documentary sources. An extensive literature searches was conducted to ascertain availability of literature on the proposed study. Together with these efforts, searches had been conducted through Internet also to find out relevant literature. Though vast amount of literature was available of the present work i.e. issues concerning IPR copyright, Electronic technology, Electronic publishing etc.

Kumar (2003):

The issues are thus becoming more complicated with pricing of information in electronic media and thus the whole issue of copyright is being reviewed all over the world. As regards to the use of books and issues pertaining to libraries, the existing norms, conventions and regulations are to be kept in mind.

Nauful (2003):

This paper examines damaging effects of the malicious IT misuse and abuse and also presents some broad recommendation towards addressing the problems. It thus presents major challenges to ethical use of IT cyber crime poses serious threats to the integrity, safety and quality of any system. Conventional security measures are inadequate to cope with criminals using modern technologies.
Ganesh (2003):

Paper looks at the impact of Information, Communication and Technology (ICT) in an era of information, with the growth of e-publishing, one of the biggest advantages of e-publishing in the speedy process, retrieval and dissemination of information and also the development of networking model across library and information centres. Access and exchange of information has been made simple through the network for end users.

Satarkar (2003):

Intellectual property rights and copyright hold importance in almost all walks of life, be it the field of agriculture, biotechnology, library and information science, with the new inventions in science and technology, there is rapid growth in production of the equipments useful for duplicating or copying. This has resulted in malpractice, which effect the Intellectual property rights and copyright cover not only printed matter but the patents, industrial designs, trademarks, trade secrets, layout designing of integrated circuits and so on.

Librarians are deeply concerned with these rights as their work is closely related to the acquisition, storage and retrieval of information.

Only preparation of law for protection of Intellectual property rights does not fulfill the aim. Execution of the law effectively and awareness of these laws among the society play an important role in this success. Such awareness can effectively be created by the educational institutions.

Intellectual property rights and copyright ensure the originator such a protection so that even a new design, logo or a trademark can be protected from its misuse. Even a piece of art, literature, computer program, biological wealth or cultural heritage can be protected with the help of these acts. However, the people are not
adequately aware of the Intellectual property rights and copyright. This book discusses all these issues in depth.

**George (2002):**

Reveals that software is one of the most valuable technologies of the information age. Everything from hand held devices to the internet are run by software. There is no doubt that this technology requires to be protected, what are the challengers presented by the current scenario and does the current framework ensure that neither the creators nor the users are short changed?

**Wadehra (2001):**

This book has been written with the intention of making the people aware about the complex subject of Intellectual property rights. It is an attempt to inform the people in general, besides the practitioners in the field of intellectual property rights, The students and those involved in the process of governance at political and bureaucratic levels, of what is what, what is coming, what are the consequences and what needs to be done to save ourselves from the potential dangers and take advantages of the coming changed leading regime.

All the respect relating to this complex subject have been dealt with in a very simple language touching each aspect i.e. patents, trademarks, copyright, designs and geographical indications separately.

**Narayanan (2001):**

Gives an authoritative commentary on the entire gamut of this multifaceted law and explains, inter alia, that though there is no copyright in ideas, yet the copyright in a work giving expression to the idea in a material from automatically subsists as soon as the work comes into existence, provided it is original. If a design is
registered under the designs act of 1911, it is not eligible for protection under the copyright act but to a design not so registrable, copyright will subsist under the copyright act. Again, information relating to any subject is now available through internet and website from anywhere in the world and within a few seconds. Beneficial though they are, the changes introduced in the new millennium enormously increased the scope of piracy of Intellectual property and against which the present law appears inadequate. The work not only highlights all the salient features of the new legislations but also the essential and useful information about all branches of IPR law.

Srivastava (2001):

The paper discussed the legal aspects of Intellectual Property Rights, Information technology products has been discussed. It is shown that the fast going electronic medium entails increased change of infringement of copyright. The inadequacy of existing Indian copyright Amendment Act, 1994 has been indicated. Changing role of libraries has been discussed and need of making provision in copyright legislation has been stressed for validating this role of libraries

Viswanathan (2000):

This paper presents the copyright issues in the digital era. Digital medium negates the foregoing assumptions. Digital technology has detached information from the physical plane and application of laws of the physical world to information in the digital medium has resulted in absurdities. Since copyright protection is a monopoly it is dangerous to expand the scope of copyright protection at the cost of acquisition of knowledge by the public.
Moorthy (2000):

It reveals the development in the information technology have much helped libraries in their day to day operation. However, they also brought with them a number of issues and concerns. One of the major issues which concerns publishers, authors and librarian alike is the copyright. The developments in the electronic publishing, computers and communications fields have further complicated the situation. The Vulnerability of digital information for manipulations makes the problem all the more serious problems relating to copyright of electronic information resources on Internet, multimedia works, computer software, databases and copyright enforcement have been dealt. Security of information including uses of cryptography, digital finger prints and water marks to prevent illegal copying over networks has also been discussed.

Gupta (2000):

Discussed the emerging focus on the question of protection on databases is guided by the international debate on the proposed WIPO treaty on Intellectual property in respect of databases aimed at harmonizing the national law. In an open economic environment, it is essential to provide for database protection in live with international developments. The paper examines the issues and implication of the proposed treaty in the context of professional developments of library and information services the essential of the principle of substantial investment for the protection of database has been questioned.

It argues for articulation to provide for the use and re-utilization of databases for scientific research, private purposes, education, public health and other social or governmental purpose. The importance of public domain/government owned information has been highlighted. The need of database protection is essential in the context of the growth of information industry and services and attracting foreign investments and exploiting domestic capabilities. The impact of the proposed sui
generic protection on secondary information services like abstracting is an important issue in the Indian context of promotion and progress of science, single source information, information industry and information services, an update on the current debate and perspective has been provided.

Debroy (1998):

Intellectual property rights has been the most contentious issue in the aftermath of the Uruguay round of negotiations and the final agreement on trade-related Intellectual property rights (TRIPs) more specifically the TRIPs agreement covers seven forms of Intellectual property – patents, copyrights, industrial designs, trademarks, integrated circuit, geographical indication and undisclosed information and the gap exist not for all of TRIPs, but for patents. Therefore, this book should help to formulate a national strategy, if not a national policy, on intellectual property rights.

Cornish (1996):

Provides comprehensive and authoritative coverage of the whole spectrum of Intellectual property law as it applies in the U.K. it takes account of highly significant developments at the European and International levels. It also discusses the GATT agreements on Trade related aspects of Intellectual property rights (TRIPs).

Thairani (1996):

Deals with an important role of copyright law in the complex world of modern communications. The basic aim of this branch of law is to promote progress in society by affording legal protection to the rights of authors of creative works as well as those concerned with the dissemination of such works to the public. A copyright law needs to be constantly reviewed and revised because methods of communication and using works keep changing and developing.
KOUL (1992):

Intellectual Property Rights have a direct bearing and symbiosis with inventions and technology. Technology can be defined as a systematic knowledge for manufacturing of a product or of rendering of a service in Industry, agriculture or commerce whether that knowledge be reflected in an invention, a utility model, an industrial design, a plant variety or in technical information in the form of documentation or in skills or experiences of experts for the design, installation, operation or maintenance of an industrial plant or an equipment or for the management of an industrial or commercial enterprise or its activities. Today Science and Technology is the key to the progress of mankind and the intellectual capital formed by scientific resources and the aptitude for the technological innovations a expressed in proprietary knowledge constitutes the major assets of any country.