MINOR RESEARCH PROJECT
on

"Intellectual Property Protection and Protective Softwa re's for Database at International and National Level"

Submitted by

Principal Investigator
Dr.Sapna Sukrut Deo,
B.S.L, LL.M, PhD. DCL
Assistant Professor
BVDU, New Law College,
Pune-411038
Maharashtra

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Joint Secretary,
UGC, Western Regional Office (WRO)
Ganeshkhind, Pune-411007

CHAPTER -I
INTRODUCTION

The term Intellectual property refers to a number of distinct types of creations of the mind for which property rights are recognized and protected by law. Intellectual property is concerned with ownership of intangible and non-physical goods and includes ideas, inventions, literary and artistic works names, designs, symbols, artwork, writings, and other creations. It also covers digital environment, such as audio and video clips, E-publications, online games, film, television broadcasting, radio broadcast, and notably computer programs that can be downloaded online.

Intellectual property is intangible, it is more difficult to protect than other types of property. Tangible property such as a car can be recovered if it is stolen. However, if intellectual property is stolen, it may be difficult to recover. For example, when a person comes up with an idea for a new invention and someone else lifts the idea, the potential profit of the invention may also be taken away. Similarly, if a digital recording of a new song is 'leaked' on the Internet, thousands of people may download it and redistribute it to others. When such an incident takes place, the profit potential of selling the music may also get substantially diminished.

On account of such financial implications, intellectual property is often considered as a legal entity and steps are taken to safeguard the rights of owners, creators and inventors. Intellectual Property may be defined as those creations of the legal mind in relation to which the State confers upon individuals a statutory monopoly for a prescribed term to prevent their unauthorized exploitation.[1] Intellectual property rights are also defined as the rights given to people over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creations for a certain period of time.[2] Intellectual property rights are the 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

[1] Michael Blakeney: "Guidebook On Enforcement Of Intellectual Property Rights".
[2] WTO n.d. Frequently asked questions about TRIPS in the WTO. http://www.wto.org/english/tratop_e/trips_e/tripfq_e.htm#WhatAre.

commerce. They give the creator the right to prevent others from making unauthorized use of their property for a limited period.[3]

As a result of defining and establishing intellectual property rights, innovators, owners, authors and creators have legal protection of their ideas and creations. This may be done by applying for patents for inventions, registering trademarks, brands, names, and logos, putting written works under copyright. Copyright is a form of intellectual property protection granted under laws to the creators of original works of authorship such as literary works including computer programs, tables and compilations including computer databases which may be expressed in words, codes, schemes or in any other form, including a machine readable medium, dramatic, musical and artistic works, cinematographic films and sound recordings

Copyright are a set of exclusive rights granted by law to the creators and producers of forms of creative expressions such as literary, artistic, musical, cinematographic work. These rights bestow on the copyright owner the control over the use of his works like their reproduction and distribution for a limited durations, while the concept of copyright is very ancient, the law granting these rights are of comparatively recent origin. Their genesis can be traced to the chaotic market conditions in the cultural industries created by the advancement in the technology following the industrial revolution. There was felt need to have proper norms to regulate new business opportunities in the creative arts. Laws protecting copyright have been introduced as response to widespread commercial exploitation of literary works as a result of technological developments in the printing methods. it was the inventions of printing press in the fifteenth century and consequential publication of literary works in the multiple copies that led to the enactment of laws in England first prohibiting importation of foreign books in 1534,then granting search, seizure and destruction power to the "stations company" over unauthorized copies in 1956 and finally during the reign of queen anne the copyright act of 1710 granting" sole right and liberty of printing books "to author and their assigns for a period of fourteen years. During the next two hundred years, a number of legislations were enacted in Britain granting different exclusive rights to author and publishes as the publishing industry expanded and newer technologies were introduced. Originally designed to cover printed material, the scope of copyright law progressively expanded to cover newer forms of creative

[3] Integrating Intellectual Property Rights And Development Policy, Report of Commission on Intellectual Property Rights, London September 2002.

expressions like photographic and cinematographic works and phonograms, made possible by technologies. In India too modern copyright law emerged consequent to the spread of printing technology. It is true that while the history of printing of books in India goes back to 1557, that of copyright law is only little more than a hundred and fifty year old. These was because the early printing activies were mostly non-commercial and Christian missionary driven. but once commercial publishing pick up ,need for a copyright law to protect the interest of authors and publishers was felt. this led to enactment of the Indian copyright act of 1847 on 15 December 1847.This act made the English law applicable to the areas under the control of the British East India company.

Subsequently, when Britain enacted the copyright act,1911 ,the first British legislation to bring the various copyright within single text[4]It was considered appropriate to have a new legislation for India too. thus was promulgated in Indian copyright act of 1914 which was slightly modified version of the British copyright act,1911,adopting it to the legal requirement of India .this law remained in forced till 1958 when the present Indian Copyright Act of 1957 had came into force. The vagaries and compulsions of history dragged India into the legal regime of Great Britain for about a hundred years .this had certain advantages so far as copyright protection was concerned, Great Britain had been one of the founder members of the Berne Conventions.[5]Its Laws on copyright had kept abreast of the International Treaties and state of technologies in this area this naturally ensured that the Indian law was also on paw with the same. Thus at the time of its independent, India had a copyright Law which was fully compatible with the international treaties on copyright and the technologies in the cultural industries at that time.

It is not only the compulsions of the sovereign state to have of its own, which is not merely an appendage or an adaptation of the law of another country, but also the felt need resulting from technological developments such as “New and advanced means of communications like broadcasting, lithography, etc which made enactment of a new legislation in 1957 inevitable. This focus on the need for copyright law harmonizing itself with the state of technology has never shifted, whenever need had arisen for suitably arming the law with provisions necessary for tackling new challenges posed by the developments in the technological field ,necessary amendments had been carried out in the Act The

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[4] T.C.James ,“ Indian Copyrights Laws and Digital Technologies” Journal of Intellectual property rights,Vol 7,September 2002,pp 425-435.

[5] T.C.James ,“ Indian Copyrights Laws and Digital Technologies” Journal of Intellectual property rights,Vol 7,September 2002,pp 425-435.

influence of new technology is visible in the amendments made 1983,1984,and 1994.For example ,the 1983 amendments in law inserted new sections and definitions in the Act to take care of broadcasting technology, reprographic technologies and so on. In order to tackle the menace of increased piracy of copyrighted works. Due to the introduction of new techniques of printing ,recording and fixation of broadcast program, amendments made in the Act in 1984.the situation created by various technological developments that had taken place in the world in 1980's and early 1990s was prime reason for the comprehensive amendments in 1994.

While the contours of copyright law has always been drawn by the developments in the technological world, the emergence of digital technologies towards the concluding decades of the twentieth century as the defining paradigms of new age communication raised a whole new sets of challenges to copyright regimes. The traditional notions of the basic concept of copyright such as rights of reproduction and distributions have became inadequate and even irrelevant in digital era. A host of intangibles have arisen in the world of 'property incorporeal', all works can be digitalize whether they compromise text, images, sound or diagrams and once digitalized the various element such as images are all 'equal' can me merged, transformed, manipulated or mixed to create an endless variety of new works .earlier rights of reproduction and distribution affected tangible physical copies only of a work. The New technology brought in non-material reproduction and distribution physical reproduction were replaced by Digital Reproduction, while intellectual property right community got bewildered at these developments, sloly they learnt the tricks of the new game and found out ways to regulate the rights in the cyberspace.[6]The Concern efforts of the International community to respond to the challenges of digital technologies mostly took place under the aegis of the World Intellectual property Organization. This special agency of the United Nations Organization responsible for the promotion of the protection of intellectual property throughout the world[7] began in 1989 to examine the revisions needed in the Berne Convention for the protection of Literary and Artistic works (the Berne Convention 1886) in the light of the new technologies[8] and concluded two new treaties in a diplomatic conference in December 1996,namely,the WIPO Copyright Treaty(WCT)[9] and the WIPO Performance and

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6 T.C.James ," Indian Copyrights Laws and Digital Technologies" Journal of Intellectual property rights,Vol 7,September 2002,pp 425-435.

7 See WIPO General Information, WIPO Publication No 400(E).

8 For a brief background of WIPO's effort see WIPO document No.CRNR/DC/4.

9 WIPO Publication No.223(E).

Phonograms Treaty (WPPT)[10],these treaties are popularly known as they are intended to address the issues of copyright protection on the internet, the worldwide communication system possible by advancements in digital technologies. The WCT and WPPT address the issues in three ways, namely, (a) by clarifying the exiting provisions in the Berne Convention and in the International Convention for the protection of performers, producers of phonograms and Broadcasting Organizations (the Rome Convention,1961) and in some cases, reaffirming the interpretations already generally adopted (b) giving new provisions on rights and obligations, while the negotiations in WIPO had been going on, the Uruguay Round of Multilateral Trade Negotiation had concluded the Agreement on Trade related aspects of Intellectual Property Rights(TRIPS)in 1994.[11]

This Minor Research Project addresses highly Challenges and debated issues pertaining to Copyright infringement and protection to database while drawing analogies from laws of US and UK. It also suggests certain amendments to the Indian laws so as to establish a more definite Copyright protection for Original Owner. The major challenges to copyright generated by advancements in digital technologies are detailed below,:

1. Copyright Protection of Databases
2. Protection of personal information in Database
3. Protection of Non Original database
4. Test of Originality in Database
5. The effect of multiple authorship
6. Creation ownershimp
   issues of externally funded project.
7. Abstract and article related issues in research
8. Telecom issues and Database
9. Issues of downloading
10. Ownership in instances of employee creation
11. The role of contract/ lisencing in overriding IP legislation
12. Issues of "Substantial Contribution" in creation of database
13. Distribution and publication, broadcasting issues
14. The current challenges faced for the drafting of database protection law are
15. Copyright Protection of Computer Programs

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[10] WIPO, Model provisions on the protection of computer software, quoted in srewart.

[11] T.C.James ," Indian Copyrights Laws and Digital Technologies" Journal of Intellectual property rights,Vol 7,September 2002,pp 425-435.

16. Liability for linking and deep-linking online content
17. Liability for framing online content
18. Copyright Protection of Caching,
19. Jurisdiction in Cyberspace
20. Fair use
21. Circumvention of Digital Rights Management System

- **Copyright Protection of Databases**: Databases should be given copyright protection even if they are the compilation of non- original works as they are the result of skill and labour employed by the author in creating the work. If anyone by pain and labour collects and reduces into the term of a systematic course of instruction those questions which he may find an ordinary person asking in reference to common phenomena of life, with answers to those questions, and explanation of phenomena of whether those explanations and answers are furnished by his own recollection of his former general readings, or out of works consulted by him for the express purpose, the reduction of questions so collected, with such answers under certain heads and in scientific form, is amply sufficient to constitute an original work which will be protected by copyright.[12]

Certain problems were faced while giving copyright protection to computer programs and software, like Does Copyright subsist in a computer program?, If it does, does the copyright in the BBC program?, If the above question are affirmative, what should the court's approach be to a claim of Non-literal Copying? The law assumes that if a thing is in writing, it can be protected through copyright and if it is a machine or invention then it can be protected by patent. Computer programs have both aspects i.e. authorship as well as invention -which law generally does not assume simultaneously. One of the views is that a computer program uses mathematical algorithms and functions in a technical manner. Thus, it needs patent protection. Another view is that it cannot be protected under patent as granting monopoly like protection i.e. patent in computers, may hamper technological development of society. However, it is apparent that a computer program subsists only in material form in which ideas are expressed and it is to be protected under copyright as copyright protects expression of ideas and not ideas themselves. Thus, most countries have protected computer software and programs under copyright. Initially in India, the Copyright Act, 1957 did not protect computer programs. However, after the Amendment Act of 1999, it has given protection

[12] Jorrold v. Houlston, (1857) 3 KJ 708: 69 ER 1294.

to computer programs as literary works, which are already protected under copyright.[13]

- **Liability for linking and deep-linking online content:** The software that underlies the operation of the Internet allows information to be "hyperlinked" or "hypertext reference linked" within and between sites.[14] Such linking typically occurs when the creator of one website provides a reference to another website, usually indicated in colored text or icons, using software that allows the user to click on the reference and view the content on the linked website. While enabling users to surf fluidly from one website to another, this practice also raises copyright issues. A simple link from one website to the home page of another website does not normally raise concern, as the use of such links may be equated to the use of footnotes to refer to other sites.[15] Employing a simple link, the user merely views the material from the linked site, and is aware that it originates from a different website. This process does not create a copy of the linked work, other than that created in the random access memory (RAM) of the computer. Often, no permission is required to make a link to a site, either because the website owner has given an implied license to link by posting his material on the Web, or by characterizing such linking as fair use.[16]

- **Liability for framing online content:** A related issue has arisen as a result of the practice of using browser software to "frame" content from another online source. The legal difficulty arises because the user sees the original website content, which may be copyright protected, framed by a different

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[13] Section 13 of the Copyright Act, 1957 provides:
Works in which copyright subsists.- 'Subject to the provisions of this section and the other provisions of this Act, copyright shall subsist throughout India in the following classes of works, that is to say,- original literary, dramatic, musical and artistic works, cinematograph films, and sound recordings.'

[14] See generally, Ignacio Javier Garrote, "Linking and Framing: A Comparative Law Approach," Issue 4, European Intellectual Property Review, pp.184-198 (2002).

[15] In some jurisdictions, such as the United States of America, copyright infringement has been found as a result of the simple act of linking, if such links facilitate copyright infringement or piracy; see Intellectual Reserve Inc. v. Utah Lighthouse Ministry Inc., United States District Court (C.D. Utah) 75 F. Supp. 2d 1290. A similar reasoning was followed by the Belgian court in IFPI v. Beckers (Antwerp Court of First Instance, at http://www.jura.uni-tuebingen.de/~s-bes1/text/ifpi_v_beckers.PDF). However, in Germany, this practice would seem not to give rise to legal liability, in accordance with §5(3) of the Teledienste-Gesetz, following court decisions in Pfälzer-Links (LG Frankenhalt, Urt. vom 11.28.2000) and Swabedoo (OLG Schleswig-Holstein Urt. vom 12.19.2000). See the discussion by Garrote (2002), supra note 139, at p.184, p.188 and pp.190-191.

[16] See also Maureen A. O'Rourke, "Fencing Cyberspace: Drawing Borders in a Virtual World," 82 Minnesota Law Review, p. 609 (1998).

website, with a different URL, and possibly with different logos and advertising. This practice may constitute copyright infringement in some jurisdictions, because a copy of the material is made in the user's computer memory.

- **Copyright Protection of Caching:** Caching' is a technical process which essentially involves the storage of data so that future requests for that particular data can be served faster. Does the creation of a cached copy constitute unauthorised copying? At this time, no case has straightforwardly addressed the issue of direct infringement during the initial "copying" step in the search engine caching process, or the legality of cached links.

Jurisdiction in Cyberspace: Jurisdiction is the authority given to a legal body or to a political leader to deal with legal matters, and to pronounce or enforce legal matters. Because cyberspace has no geographical boundaries, it establishes immediate long-distance communications with anyone who can have access to any website. Usually an internet user has no way of knowing exactly where the information on a site is being accessed from. Here, i.e., in cyberspace, jurisdiction issues are of primary importance. As Internet does not tend to make geographical and jurisdictional boundaries clear, Internet users remain in physical jurisdictions and are subject to laws independent of their presence on the Internet. Therefore, any kind of use of the World Wide Web and any related activities on the internet may expose the person to risk of being sued in any state or foreign country where another internet user may establish a claim. Accordingly, in each case, a determination should be made as to where an online presence will subject the user to jurisdiction in a distant state or a foreign company. As such, a single transaction may involve the laws of at least three jurisdictions:

1) The laws of the state/nation in which the user resides,
2) The laws of the state/nation that apply where the server hosting the transaction is located, and
3) The laws of the state/nation which apply to the person or business with whom the transaction takes place.

So a user in one of the United States conducting a transaction with another user in Britain through a server in Canada could theoretically be subject to the laws of all three countries as they relate to the transaction at hand. Jurisdiction is an aspect of state sovereignty and it refers to judicial, legislative

and administrative competence. Although jurisdiction is an aspect of sovereignty, it is not coextensive with it. The laws of a nation may have extra-territorial impact extending the jurisdiction beyond the sovereign and territorial limits of that nation. This is particularly problematic, as the medium of the Internet does not explicitly recognize sovereignty and territorial limitations. There is no uniform, international jurisdictional law of universal application, and such questions are generally a matter of conflict of law, particularly private international law. An example would be where the contents of a web site are legal in one country and illegal in another. In the absence of a uniform jurisdictional code, legal practitioners are generally left with a conflict of law issue.

Fair use: the defence of fair use is available to the user while making use of the copyright material available in the traditional form. However, whether fair use defence should be available on the Internet has widely been debated. It has been argued that a user, perhaps mistakenly relying on fair use, has the potential to distribute a work to thousands of other users in cyberspace without diminishing the quality of the copy. Further, copyright owners may think that the continued improper exploitation of fair use will ultimately keep potential contributors out of the digital environment because the authors may not like to put their copyright material on the Internet. Copyright owners may believe that if a work may be instantly accessed for free on the web, distributed to masses free of cost, there will be no incentive for the copyright owners who may ultimately like to keep their works away from the Internet.

Circumvention of Digital Rights Management System:The digitization of content, together with the increased reliance by rightsholders and intermediaries (including collecting societies) on information technology, and the Internet, is influencing the traditional means of licensing intellectual property rights, as described above. The application of information technology to facilitate the exploitation of rights is commonly referred to as "digital rights management" (DRM). DRM systems are aimed at enforcing certain business rules in respect of the use of content protected by intellectual property. Typically, these business rules concern questions of who is entitled to access a work, at what price and on which terms. These terms address questions such as whether a user is entitled to make any copies of the work (and, if so, how many), for how long a user is entitled to access a work; whether a user can excerpt the work or make changes to it; whether a user can access the work on one or on multiple devices, etc. In effect, DRM systems aim to automate the process of licensing works and of ensuring that license terms are complied

with. The following elements are often associated with DRM systems: (1) identifiers, i.e., numbers or codes permitting the unique identification of a piece of content (comparable to, for example, the ISBN number for books);[17] (2) metadata, i.e., information about the piece of content which may include, for example, the identity of the rightsholder, the price for using the work, and any other terms of use; and (3) technological protection measures, i.e., systems designed to ensure that certain usage rules are complied with, in particular those concerning access and copy control.[18]

Research Aims and objectives of Project:

1. This research aims at gathering further insights into the challenges and possibilities of Copyright protection and the economic value of infringements on Intellectual Property Right in Cyberspace.
2. The aim is to investigate what the actual nature and scope of the Copyright infringements in cyberspace.
3. To assess to what extent the current system of Copyright protection can be considered sufficient.
4. Against this background, the research will address a number of questions:

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[17] For an important initiative in the area of identifiers, see the work of the International DOI (Digital Object Identifier) Foundation at*http://www.doi.org.*

[18] For a discussion of digital rights management, see presentations of R. Kahn, President, Corporation for National Research Initiatives; N. Garnett, Senior Vice President, MetaTrust Utility, InterTrust Technology Corporation; T. Koskinen-Olsson, Chief Executive Officer, Kopiosto; and N. Paskin, Director, The International DOI Foundation, WIPO Second International Conference on Electronic Commerce and Intellectual Property (September 2001), at *http://ecommerce.wipo.int/meetings/2001/conference/program/index.html*, and presentations of L. Chiariglione, Division Head, Multimedia Technologies and Services, Centro Studi e Laboratori Telecommunicazioni; D. Gervais, Vice President, International Copyright Clearance Center & Partner, Brouillette, Charpentier, Fortin; T. Koskinen-Olsson, Chair, International Federation of Reproduction Rights Organizations; N. Paskin, Director, The International DOI Foundation; and H. Rosen, President and Chief Executive Officer, Recording Industry Association of America, First WIPO E-Commerce Conference (September 1999), at *http://ecommerce.wipo.int/meetings/1999/program/wednesday.html*. See also D. Marks, Senior Counsel Intellectual Property, Time Warner Inc. and B. Turnbull, Partner, Weil, Gotshal & Manges LLP, Technical Protection Measures: The Intersection of Technology, Law and Commercial Licenses, WIPO Document No. WCT-WPPT/IMP/3 (December 3, 1999) and T. Koskinen-Olssson, Chief Executive Officer, Kopiosto and D. Gervais, Acting Director, Rightsholder Relations, Copyright Clearance Center, Electronic Commerce and Copyright: A Key Role for WIPO, WIPO Document No. ACMC/2/1 (November 17, 1999) at *http://www.wipo.int/documents/en/meetings/1999/acmc/index.htm.*

- ✓ What is a Copyright from a legal point of view?
- ✓ To what extent does this match with the sector's view on innovativeness in cyberspace?
- ✓ Which examples of Copyright infringement in cyberspace can be given?
- ✓ How wide-spread is the infringement problem and what is the sense-of-urgency?
- ✓ What does this mean in economic terms?
- ✓ What can be done to overcome the problems in cyberspace law?
- ✓ Does this require changes in the legal framework?
- ✓ To what extent could the current evolutions in the innovation landscape (open innovation) be captured in the Legal framework?

5. Based on the in-depth understanding obtained in answering these questions, the ultimate goal of this Research is to recommend practical ways to further improve the policy currently in place, in order to tackle the challenges to Copyrights in cyberspace is confronted With to the highest possible extent.

Hypothesis of the Research Project:

1. There is no Specific Law in India other than the extended meaning of regular law of Copyright to address the issues arising out of Digital Copyright and for protection of database.
2. There is no harmonization between International legal regime and domestic legal regime pertaining to copyright law in cyberspace.
3. The Indian Copyright Law has not been amended to implement the Anti-circumvention provisions under the WCT and WPPT.
4. There is need for amendment in the existing laws of copyright in accordance with the system prevailing under US and UK legal system.
5. The Judicial Activism in this area is much needed.

Research Methodology:

The materials used in a Doctrinal Legal Research are largely Library based and consist primary and secondary Sources

- ❖ **Primary Sources:**
  - ✓ Constitutional Provisions
  - ✓ Legislations (Rules ,regulation, and bye-laws)
  - ✓ Reported Decisions of the Courts (Case-Laws)

- **Secondary Sources:**
  - ✓ Text Books.
  - ✓ Reference Books.
  - ✓ Journals./Magazines/Newspapers
  - ✓ Legal Encyclopedia
  - ✓ Digest of Cases
  - ✓ Official Statistics
  - ✓ Internet.

Applicability of Laws in Present Project:

The present research is related to the topic Copyrights laws and Information Technology Laws from US, and INDIA

International Convention:

Conventions:

1. Berne Convention for the protection of literary and artistic works 1971
2. The Rome Convention for the Protection of Performers, Producers Of Phonograms and Broadcasting Organizations ,1961

Treaties:

1. WIPO Copyright Treaty,2000
2. WIPO Performance and Phonograms Treaty,2000

Agreement

1. TRIPS Agreement ,1995

US Laws:

1. Stop Online Piracy Bill ,2011
2. Digital Millennium Copyright Act,1998
3. **EU:** European Union Directives, 2001

Indian Laws:

1 The Indian Copyright (Amendment) Act, 2012
2. Indian Information Technology (Amendment) Act 2008
3. Indian Information Technology Act 2000
4. Copyright Act,1957
5. Indian Constitutional Law'1950

Utility of the Research Project:

1. Law Researchers: The researcher thinks that this topic will be of immense utility to all the forthcoming law researchers, Law Students.
2. Every Copyright Owner will get to know as to how to protect their databases by using protective software's.
3. Software/hardware Engineers will be able to protect their Computer programmes by understanding copyright laws in India
4. Music Industry: Research Project will help them to be aware of their rights, curbing piracy and allowing them to get their rightful benefits of their work.
5. Research Project will also help the Police in conducting raids and producing evidence from computer system during the trial by the court
6. Web Designer will become aware about their role while designing any web layout content for Educational institutions, manufacturers or organizations

Chapterization of the Research Project:

Chapter I of this Research Project deal with the general background and growth of the Internet and concept of intellectual property, i.e Copyright in cyberspace. The development of new information technologies is enhancing commercial use of the internet. Internet posses are geometrically increased risk- to intellectual property owners over the virtual world. The risk of Intellectual Property violation in the form of, unauthorized publication and distribution of copyrighted materials and unaccredited hyper –linking, plagiarism is higher over the virtual world due to global reach of Internet. So lawmakers must anticipate room for future problems which may arise. Legislators must take into account the reality that new technology exists and then legislate with it in mind.

Chapter II of this Research Project deal with necessary concepts related to copyrights, Database rights, cyberspace, and information technology laws.

Chapter III is the general aspects of intellectual property rights and copyrights in cyberspace with the help of international and national laws – International Convention, Position of US, Position of UK, and Indian Perspective.

Then Chapter IV Researcher deal with Critical evaluation through judicial interpretation related to Copyright infringement in Cyberspace".

Then Chapter V confer the Challenges and issues of pertaining to Copyright violation of database, E-publishing, Computer programs, Responsibility of Internet Service Provider, Caching, framing, linking, Digital Broadcasting etc.and control on this digital objects in cyberspace by Digital Rights Managements (DRM).and also possible solution to this problem. Under such circumstances this chapter explores the need for an Anti-Circumvention Law in India.

In Chapter V, Researcher contrasts this proposed regime with the help of recent Case laws and some criticism about protecting database in Cyberspace.

Finally, Chapter VI is Conclusions and recommendations.

CHAPTER - II
INTELLECTUAL PROPERTY PROTECTION TO DATABASE IN CYBERSPACE: A CONCEPTUAL ANALYSIS

Intellectual Property may be defined as those creations of the legal mind in relation to which the State confers upon individuals a statutory monopoly for a prescribed term to prevent their unauthorized exploitation.[19] Intellectual property rights are also defined as the rights given to people over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creations for a certain period of time.[20] Intellectual property rights are the 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 the right to prevent others from making unauthorized use of their property for a limited period.[21]

The protection of copyright and related rights covers a wide array of human creativity. Much of the creative content that fuels electronic commerce is subject to such protection. Under the most important international copyright convention, the Berne Convention[22] copyright protection covers all "literary and artistic works." This term encompasses diverse forms of creativity, such as writings, both fiction and non-fiction, including scientific and technical texts and computer programs; databases that are original due to the selection or arrangement of their contents; musical works; audiovisual works; works of fine art, including drawings and paintings; and photographs. Related rights protect the contributions of others who add value in the presentation of literary and artistic works to the public: performing artists, such as actors, dancers, singers and musicians; the producers of phonograms, including CDs;

Digital technology enables the transmission and use of all of these protected materials in digital form over interactive networks. The process of "digitization" allows the conversion of such materials into binary form, which can be transmitted across the Internet, and then re-distributed, copied and stored, in

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19 Michael Blakeney: "Guidebook On Enforcement Of Intellectual Property Rights".

20 WTO n.d. Frequently asked questions about TRIPS in the WTO. http://www.wto.org/english/tratop_e/trips_e/tripfq_e.htm#WhatAre.

21 Integrating Intellectual Property Rights And Development Policy, Report of Commission on Intellectual Property Rights, London September 2002.

22 The Paris Act of the Berne Convention for the Protection of Literary and Artistic Works (1971).

perfect digital form. While the transmission of text, sound, images and computer programs over the Internet is already commonplace, this is also becoming true for transmission of audiovisual works such as feature films, as the technical constraints of narrow bandwidth begin to disappear[23] materials protected by copyright and related rights, spanning the range of information and entertainment products, constitutes much of the valuable subject matter of e-commerce[24].

Given the capabilities and characteristics of digital network technologies has had a tremendous impact on the system of copyright and related rights, and the scope of copyright and related rights in turn is affecting how e-commerce evolves. It is essential that legal rules are set and applied appropriately, to ensure that digital technology does not undermine the basic tenets of copyright and related rights. From one perspective, the Internet has been described as "the world's biggest copy machine."[25] Whereas earlier technologies such as photocopying and taping allow mechanical copying by individual consumers, they do so in limited quantities, requiring considerable time, and resulting in copies of lesser quality. Moreover, the copies are physically located in the same place as the person making the copy. On the Internet, by contrast, one can make an unlimited number of copies, virtually instantaneously, without perceptible degradation in quality[26]. And these copies can be transmitted to

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[23] For a discussion of digital distribution of films online, see presentation of A. Khanna, Chairman, Reliance Entertainment, Ltd., and presentation of T. Dow, Vice President and Counsel, Technology and New Media, Motion Picture Association of America (MPAA), Second WIPO International Conference on Electronic Commerce and Intellectual Property ("Second WIPO E-commerce Conference", September 2001), at *http://ecommerce.wipo.int/meetings/2001/conference/program/index.html*. See also presentations of G. Whitson, Senior VP, Business and Legal Affairs, Warner Bros. Online, and L. Safir, Chairman, AFMA Europe, WIPO International Conference on Electronic Commerce and Intellectual Property (" First WIPO E-commerce Conference", September 1999).

[24] For a discussion of online publishing of literary works, see presentation of H. Spruijt, Member, Executive Committee, International Publishers Association, and J. Bourgois, Chief Executive Officer, Vuibert Publishers, Second WIPO E-Commerce Conference (September 2001) . For a discussion of the current state of online delivery of music, see presentation by J. Vacher and presentation of A. Vänttinen, New Media Adviser, International Federation of Musicians (FIM), Founder, Musicfinland.com, and presentation of S. Perlmutter, at the Second WIPO E-Commerce Conference (September 2001).

[25] See "It's the World's Biggest Copy Machine," PC Week (January 27, 1997).

[26] Indeed, in the earliest discussions concerning the Internet and its implications for copyright, some commentators argued that content subject to such rights could not be controlled on the Internet, and authors would have to find new ways to make money in cyberspace. See L. Lessig, "The Law of the Horse: What Cyberlaw Might Teach," Harvard Law Review (1999); C. Mann, "Who Will Own Your Next Good Idea,", The Atlantic Monthly (September 1998); see also "Digital Rights and Wrongs," Economist, p.95 (July 17, 1999). As the WIPO Internet

locations around the world in a matter of minutes. The result could be the disruption of traditional markets for the sale of copies of programs, art, books and movies[27]. In the music industry, for example, the emergence of Internet-based file swapping services such as Napster and others[28], , have enabled a large-scale exploitation of music and recordings without the authorization of the rightsholders. That exploitation was further aggravated by the simultaneous broad commercialization of CD burners and portable MP3 players, adapted to the most commonly used file format. These challenges face the copyright industry at a time when the share of copyright in national economies is reaching unprecedented levels. therefore critical to adjust the legal system to respond to the new technological developments in an effective and appropriate way, and to do so quickly and continuously, because technologies and markets evolve increasingly rapidly. This will ensure the continued furtherance of the fundamental guiding principles of copyright and related rights, which remain constant whatever may be the technology of the day: giving incentives to creators to produce and disseminate new creative materials; recognizing the importance of their contributions, by giving them reasonable control over the exploitation of those materials and allowing them to profit from them; providing appropriate balance for the public interest, particularly education, research and access to information; and thereby ultimately benefiting society, by promoting the development of culture, science, and the economy. In addition, a number of important recent developments have occurred in the field of copyright and related rights that have far-reaching implications for the industry, and that are being addressed in legislatures, judiciaries and other international fora. While courts in some jurisdictions are responding to new types of infringement resulting from the use of digital technologies, new laws are also being debated and passed in some countries to ensure effective protection and enforcement of rights in the digital era. At the same time, copyright industries are also adapting their business methods and uses of technology to exploit the digital opportunities, while guarding against new risks.

Treaties of 1996 demonstrate, however, copyright continues to play an essential role in this new environment.

27 Even without the effects that can result from copyright infringement, these markets will face considerable pressures generated by new business models and disintermediation in the networked environment. See " The Economic and Social Impacts of Electronic Commerce: Preliminary Findings and Research Agenda," OECD, at Ch.4 (1999) (in particular, the OECD highlights the effects of disintermediation).

28 239 F.3d 1004 (9th Cir. 2001).

This chapter introduces the conceptual analysis and fundamental elements of Copyrights in digital environment with a meaning, definition of elements of Copyrights protection in Cyberspace

1. Copyright:

The word "copyright" is derived from the expression "copies of words" which was used for the first time in 1886, which means a manuscript or other matter prepared for printing. According to blacks Law Dictionary copyright means "transcript, imitation, and reproduction of any original writing, printing, and instruction". The object of copyright is to encourage authors, composers and artists to create original work by rewarding them with exclusive right for a specified period to reproduce work or publishing and selling them to public. For that the copyright law has an extremely important purpose to give authors the economic and artistic incentive to create the intellectual property that all societies need. In order to do so, the Copyright Act gives the owner of copyright the exclusive right to make and to authorize others to make the following valuable uses of their work:

1. To reproduce the copyrighted work in copies or phonorecords;
2. To prepare derivative works based upon the copyrighted work;
3. To distribute copies or phonorecords of the copyrighted work to the public by sale or otherwise, or by rental, lease, or lending;
4. To perform the copyrighted work publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works;
5. To display the copyrighted work publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work; and
6. In the case of sound recordings, to perform the work publicly by means of a digital audio transmission.

It is illegal for anyone to utilize any of these exclusive rights of the copyright owner without proper permission, and only the copyright owner can authorize that permission. Mere ownership of a book, manuscript, or any other copy of a work does not give the owner the copyright. The transfer of ownership of a material object that embodies a copyrighted work does not by itself transfer any rights in the copyright. Therefore, if you purchase a book you can give or

lend it to a friend, but the copyright law still prohibits photocopying or scanning the work onto a website and giving other access to the copies[29].

In other words it can be said copyright ensures certain minimum safeguards of the rights of authors over their creations, thereby protecting and rewarding creativity. Creativity being the keystone of progress, no civilized society can afford to ignore the basic requirement of encouraging the same. Economic and social development of a society is dependent on creativity. The protection provided by copyright to the efforts of writers, artists, designers, dramatists, musicians, architects and producers of sound recordings, cinematograph films and computer software, creates an atmosphere conducive to creativity, which induces them to create more and motivates others to create.

Definition of Copyrights under various Laws:

Section 14 of the act gives the definition of copyright[30].

(1) "copyright" means the exclusive right subject to the provisions of this Act, to do or authorise the doing of any of the following acts in respect of a work or any substantial part thereof, namely:-

a) In the case of a literary, dramatic or musical work, not being a computer programme,-

(i) to reproduce the work in any material form including the storing of it in any medium by electronic means;

(ii) to issue copies of the work to the public not being copies already in circulation;

(iii) to perform the work in public, or communicate it to the public;

(iv) to make any cinematograph film or sound recording in respect of the work;

(v) to make any translation of the work;

(vi) to make any adaptation of the work;

(vii) to do, in relation to a translation or an adaptation of the work, any of the acts specified in relation to the work in sub-clauses (i) to (vi);

(b) In the case of a computer programme,-

(i) to do any of the acts specified in clause (a)[31]

(ii) to sell or give on commercial rental or offer for sale or for commercial rental any copy of the computer programme:

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[29] Words Copyright Basics, http://www.csusa.org/face/words/basics.htm.
[30] Copyright Act, 1957.
[31] Subs by Act 49 of 1999, Section 3, for sub clause (ii) (wef 15.1.2000)].

Provided that such commercial rental does not apply in respect of computer programmes where the programme itself is not the essential object of the rental."

(c) In the case of an artistic work,-

(i) to reproduce the work in any material form including depiction in three dimensions of a two dimensional work or in two dimensions of a three dimensional work;

(ii) to communicate the work to the public;

(iii) to issue copies of the work to the public not being copies already in circulation;

(iv) to include the work in any cinematograph film;

(v) to make any adaptation of the work;

(vi) to do in relation to an adaptation of the work any of the acts specified in relation to the work in sub-clauses (i) to (iv);

(d) In the case of cinematograph film, -

(i) to make a copy of the film, including a photograph of any image forming part thereof;

(ii) to sell or give on hire, or offer for sale or hire, any copy of the film, regardless of whether such copy has been sold or given on hire on earlier occasions;

(iii) to communicate the film to the public;

(e) In the case of sound recording, -

(i) to make any other sound recording embodying it;

(ii) to sell or give on hire, or offer for sale or hire, any copy of the sound recording regardless of whether such copy has been sold or given on hire on earlier occasions;

(iii) to communicate the sound recording to the public.

Explanation: For the purposes of this section, a copy which has been sold once shall be deemed to be a copy already in circulation.

The Copyright (Amendment) Act, 2012

In section 14 of the principal Act,—

(i) in clause (c), for sub-clause (i), the following sub-clause shall be substituted, namely:—"(i) to reproduce the work in any material form including—

(A) The storing of it in any medium by electronic or other means; or

(B) depiction in three-dimensions of a two-dimensional work; or

(C) depiction in two-dimensions of a three-dimensional work;";

(ii) in clause (d),—(a) for sub-clause (i), the following sub-clause shall be substituted, namely:—"(i) to make a copy of the film, including—

(A) a photograph of any image forming part thereof; or
(B) storing of it in any medium by electronic or other means;";
(b) for sub-clause (ii), the following sub-clause shall be substituted, namely:—
"(ii) to sell or give on commercial rental or offer for sale or for such rental, any copy of the film;";
(iii) in clause (e),—
(a) in sub-clause (i), after the words "embodying it", the words "including storing of it in any medium by electronic or other means" shall be inserted;
(b) for sub-clause (ii), the following sub-clause shall be substituted, namely:—
"(ii) to sell or give on commercial rental or offer for sale or for such rental, any copy of the sound recording;"

In UK Laws[32] "Copyright" means the sole right to produce or reproduce the work or any substantial part thereof in any material form whatsoever, to perform, or in the case of a lecture to deliver, the work or any substantial part thereof in public; if the work is unpublished, to publish the work or any substantial part thereof; and shall include the sole right,—

(a) to produce, reproduce, perform, or publish any translation of the work;
(b) in the case of a dramatic work, to convert it into a novel or other non-dramatic work ;
(c) in the case of a novel or other non-dramatic work, or of an artistic work, to convert it into a dramatic work, by way of performance in public or otherwise;
(d) in the case of a literary, dramatic, or musical work, to make any record, perforated roll, cinematograph film, or other contrivance by means of which the work may be mechanically performed or delivered, and to authorise any such acts as aforesaid.

In Copyright, Designs and Patents Act 1988, Copyright is a property right which subsists in accordance with this Part in the following descriptions of work—

(a) Original literary, dramatic, musical or artistic works,
(b) Sound recordings, films [F1or broadcasts], and
(c) The typographical arrangement of published editions.

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[32] Section 1(2)of Copyright Act 1911:

(2) In this Part "copyright work" means a work of any of those description in which copyright subsists.

(3) Copyright does not subscript in a work unless the requirement of this part with respective qualification for copyright protection are made.

In US laws[33] "Copies" are material objects, other than phonorecords, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. The term "copies" includes the material object, other than a phonorecord, in which the work is first fixed.

"Copyright owner", with respect to any one of the exclusive rights comprised in a copyright, refers to the owner of that particular right.

Subject matter of copyright:[34]

(a) Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. Works of authorship include the following categories:

(1) Literary works;
(2) Musical works, including any accompanying words;
(3) Dramatic works, including any accompanying music;
(4) Pantomimes and choreographic works;
(5) Pictorial, graphic, and sculptural works;
(6) Motion pictures and other audiovisual works;
(7) Sound recordings; and
(8) Architectural works.

(b) In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation,

[33] Section 101 of Copyright Law of the United States.
[34] Section §102 of Copyright Law of the United States.

concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work

Conclusion

1. Copyright Act in India is substantively similar to copyright law in the UK. The expansion of doctrinal principles through judicial interpretation has also been influenced by cases in the UK as the Supreme courts; High courts in India regularly refer to UK judgments.
2. There are no differences between UK law and Indian law in case of the definition of Copyright, especially artistic work, an artist from the UK well-known with copyright law should find himself to be very comfortable with copyright law in India. The difference would perhaps lie more in the specific language of the statutes, but the core principles remain the same. One difference between the two countries lies in the term of copyright. In India the term of copyright for artistic works is life of the author plus sixty years, which is ten years less than in the UK.
3. There are many differences between the copyright legislation in USA and India in relation to copyright, In India, there has been no more case law which can be of assistance in defining copyright in cyberspace
4. In India there are no special laws for defining digital copyright

2. Cyberspace:

The word cyber apparently refers to the science of cybernetics. It derives from the Greek word **Kubernao,** which means "to steer" and which is the root of our present word "to govern". It connotes both the idea of navigation through a space of electronic data, and of control, which is achieved by manipulating those data.

The reference to cybernetics is important because it defines itself as a science of information and communication. The term “cyberspace” is sometimes treated as a synonym for the Internet, but is really a broader concept. The term cyberspace emphasises that it can be treated as a place. William Gibson is credited with coining the term in his novel Neuromancer.[35] For example, in his novel Gibson[36] describes how someone, by entering cyberspace, could steer computer-controlled helicopters to a different target.

[35] American Bar Association, “ Achieving Legal and Business Order in Cyberspace: A Report on Global Jurisdiction Issues Created by the Internet ” (2000).
[36] Gibson, W., Count Zero. 1987, London: Grafton.

Gibson's cyberspace is connected to the real world, and allows cyberspace navigators to interact with that world. Gibson's concept included a direct brain-computer link that gives the user the illusion of vision, moving about in the data "matrix" to obtain information. Cyber space is a virtual space that has become as important as real space for business, politics, and communication and for like other purposes. But where is cyberspace? The answer to this question seems to approach the metaphysical one. It is everywhere and nowhere[37]; Functionally, cyberspace is a place. It is a place where messages and web pages are posted for everyone in the world to see[38].

The United States Supreme Court's first opinion about the internet contains language that can be determined as acceptance of the legal metaphor of cyberspace as a place outside national boundaries. The expression of the court was significantly distinctive when it states that a unique medium consisting of certain tools located in no particular geographical location but available to anyone, anywhere in the world, with access to the internet that is known to its users as 'cyberspace ❞ There exists in international law a type of territory, which is called international space.

At present there are three international spaces as such Antarctica, Outer-space, and the High Seas.

For jurisdictional analysis, cyberspace should be treated as a fourth international space. The history of international spaces begins at sea. Modern admiralty law and the law of the High Seas began in large part with Grotius in the 17th Century.

The Law of the Sea remains the dominating voice in the discussion of international spaces, and the oceans have long been the most important of the international spaces. Antarctica was not discovered until about 1820, and it did not become the subject of serious international attention until the 1950s, especially during the International Geophysical Year (1957-58).

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[37] http://en.wikipedia.org/wiki/cyberspace#originsoftheword/28/06/2006.

[38] In his book Wyrms, science fiction author Orson Scott Card describes a most remarkable place called Heffiji's house, which could have been a metaphor for cyberspace. Heffiji had a sign on her house reading "Answers" that lured many curious people. She asked questions of all her visitors and wrote the answers down on scraps of paper. These scraps of paper were scattered all around her enormous house. Unfortunately she had no brain, so she could not learn anything. She did, however, know where she had put the pieces of paper, and you could learn anything from her if you asked the right question. ORSON SCOTT CARD, WYRMS 165-188 (1987).

Although visible since time immemorial, outer space remained similarly unexplored until 1957, when Sputnik introduced man to a new international space.

Cyberspace emerged during the 1970s and 1980s as the apparatus of the Internet took root, but it was not until the early 1990s that an explosion in users and uses, including commercial uses, introduced a worldwide virtual community to another international space. The theoretical and conceptual impediment is physicality. These three physical spaces are not like cyberspace, which is a non-physical space

Definitions:

- Term originated by author William Gibson in his novel Neuromancer, the word Cyberspace is currently used to describe the whole range of information resources available through computer networks.[39]
- Coined by author William Gibson in his 1984 novel "Neuromancer," cyberspace is now used to describe all of the information available through computer networks.[40]
- Describes the world of connected computers and the society that gathers around them. Commonly known as the Internet.[41]
- The total interconnectedness of human beings through computers and telecommunication without regard to physical geography.[42]
- Refers to a “virtual meeting place” of the electronic universe of information available through the Internet.[43]
- the virtual shared universe of the world's computer networks, it has come to describe the global information space. As an example, telephone conversations, 'chat-room' discussions, computer communications and ATM transactions all take place in cyberspace.[44]

[39] www.library.arizona.edu/rio/glossary.htm.
[40] advertise.guapunya.net/glossary/.
[41] www.tsl.state.tx.us/ld/pubs/compsecurity/glossary.html.
[42] www.creotec.com/index.php.
[43] www.iarchive.com/_library/terminology/c.htm.
[44] www.unesco.org/education/educprog/lwf/doc/portfolio/definitions.htm.

Conclusion

According to Strate, Cyberspace time is the totality of events involving relationships between humans and computers, between humans through computers, and between computers themselves." The Researcher have given a short overview and analysis of the evolution and common meaning of the term cyberspace and made a contribution by offering a new definition. The Researcher propose that cyberspace is a time dependent set of interconnected information systems and the human users that interact with these systems, where the addition of time-dependence is our contribution. The Researcher have also tried to analyze the implications of the time-dependence issue from a cyber conflict perspective. While this new definition does not necessarily replace any pre-existing definitions, The Researcher feels that it does offer an important viewpoint to cyberspace that is often not considered.

3. Copyright in Cyberspace: Protection of Database

The Cyberspace is one of the most important development made by the man till date. It is a global network of interconnected computers and computer networks. With its unprecedented ability to provide an easy, relatively inexpensive and flawless means to create and distribute copyright material to a mass audience throughout the world, it has threatened the rights of the copyright owners. Copyright owners perceive Internet as threat to their exclusive rights due to the following reasons: (i) wide distribution is relatively simpler and quicker on the Internet; (ii) anyone can distribute to a mass audience; (iii) the quality of copies is virtually indistinguishable from the original; (iv) distribution is almost costless; (v) users can easily and cheaply obtain some copyright material to the Cyberspace. The Internet may impair the exclusive rights of the copyright owners by transforming the nature and means of publication and making their works extremely vulnerable to Internet piracy. Another problem is the decentralized nature of the Internet's management, which makes it possible for any user to widely disseminate a work on the electronic network through any number of channels.

The increasing use of the Internet has posed numerous legal disputes. The analysis and outcomes of many legal issues, inter alia, copyright infringement in this context are, complicated because some or all of the activities engaged in have taken place on digital networks. Today, courts national legislatures and international organizations are experiencing difficulty in talking the complex issues that the Internet creates for copyright law.

There is no doubt that the Internet provides entrepreneurs and creators with the opportunity to make profit in a new, rapidly growing medium. However, the nature of the Internet creates enormous legal issues relating to copyright law because much of the material found on the cyberspace is subject matter protected by copyright law. Not only simple information but also the pictures, movies, software, musical works, multimedia works and audio-visual works can easily be accessed through the Internet. Further, the aforesaid material easily be downloaded from the Internet and also uploaded on it without having spent any money in most of the cases.[45]

4. Infringement

Infringement Means violation of the terms of an agreement, encroachment, trespass, or disregard of others' rights, such as invasion of an exclusive right of intellectual property.

The owner of a copyright has sole right to do certain acts in respect of the work. If any act is done without the authority of owner, this counts for infringement of the copyright in the work. The nature of the rights depends upon the nature of the work. The reproduction of the work in any material form, performance of the work in public and communication of the work to public in certain form are usual methods by which the copyright in any work is commercial exploited for profit. If any person without authority commercial exploits the work for profit he infringes the copyright.

Types of infringement

(1) Primary Infringement
Copyright is said to be infringed when one of the exclusive rights of an author is performed by a party without the consent or authorization of the author, this infringement is referred to as primary infringement.

(2) Secondary Infringement
Providing accessories for infringing the exclusive rights or assisting in making or distribution of infringing copies, this infringement is refereed to as secondary infringement.

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[45] Uploading refers to the transfer of information from a user's personal computer to a computer network, usually via a bulletin board, while downloading refers to the transfer of information from a bulletin board of the Internet to one's personal computer.

Definition of infringement [46]

In India: Copyright in a work is said to be infringed,

(a) When any person, without a licence granted by the owner of the copyright or the Registrar of Copyrights under this Act or in contravention of the conditions of a licence so granted or of any condition imposed by a competent authority under this Act-
   (i) does anything, the exclusive right to do which is by this Act conferred upon the owner of the copyright; or
   (ii) permits for profit any place to be used for the communication of the work to the public where such communication constitutes an infringement of the copyright in the work, unless he was not aware and had no reasonable ground for believing that such communication to the public would be an infringement of copyright; or

(b) when any person-
   (i) makes for sale or hire, or sells or lets for hire, or by way of trade displays or offers for sale or hire, or
   (ii) distributes either for the purpose of trade or to such an extent as to affect prejudicially the owner of the copyright, or
   (iii) by way of trade exhibits in public, or
   (iv) imports into India, any infringing copies of the work except one copy of any work for the private and domestic use of the importer.

Explanation given along with section51 states that; the reproduction of a literary, dramatic, musical or artistic work in the form of a cinematograph film shall be deemed to be an "infringing copy".

Illustration[47]
A producer, without the authorization from the writer of a novel, makes a film based on the story of novel. The film is deemed as an “infringed copy” of the novel.

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[46] Section 51 of Indian Copyright Act 1957.
[47] Dr. M. K. Bhandari: law relating to Intellectual Property Rights, Central Law Publications, (2006) p. 52.

Definition of infringing copy:

Infringing copy[48] means-

1. in relation to literary, dramatic, musical or artistic work, a reproduction thereof otherwise than in the form of a cinematographic film;
2. in relation to a cinematographic film, a copy of the film made on any medium by any means;
3. in relation to a sound recording, any other recording embodying the same sound recording, made by any means;
4. in relation to a programme or performance in which such a broadcast, reproduction right or a performer's right subsists under the provisions of this Act, the sound recording or a cinematographic film of such programme or performance,

The import of one copy of any work for private and domestic use of the importer is permitted. Commonly work is said to be infringed when one or more of the following act takes place:

- Reproduction of the work in a material form;
- Publication of the work;
- Communication of the work to the public;
- Performance of the work in public;
- Making of its translations and adaptation; and
- Commercially exploiting the work, or trying to do so.

Factor involved in determination of infringement of copyright are[49]

(a) Copying and substantial copying
(b) Subconscious copying
(c) Indirect copying
(d) Direct evidential of copying from the work in which copyright subsists.

Explanation with examples

Copying: a person publishes the research article of another person in his name. Is an example of direct copying.

Substantial copying: A reads a book of B. He uses content of a chapter in his book. In this case there has been substantial copying. Even a small part of work used may constitute infringement.

In *Prakashak Puneet Prashant Prakashan v Distt.judge, Bulandshahr &Ashok Prakashan (Regd)* the Allahabad High Court held that if the petitioner

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[48] Section 2(m) of Indian Copyright Act 1957.

[49] See Cornish W.R., Intellectual Property, 5th edition.,2003.

publishes a book by adding any word before or after the book "Bal Bharati", he infringes the copyright of the respondent[50].A causal connection between the original and alleged infringed apart from sufficient degree of similarity.

Indirect copying: a work may be copied by making copy from a pre-existing copy of the same work. If the defendant makes a two dimensional copy of the plaintiffs three-dimensional work of plan, he is guilty of indirect copying. Similarly a play based on novel, which in turn was based upon some original play amounted to infringement of original play[51].
Direct infringement: is a strict liability offence and guilty intention is not essential to fix criminal liability. The requirements to establish a case of copyright infringement under this are:
(1) Ownership of a valid copyright; and
(2) Copying or infringement of the copyrighted work by the defendant.

Thus, a person who innocently or even accidentally infringes a copyright may be held liable under the Copyright Act. The guilty intention of the offender can be taken into account for determining the quantum of damages to be awarded for the alleged infringement. Evidence of copying can be found out if the defendant's work contains the same errors, as those made in plaintiffs work.

Lay observer test: to observe from the fact provided by the reader, spectator or viewer after having read both the work should be clearly of the opinion and gets an unmistakable impression that the subsequent work to be the copy of the first., and the impression formed of a lay observer, is so it is said to be an infringed work. The lay observer test was used in *R.Madhavan v. S.K.Nayar case* in which the Kerala high Court held that dissimilar novels do not involve infringement of copyright.

What are not infringements?

A blanket ban on reproduction of a work of science, literature and arts, either in full or part may, in certain circumstances, become inimical to the public purpose that a copyright is intended to serve. For example, such a total ban may, instead of promoting and stimulating study and research in science, humanities and arts, lead to thwart it and become counter productive. The Act, recognizing such possibility, permits copying and reproduction of and from a

[50] Mahendra Kumar Sunkar: Copyright Law in India (Article), 20 Mar 2008, http://www.legalserviceindia.com/article/30-Intellectual-Property-laws.html.
[51] Schlesinger v. Turner 1980 63 CT 764.

copyrighted work in certain circumstances without attracting provisions of infringement. The principle behind such statutory exceptions to infringement is one of fair dealing or fair use of the copyrighted work, which provides balance between the copyright owner's exclusive rights, and the wider public interest. The fair use is to be determined by considering whether the part reproduced or copied is substantial and amounts to plagiarism. To determine whether the portion taken up from a work is substantial one does not necessarily depend on the volume of the material reproduced; it is very much a question of the importance and the import of the part picked up.

The Act has a long list of actions that are not to be regarded as infringement of copyright:

- a fair dealing with a literary, dramatic, musical or artistic work for private use including research, and for criticism or review;
- in the case of a computer programme, making copies or adaptation by the lawful possessions of a copy of the programme for the original or back up purposes; or for understanding its underlying principles and ideas, or for non- commercial personal use;
- a fair dealing of the work for reporting current events in newspaper or a periodical, or in a broadcast or a film or by means of a photograph. (The publication of a compilation of addresses or speeches delivered in public is not a fair dealing); reproduction for the purpose of a judicial proceeding or a report of judicial proceedings; or reproduction in a work prepared by the secretariat of a legislature exclusively for the use of members of the legislature;
- reading or reciting in public extracts from a published literary or dramatic work;
- publication of short passages in a collection for use in educational institutions. Not more than two such passages from works by the same author can be taken.
- reproduction by a teacher or a pupil in the course of instruction, or as a part of questions for examination or in answers to such questions;
- performance in the course of activities of an educational institution, if the audience is limited to the staff and students and parents and guardians of the students and persons directly connected with the institution;
- making of sound recordings in respect of any literary, dramatic or musical work, if the person making the recordings (i) has given a notice of his intention to make the recordings, (ii) has provided copies of all covers or labels with which the recordings are to be sold, and (iii) has paid due

royalties to the author, at the rate fixed by the copyright Board. (No recording can be made until the expiry of two calendar years from the end of the year in which the first recording of the work was made).

- Playing the recording to an audience, if it is utilised in a room in a private residence meant for the common use of residents, or in a club/ organization as part of the amenities provided by it, and which is not conducted for profit;
- performance in an amateur club before a non-paying audience, or for the benefit of a religious institution;
- the reproduction in a newspaper, magazine, periodical of an article on current economic, political, social or religious topics, unless the author has reserved to herself the right of such reproduction;
- the publication in a newspaper etc. of a report of a public lecture;
- the making of a maximum of three copies for use in a public library, if such work is not available for sale in India;
- the reproduction for the purpose of research and/or private study, or with a view to publishing an unpublished work kept in a library, museum or other public institution. However, if the identity of the author of such work is known, such reproduction is to be made only after more than sixty years have passed since the death of the author; if there are more than one authors, the sixty years are to be counted from the death of the author who died last;
- the reproduction of any matter, published in any official Gazette, except an Act of a Legislature; any Act of a Legislature, if it is reproduced with any commentary thereon or any other original matter; the report of any Committee, Commission, Board or a like body appointed by the Government, if such report has been laid on the Table of the Legislature, unless prohibited by the Government; any judgment of a judicial authority unless prohibited;
- the reproduction/publication of a translation of an Act of Legislature, in any Indian language if no such translation produced by the Government exists, or if such government translation exists, it is not available for sale to public. However, in such cases, it is to be stated at a prominent place that such translation has not been authorised or accepted by the Government;
- the making or publishing of a painting, drawing or photographs of a work of architecture;
- the making or publishing of a painting, drawing, engraving or photograph of a sculpture or other artistic work, if such work is permanently located in a public place; and the inclusion in a cinematograph film of any artistic work permanently situated in a public place, or any other artistic work by way of

background, or if such inclusion is incidental to the principal matters represented in the film.

It may be noted that the exceptions to infringement in relation to a literary, dramatic, musical or artistic work, are equally applicable in relation to any translation or adaptation of such a work since they qualify as original works in their own right and copyright subsists in them too. However, for publishing a translation, permission of the author of the original work is necessary.

Infringement of Copyright[52]

In UK Law Copyright in a work shall be deemed to be infringed by any person who, without the consent of the owner of the copyright, does anything the sole right to do which is by this Act conferred on the owner of the copyright: Provided that the following acts shall not constitute the infringement of a copyright:—

(i) any fair dealing with any work for the purpose of private study, research, criticism, review or newspaper summary:

(ii) Where the author of an artistic work is not the owner of the copyright therein, the use by the author of any mould, cast, sketch, plan, model or study made by him for the purpose of the work, provided that he does not thereby repeat or imitate the main design of the work:

(iii) The making or publishing of paintings, drawings, engravings, or photographs of a work of sculpture or artistic craftsmanship, if permanently situated in a public place, or building, or the making or publishing of paintings, drawings, engravings, or photographs (which are not in the nature of architectural drawings or plans) of any architectural work of art:

(iv) The publication in a collection, mainly composed of non-copyright matter, bona fide intended for the use of schools, and so described in the title and in any advertisement issued by the publisher, of short passages from published literary works not themselves published for the use of schools in which copyright subsists: Provided that not more than two of such passages from works by the same author are published by the same publisher within five years, and that the source from which such passages are taken is acknowledged:

(v) The publication in a newspaper of a report of a lecture delivered in public, unless the report is prohibited by conspicuous written or printed notice

[52] Section 2 of the Copyright Act 1911:

affixed before and maintained during the lecture at or about the main entrance of the building in which the lecture is given, and, except whilst the building is being used for public worship, in a position near the lecturer; but nothing in this paragraph shall affect the provisions in paragraph (i) as to newspaper summaries:

(vi) The reading or recitation in public by one person of any reasonable extract from a published work.

(2) Copyright in a work shall be deemed to be infringed by any person who—

(a) Sells or lets for hire, or by way of trade exposes or offers for sale or hire; or

(b) Distributes either for the purposes of trade or to such an extent as to affect prejudicially the owner of the copyright; or

(c) By way of trade exhibits in public; or

(d) Imports for sale or hire into any part of His Majesty's dominions to which this Act extends, any work which to his knowledge infringes copyright or would infringe copyright if it had been made within the part of His Majesty's dominions in or into which the sale or hiring, exposure, offering for sale or hire, distribution, exhibition, or importation took place.

(3) Copyright in a work shall also be deemed to be infringed by any person who for his private profit permits a theater or other place of entertainment to be used for the performance in public of the work without the consent of the owner of the copyright, unless he was not aware, or had no reasonable ground for suspecting, that the performance would be an infringement of copyright.

In US laws[53] : Infringement of copyright[54]

(a) Anyone who violates any of the exclusive rights of the copyright owner as provided by sections 106 through 122 or of the author as provided in section 106A(a), or who imports copies or phonorecords into the United States in violation of section 602, is an infringer of the copyright or right of the author, as the case may be. For purposes of this chapter (other than section 506), any reference to copyright shall be deemed to include the

[53] Title 17 of the United States Code,§ 501.

[54] The Berne Convention Implementation Act of 1988 amended section 501(b) by striking out "sections 205(d) and 411" and inserting in lieu thereof "section 411." Pub. L. No. 100-568, 102 Stat. 2853, 2860. The Satellite Home Viewer Act of 1988 amended section 501 by adding subsection (e). Pub. L. No. 100-667, 102 Stat. 3935, 3957.

rights conferred by section 106A (a). As used in this subsection, the term "anyone" includes any State, any instrumentality of a State, and any officer or employee of a State or instrumentality of a State acting in his or her official capacity. Any State, and any such instrumentality, officer, or employee, shall be subject to the provisions of this title in the same manner and to the same extent as any nongovernmental entity.

(b) The legal or beneficial owner of an exclusive right under a copyright is entitled, subject to the requirements of section 411, to institute an action for any infringement of that particular right committed while he or she is the owner of it. The court may require such owner to serve written notice of the action with a copy of the complaint upon any person shown, by the records of the Copyright Office or otherwise, to have or claim an interest in the copyright, and shall require that such notice be served upon any person whose interest is likely to be affected by a decision in the case. The court may require the joinder, and shall permit the intervention, of any person having or claiming an interest in the copyright.

(c) For any secondary transmission by a cable system that embodies a performance or a display of a work which is actionable as an act of infringement under subsection (c) of section 111, a television broadcast station holding a copyright or other license to transmit or perform the same version of that work shall, for purposes of subsection (b) of this section, be treated as a legal or beneficial owner if such secondary transmission occurs within the local service area of that television station.

(d) For any secondary transmission by a cable system that is actionable as an act of infringement pursuant to section 111(c)(3), the following shall also have standing to sue: (i) the primary transmitter whose transmission has been altered by the cable system; and (ii) any broadcast station within whose local service area the secondary transmission occurs.

(e) With respect to any secondary transmission that is made by a satellite carrier of a performance or display of a work embodied in a primary transmission and is actionable as an act of infringement under section 119(a)(5), a network station holding a copyright or other license to transmit or perform the same version of that work shall, for purposes of subsection (b) of this section, be treated as a legal or beneficial owner if such secondary transmission occurs within the local service area of that station.

(f)(1) With respect to any secondary transmission that is made by a satellite carrier of a performance or display of a work embodied in a primary transmission and is actionable as an act of infringement under section 122, a television broadcast station holding a copyright or other license to

transmit or perform the same version of that work shall, for purposes of subsection (b) of this section, be treated as a legal or beneficial owner if such secondary transmission occurs within the local market of that station.

A television broadcast station may file a civil action against any satellite carrier that has refused to carry television broadcast signals, as required under section 122(a)(2), to enforce that television broadcast station's rights under section 338(a) of the Communications Act of 1934.

5. Infringements in Cyberspace

Scope of Infringement in Cyberspace:

To determine the scope of infringement in cyberspace, the Net may be thought of as comprising two spheres; one commercial, the other non-commercial. Non-commercial sphere of the Net, which allowed continuing its well-established practices of free searching, free browsing, and free copying. The incredible explosion of the Internet, and the Web in particular, owes much of its success to these three intrinsic characteristics of the Net: free searching, free browsing, and free copying. Such should be the default for the non-commercial sphere of the Net.

Those who wish to conduct commerce in digital works over the Net must take reasonable security measures to protect their goods. Right or wrong, once having surfed onto a web, ftp, or other such site, most Net users believe they are free to browse around, to view what source code they can freely access (it's on the menu), and maybe even borrow some of the code or link to the site from their own web page. Furthermore, we have all encountered web sites that prohibit access in some manner. Commercial subscription sites and company firewalls are only two examples. In fact, it appears quite simple for commercial entities to restrict access to their web sites-- keeping the overwhelming majority of us out, or only letting a select few of us in. While on the other hand, it appears quite ludicrous to allow commercial entities to expect passive intellectual property laws to change the culture and practice of Net users.

Who Can Be Held Liable for Infringement in Cyberspace?

Arguably the most hotly debated Net copyright issue--deciding who should be liable for copyright infringement in cyberspace-- remains a touchy subject, especially for the Internet service providers (ISPs). Copyright owners, unable to prevent others from spreading their works on-line, would like to put the burden of liability on the ISPs, thus forcing the ISPs to "police" their customers. However, shifting the burden of enforcement onto the ISPs does not make the job of enforcement any easier, nor more desirable. In fact, imposing contributory or direct infringement liability on ISPs will more likely have a negative chilling effect on the Net, as the ISPs would either have to turn themselves into cyber-cops, drastically raise prices to cover liability costs, or simply exit the business altogether.

To prevent infringers from commercializing non-commercial copyrighted works, the rightful owner will have to perform its own policing, if it desires to police at all. Although such creators cannot practically expect to prevent others from accessing or using their works, they should be able to expect that no one will profit off them either. Granted that policing for such commercial uses might be as difficult as it would be for non-commercial uses, The researcher suggest that the more pervasive the commercial infringement, the better chance the creator will be harmed, and the better chance the creator will notice the harm in the first place. If this sounds illogical, consider the more likely converse. Isolated and rare commercial uses of another's copyrighted expression will have as little chance of causing harm as being discovered at all. Besides, if these creators do not want others to access or copy their content, then they should not post it on a publicly accessible web site in the first place.

Notwithstanding the nature of digital reproduction, at some point it becomes reasonable to expect protection for copyrightable digital works if having taken reasonable protective technical measures to secure such works. It is likewise reasonable to assume some hackers will be able to bypass such technological barriers. They always have. However, such "crackers" will be easier to catch than innocent infringers, constitute a much more dangerous and concentrated threat, and as such deserve more attention and more punishment. As opposed to hackers, crackers are thieves; just like the bank robber, the home burglar, and the pick pocket--but until the novelty of computing wears off, they will continue to be revered, even as they are punished.

6. Databases:

Database' means a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means.

Computer database means a representation of information, knowledge, facts, concepts or instructions in text, image, audio, video that are being prepared or have been prepared in a formalized manner and have been produced by a computer, computer system or computer network and are intended for use in a computer, computer system or computer network.[55]

The protection of the databases is one of the hot button issues facing the Internet. Indeed, these issues go beyond the Internet since databases are essential components of much of our lives as a society as a whole. Those that create and use databases should have some sense about the respective legal issues in this area of intellectual property law.

Definitions:

1. **The Berne Convention** does not use the word "database", but instead specifies in Article 2(5) that "collections" of literary and artistic works which "by reason of the selection and arrangement of their contents constitute intellectual creations shall be protected as such."
2. **TRIPS** Article 10.2 broadens the concept of a database. It provides that "compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such. Such protection, which shall not extend to the data or material itself, shall be without prejudice to any copyright subsisting in the data or material itself."
3. **WCT** Article 5 is substantially similar to the provisions of TRIPS Article 10.2. It provides that "compilations of data or other material, in any form, which by reason of the selection or arrangement of their contents constitute intellectual creations, are protected as such. This protection does not extend to the data or the material itself and is without prejudice to any copyright subsisting in the data or material contained in the compilation."
4. Article 1(2) of the **EC Database Directive** defines a database as "a collection of independent works, data or other materials arranged in a

[55] See Explanation (ii) of Section 43 of the Information Technology Act, 2000.

systematic or methodical way and individually accessible by electronic or other means." This definition includes "hard copy" or paper databases, but specifically excludes computer programs used to make or operate a database[56].

5. Article 5 of the **WIPO Copyright Treaty** ("WCT") states , "Compilations of data or other material, in any form, which by reason of the selection or arrangement of their contents constitute intellectual creations, are protected as such. This protection does not extend to the data or the material itself and is without prejudice to any copyright subsisting in the data or material contained in the compilation[57].
6. Section 2(o), **Indian Copyright Act 1957** states Databases are protected as collections or compilations of literary and artistic works. and the meaning of 'literary work' included works such as computer programmes, tables and compilations including computer databases[58] The Act also provides for the subsistence of copyright protection for literary works under Section 13(1).[59] The necessary requirement is that a database should be the result of its creator's own intellectual effort and that it achieves a sufficient level of originality[60] there can be no copyright in databases that are the result of effort alone, without any skill or judgment in selection of the material to be entered into the database.[61]

Case Laws:

1. Burlington Home Shopping Pvt. Ltd.Vs. Respondent: Rajnish Chibber[62],
   "TRADE catalogues are generally compilations, and as such are capable of protection as literary works. On similar principles, a computer database, stored on tape, disk or by other electronic means, would also generally be a compilation and capable of protection as a literary work"
2. Govindan v. Gopalakrishna[63],

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56 Database Directive, Article 1(3) of EC Database Directive.
57 WCT, art. 5 of WCT.
58 Section 2(o), Indian Copyright Act 1957 with amendments in 1994.
59 Section 13: Work in which copyright subsists: Subject to the provisions of this section and the other provision of this Act, copyright shall subsist throughout India in the following classes of works, that is to be say, original, literary, dramatic, musical, and artistic works.
60 Pankaj Jain and Pandey Sangeet Rai, "Copyright and Trademark Laws relating to computers" Eastern Book Company.
61 G.A. Cramp & Sons Ltd v. Frank Smythson Ltd., (1944) AC 329.
62 (1996)113PLR31.
63 (AIR 1955 Madras 39).

Wherein the work would be protected if the author has expended time, money, labour and skill on it

3. Burlington Home Shopping Pvt. Ltd v. Rajnish ,Chibber & Anr[64], The Burlington case, applying the above ratio, held that a compilation of addresses was protected.
4. Himalaya Drug Co. v. Sumit[65] the Delhi High granted an injunction against an Italian, preventing him from copying the plaintiff's online herbal database onto its own website.
5. Eastern Book Co. v. Navin J. Desai[66] the court raised the standard to a 'modicum of creativity', which was originally laid down in the Feist case
6. Feist Publications, Inc. v. Rural Telephone Service Company[67], Therefore the database sought to be protected must not only be an original creation, but it must also satisfy a minimum level of creativity.

7. Computer Programs

Computer software is a generic term for those components of a computer system that are intangible rather than physical.[68] The term 'computer software', includes a set of computer programs, procedures, databases and associated documentation related to the operation of a computer, computer system, or computer network. It also includes programming language and software tools to be used to develop computer software

Constituents of Computer Software

It is obligatory that one may have to consider computer software as a collection of items and materials associated with the development and operation of computer programme, but which does not include computer hardware. It may include[1]:

- Preparatory design materials, like flowcharts, diagrams, written specifications, form and report layouts, designs for screen displays etc.
- Computer programmes (object code and source code) and other executable code
- Software development tools, like relational database development

64 1995 PTC (15) 278).
65 (Suit no 1719 of 2000).
66 (MANU/DE/0066/2001).
67 499 U.S. 340(1991)).
68 Described by the Oxford University Press Dictionary of Computing (3rd Edn., 1990).

systems, compilers, report generators etc.

- Databases and data files
- Computer output, for example, sound, print-out, computer file or data, electronic signals
- Screen displays
- Manuals and guides (on paper or stored digitally)
- Programmed languages

It is obligatory to note that written specifications, flowcharts, form and report layouts, designs for screen displays and computer output, like sound, print-out, etc. are all protected by copyright provided they were original in the copyright ense, at the first instance.[69]

Computer Program:

Computer program means a set of instructions, expressed in words, codes, schemes or in any other form, including a machine-readable medium, capable of causing a computer to perform a particular task or achieve a particular result[70]. It can be defined as an ordered set of data representing coded instructions or statements that, when executed by a computer cause the computer to process data or perform specific functions.

In India, the Copyright Act, 1957 did not protect computer programs. However, after the Amendment Act of 1999, it has given protection to computer programs as literary works, which are already protected under copyright.[71] The Amendment Act of 1999 has added definitions of 'Computer' and 'Computer Program' to the Act.

"Computer"[72] includes any electronic or similar device having information processing capabilities.

"Computer program[73]" means set of instructions expressed in words, codes,

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[69] Sharma Vakul, Information Technology Act and Practice, 2nd edn (UniversaJ Law Publishing Co Pvt Ltd. New Delhi). 2007, p.369.

[70] Section 2 (ffc) of Copyright Act, 1957.

[71] Section 13 of the Copyright Act, 1957 provides:
Works in which copyright subsists.- 'Subject to the provisions of this section and the other provisions of this Act, copyright shall subsist throughout India in the following classes of works, that is to say,- original literary, dramatic, musical and artistic works, cinematograph films, and sound recordings.'

[72] Section 2(ffb), the Copyright Act, 1957.

[73] Section 2(ffc) the Copyright Act, 1957.

schemes or in any other form, including a machine-readable medium, capable of causing a computer to perform a particular task or achieve a particular result.

"Literary work[74]" includes computer programs, tables and compilations including computer databases.

Computer Programme (Object Code and Source code):

The computer programme whether written in assembly language or high-level language is known as the source code. When the source code is translated by an assembler or a compiler into machine language, it is known as the object code. thus the object code is represented by strings of as 0s and 1s of the binary number system or hexadecimal notation of the electrical charges. The object code cannon be seen, touched or heard, but there can be no doubt that it exists. The object code existing in intangible form be referred to as a literary work and hence be protected under the copyright laws

Case Laws :

1. In Sega Enterprises ltd v. Richard[75], Justice Goulding held that the copyright subsisted in the assembly code version of the programme (the source ode) and that the object code was either a reproduction of or an adaptation of le assembly code version and, as a result, the object code was also protected by copyright.
2. In Apple Computer Inc v. Franklin Computer Corpn[76]., the court 'as of the view that object code was subject to copyright protection.
3. In Computer Edge Pty Ltd. v. Apple Computer Inc.[77], Justice Mason and Wilson, where they observed that" In our opinion, an object code, although brought into existence by technical means, takes on the same literary character as is possessed from the source code from which it is derived. This conclusion seems necessarily to follow, if the protection secured by the Act to the source programs as original literary works is to be effective. If there is no copyright in the object programs which are natural and necessary derivative of the

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74 Section 2(0), the Copyright Act, 1957.
75 1983FSR 73.
76 714F 2nd 1240 (3rd Cir.1983).
77 (1986)161CLR 171 at 143.

source programmes then there is no point in protecting the source programs "

Thus, the bottom line is that prima facie, copyright law applies to both source code and object code and the owners of the copyright in the computer programs re in fact copyright holders to both source code and object code.

In United Kingdom, Copyright Designs and Patents Act, 1988 does not define computer and computer program. Probably, the country would allow courts to develop the meaning of computer and computer program depending upon technological changes[78]. However, computer programs are protected under Copyright, Designs, and Patents Act, 1988. Section 3 of Copyright, Designs and Patents Act, 1988, states that:
"(1) In this part-'Literary work' means any work, other than a dramatic or musical work, which is written, spoken or sung, and accordingly includes-
table or compilation, and a computer program; .....
(2) Copyright does not subsist in a literary, dramatic or musical work unless and until it is recorded in writing or otherwise; and references in this part to the time at which such a work is made are to the time at which it is so recorded."

Thus, the Act places computer programs firmly within the literary works category for purposes of copyright. Under this Act, computer programs are protected through the definition of "writing" as it includes any form of notation or code, whether by hand or otherwise and regardless of the method by which, or medium on which, it is recorded.

In US The Copyright Act of 1976 was amended and the definition of a computer program was added in 1980
A “computer program” is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result. Sudwestdeutsche Inkasso KG v. Bappert und Burker Computer GmbH[79], it was held that to be protected by copyright, a computer program must result from individual creative achievement exceeding the average skills displayed in development of computer programs.

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[78] Pankaj Jain and Pandey Sangeet Rai, ”Copyright and Trademark Laws relating to computers” Eastern Book Company,p.21.
[79] (1985) Case 52/83, BGHZ 94, 276.

8. Jurisdiction:

Jurisdiction, as applied in law, means power of court to hear disputes. According to Blacks Law dictionary defines it as the power of court to decide a matter in controversy and presupposes the existence of a duly constituted court with control over the matter and the parties.

Definition of jurisdiction

As a general term, jurisdiction can refer to the following interconnected concepts:

- a State's power to exercise authority over property and persons within its geographical borders; or
- a geographical area within which political authority may be exercised
- A court power to issue a decree or decide a case

In India the Code of Civil Procedure 1908:

- Section 6: According to the code of civil procedure 1908 pecuniary jurisdiction limits the power of court to here cases up to a pecuniary limit only
- Section 16: Jurisdiction also depends on where subject matter is situated
- Section 19: Where a suit is for compensation for wrong done to the person or to movable property
  Section 20: where defendants resides or cause of action arise

Why jurisdiction is an important issue:

The notion of 'jurisdiction' is vital in the context of dispute resolution because of the deeply rooted relationship between physical proximity and the effects of any legal 'activity. Jurisdiction enables States to monitor and control activities of property and persons within and across its territorial boundaries. This is based on the underlying principle of "consent of the governed", which implies that those subjects to a set of laws must consent to their formulation or application. The subjects of a sovereign -state's laws are primarily located within its physical borders and so are greatly affected by the application of its laws. It is also generally easier to determine the will of those subjects who are in physical proximity to one another. In this way, persons within a geographically defined border are often considered

the ultimate source of law-making authority for a State. Consent to a set of laws is not sought from or given by any persons beyond a State's borders because such persons are not usually affected by these laws. This often prompts a State to have its own set of laws and principles its subjects within its jurisdiction. Thus, for many legal disputes, the notion' of Jurisdiction' is an important way of considering who may be most affected by the application and enforcement of a State's laws.

The interrelated concept is 'judicial 'jurisdiction', which concerns a State's power, as exercised through its Courts, to adjudicate disputes. In the context of dispute resolution, a clear concept of jurisdiction is needed to answer questions, such as 'Which is the most appropriate court to hear the dispute? What law will be applied - to resolve the dispute? Which authority will enforce the judgment?' This Jurisdiction' involves:

The scope of the court's power to examine and determine the acts, interpret and apply laws, make orders and declare judgments. Geographic area, the type of parties who appear, the type of relief that can be sought, and the point to be decided may limit jurisdiction.[80]

With the advent of the Internet, Internet can been seen as multi-jurisdictional because of the ease with which a user can access a web site anywhere in the world. It can even be viewed as uni-jurisdictional in the sense that from the user's perspective, state and national borders are essentially transparent.

The Court in ***Zippo Mfg. v. Zippo Dot Com, Inc***.[81] said there is a global revolution looming on the horizon, and the development of the law in dealing with the allowable scope of personal jurisdiction based on Internet use in its infancy.

The developing law of jurisdiction must address whether a particular event in Cyberspace is controlled by the laws of the state or country where the web site is located, by the laws of the state or country where the ISP is located, by the laws of the state or country where the user is located, or perhaps by all of these laws.

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[80] Nygh PE. Butt P reds} Australian Legal Dictionary. Sydney. 1997 at 650.
[81] 952 F.Supp. 1119 (1997).

Some of the jurists are of the view that ***cyberspace should be treated as a separate jurisdiction.*** In practice, this view has not been supported by the Courts or addressed by lawmakers.

Cyber jurisdiction issues have been dealt with primarily in the civil courts. Since the advent of ***US v. Thomas and Minnesota v. Granite Gate Resorts, Inc ,***[82] however, cyber jurisdiction issues have begun to be examined in criminal courts as well.

Internet jurisdiction can be examined on three bases: [83]

1. jurisdiction to prescribe,
2. jurisdiction to adjudicate and
3. Jurisdiction to enforce.

1 Jurisdiction to prescribe refers to a State's authority to make substantive law applicable to different persons and circumstances.
2. Jurisdiction to adjudicate is defined as the court's entitlement to subject persons or things to the judicial process.
3. Jurisdiction to enforce deals with a State's authority to compel compliance with its laws, whether through judicial or administrative means.

09. Fair Use :

Meaning:
A limited exception to the exclusivity of intellectual property allowing fair critique or private study use of the protected material, and with appropriate acknowledgement[84].

In India Fair dealing: The term 'fair dealing' is not defined in the Copyright Act. , Section 52(1) (a) and (b) refers only to 'fair dealing' of the work and not to reproduction of the work. Accordingly the reproduction of the whole work or a substantial part of it will not be permitted; only extracts or quotations from the work will be permitted. The quantum of extracts or quotations permissible will depend upon the circumstances of each case. No hard and fast rules to cover all cases can be laid down.

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[82] 74F.3d 701 6th Cir. 1996.
[83] RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES, § 401 (1987).
[84] http://www.duhaime.org/LegalDictionary/F/FairDealing.aspx.

Fair dealing is a question of fact and impression. The Court will take into consideration
(1) the quantum and value of the matter taken in relation to the comments or criticism,
(2) the purpose for which it is taken,
(3) Whether the work is published or unpublished, circulated (if unpublished), and
(4) The likelihood of competition between the two works[85].

Factors in favour of fair dealing. In *Hubbard* v *Vosper*[86], it has been said that fair dealing is a question of fact and of impression to which factors that are relevant include the extent of the quotation and its proportion to comment (which may be justifiable although the quotation is of the whole work): whether the work is unpublished; and the extent to which the work has been circulated, although not published within the meaning of the Copyright Act.

Lord Denning has observed: "There is very little in our law books to help on this. Some cases can be used to illustrate what is not 'fair dealing'. It is not fair dealing for a rival in the trade to take Copyright material and use it to his own benefit, such as when The Times published a letter on America by Rudyard Kipling. The St. James' Gazette took out half-a-dozen passages and published them as extracts. This was held to be an infringement.

Walter v Stein Kopff[87] "It is impossible to define what is 'fair dealing'. It must be a question of degree. You must consider first the number and extent of the quotations and extracts. Are they altogether too many and too long to be fair? Then you must consider the use made of them. If they are used as a basis for comment, criticism or review, that may be fair dealing. If they are used to convey the same information as the author, for a rival purpose, that may be unfair. Next you must consider the proportions. To take long extracts and attach short comments may be unfair. But, short extracts and long comments may be fair. Other considerations may come to mind also. But, after all is said and done, it must be a matter of impression. As with fair comment in the law of libel so with fair dealing in the law of copyright. The tribunal of fact must decide."19 'Criticism' means estimating the qualities and character of the original work (Webster's Oxford Dictionary). It has been held that criticism or

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85 Beloff v Pressdram Ltd. (1973) RPC 765; Hubbard v Vosper (1972)2 WLR 389. See also Blackwood v Parasuraman AIR 1959 Mad 410 at 428.
86 (1972)2 WLR 389.
87 1892)3.Ch 489.

review may relate not only to literary style but also to the doctrine or philosophy of the author as expounded in his books.1 A fair criticism of all the ideas and events described in the book or documents would constitute fair dealing.2 In criticism or review of one work quotation from other works are permitted. This is clear from s. 52(l)(a)(ii) which says "criticism or review, whether of that work or of any other work."

Under the **UK** Copyright, Designs and Patents Act 1988 (CDPA), fair dealing is limited to the following purposes: research and private study (both must be non-commercial), criticism, review, and news reporting[88] Although not actually defined as a fair dealing, incidental inclusion of a copyrighted work in an artistic work, sound recording, film, broadcast or cable programme doesn't infringe copyright[89]

Fair dealing and related exceptions in the U.K. include the categories of noncommercial research and private study, criticism and review, as well as the reporting of current events or official proceedings. Fair dealing requires that the user give sufficient acknowledgment of the author and title of the quoted work. The exemptions for criticism and review apply to works that have already been "made available" to the public, and so do not generally apply to unpublished works. Fair dealing only relates to literary, dramatic, musical, artistic [words] and the typographic arrangement of published editions[90].

Fair dealing has been interpreted by the courts on a number of occasions by looking at the economic impact on the copyright owner of the use; where the economic impact is not significant, the use may count as fair dealing. So, it is probably within the scope of the above fair dealing exception to make single photocopies of short extracts of a copyright work for certain purposes, that is, non-commercial research or private study, criticism or review, reporting current events, and so on."

Notwithstanding the provisions of sections 17 U.S.C. § 106 and 17 U.S.C. § 106A, In U.S. LAW [91] the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news

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88 (sections 29, 30, 178 of Copyright, Designs and Patents Act 1988 (CDPA).
89 http://en.wikipedia.org/wiki/Fair_dealing.
90 From the website of the Intellectual Property Office.
91 Fair dealing under the U.S. law. Factors to be considered in deciding whether use is fair use have been set out in the U.S. Copyright Act 1976 (Para 107) as follows:17 U.S.C. § 107.

reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include:

1. the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
2. the nature of the copyrighted work;
3. the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
4. the effect of the use upon the potential market for or value of the copyrighted work.

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors[92]

10. Digital Rights Management:

"Digital rights management (DRM): The chain of hardware and software services and technologies confining the use of digital content to authorised use and users and managing any consequences of that use throughout the entire life cycle of the content. DRM is one kind of content protection technology**.**[93]

Meaning:

With the new technological systems capable of Digital Rights Management have become popular measures of protection of interests of individuals in digital environment. Nevertheless, their application has been the subject of much controversy, especially among consumer rights protection organizations, which results from the different nature of protection granted by traditional norms of copyright law and by technological protection measures.

Digital Rights Management is a system for protecting the copyrights of data circulated via the Internet or other digital media. Digital Rights Management enables secure distribution of your data. Typically, a Digital Rights Management encrypts the data so that it can only be accessed by authorized users or marks the content with a digital watermark so that the content can not be freely distributed. Digital Rights Management keeps your documents

[92] ^ "US CODE: Title 17,107. Limitations on exclusive rights: Fair use". .law.cornell.edu. 2009-05-20. Retrieved 2009-06-16.
[93] IDC group report p.3.

safe even after they have been made accessible to your potential investors, partners, and other authorized users. Digital Rights Management can prevent the following:

- screen-grabbing
- printing
- copying
- cutting-and-pasting
- forwarding
- saving

Definitions:

1. ,DRM is a system for protecting the copyrights of data circulated via the Internet or other digital media by enabling secure distribution and/or disabling illegal distribution of the data. Typically, a DRM system protects intellectual property by either encrypting the data so that it can only be accessed by authorized users or marking the content with a digital watermark or similar method so that the content can not be freely distributed[94].
2. **Digital rights management (DRM)** is commonly defined as the set of technological protection measures (TPM) by which rights holders prevent the use of digital content they license in ways that could compromise the commercial value of their products. Restrictions on such uses as downloading, printing, saving and emailing content are encoded directly in the products or the hardware needed to use them and are therefore in immediate effect. This automatic deployment challenges the fair use provisions of copyright law, which protect certain uses and let judges determine the outcome of a dispute[95]

3. **DRM, also sometimes called Electronic copyright management systems, ECMs**, are technologies designed to automatically manage rights in relation to information. This can include preventing copyright works and other information from being accessed or copied without authorization and establishing and enforcing license terms with individuals.[96]

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94 http://www.webopedia.com/TERM/D/DRM.html.

95 Report by Annual Meeting of the American Society for Information Science & Technology(ASIS&T),2008.

96 7th International CALIBER 2009.

4. **Section 2(xa) of Copyright Amendment Act 2012** provides the definition of Rights Management Information. RMI is defined narrowly enough to include only information (or number or coded representation of information) which identifies the work/performance and/or the name of the author/performer, provides information about the owner of rights, and terms and conditions regarding the use of rights. Presumably in the interest of privacy rights, it explicitly excludes any devices or procedures intended to identify the user. This seems to be a balanced provision which allows only for the communicating of information and doesn't include any TPMs through it.
5. **Article 11 of the WIPO COPYRIGHT TREATY (WCT)** provides the obligations of members concerning technological measures. According to Article 11, the contracting states shall have an obligation to provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under the WCT or the Berne Convention ant that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law. Article 12 of WCT, provides the obligations of member states concerning Rights Management Information. As per Article 12, the member states shall have the obligation to provide adequate and effective legal remedies against any person for knowingly inducing, enabling, facilitating or concealing removal or alteration of any electronic rights management information without authority and for inducing, enabling, facilitating or concealing distribution, import for distribution, broadcast or communication to the public, without authority, works or copies of works knowing that electronic rights management information has been removed or altered without authority.
6. **Digital Millennium Copyright Act (DMCA),1998.** has been codified under section 1201 of Title 17 of the United States Code which is the law relating to copyrights. As per section 1201 "circumvention of a technological measure" means to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner.

Why are copyright owners interested in DRM?

New technological advances such as the Internet can make it easier to copy and distribute digital works. Potentially, these advances could greatly reduce

copyright owners' costs of distributing copyright works. However, some copyright owners are reluctant to disseminate digital works because they are afraid that their copyright works will be immediately and widely infringed. This is where DRM comes in. DRM promises copyright owners a high degree of control over how works are accessed and used, even after the works are disseminated to users. Thus, copyright owners are interested in DRM because it will help them reduce online copyright infringement. However, there are additional motivations for copyright owners to distribute DRM protected works.

For example, DRM can potentially allow copyright owners to require users to pay for each access and use of a work they wish to make. DRM also possesses the ability to observe and report on usage characteristics, which can provide the distributor of the DRM with unique marketing information not otherwise available. This could give rise to new business models and to a continual revenue stream derived from copyright works. Note, however, that there is no essential connection between DRM and copyright: DRM may be deployed in respect of any content, regardless of the copyright status of the content (i.e., public domain materials are not subject to copyright), and may report to persons other than the copyright owner[97].

A Functional Description of DRM[98]

From a functional perspective, Digital Rights Management means many things to many people. For some it is simply about the technical process of securing content in a digital form. To others, it is the entire technical process of supporting the exchange of rights and content on networks like the Internet. For convenience, DRM is often separated into two functional areas.

- The identification and description of intellectual property, rights pertaining to works and to parties involved in their creation of administration (digital rights management);
- The (technical) enforcement of usage restrictions (digital management of rights).

DRM may therefore refer to the technologies and/or processes that are applied to digital content to describe and identify it and/or to define, apply and enforce usage rules in a secure manner.

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97 Is Digital Rights Management a Means to An End?by Puspanjali Jena Dipak Kumar Khuntia.

98 Current developments in the field of digital rights management, standing committee on copyright and related rights ,Tenth session ,Geneva, november 3 to 5, 2003,wipo.

It is also important to distinguish between "access control," "copy protection" and "the management of intellectual property rights" highlighting their respective boundaries.

An access control system manages a user's access to content, usually achieved through some kind of password protection. However, once access to the content has been granted, no further protection is applied. Thus, once a user has access to the content, it is no longer possible to control what is done with that content. This type of protection is often employed on Websites where a simple access control mechanism suffices.

A copy protection system is designed to signal the extent of allowed copying and serial copying, if any, that is defined by the associated "usage information" with respect to any instance of delivered content, and to implement and enforce the signaled behavior in consumer equipment. The notion of copy protection can be extended to control the movement of content within and outside the user domain, encompassing re-distribution over the Internet.

A fully enabled intellectual property rights management system covers the processing of all rights information for the electronic administration of rights, sometime including contractual and personal information, to enable end to end rights management throughout the value chain. By its nature, DRM may require access to commercially sensitive information (as opposed to copy information and usage signaling). The use of such a system will enable very granular control of content, enabling rights owners to apply sophisticated usage models.

This process of managing intellectual property rights inevitably involves the extensive use of DRM technologies. Such technologies can be embedded into many components, from those that reside on a single device, such as a Personal Digital Assistant ("PDA") to those to be found in commercial Internet Servers run by major companies and organizations.

Conclusion:

Digital rights management system is neither good nor bad; but it can be used for lawful purposes, such as to protect copyrights from piracy and to encourage wider dissemination of works.

CHAPTER III
LEGISLATIVE ANALYSIS OF COPYRIGHT INFRINGEMENT of DATABASE AT INTERNATIONAL AND NATIONAL LEVEL

In This Chapter the Researcher would like to address the developments that have taken place in the field of copyright and Database rights, as a result of the impact of digital technologies. It begins with an introduction to "Database protection in cyberspace," then addresses the Conventions and Treaties on Digital copyright, and describes emerging developments in UK and US laws and technologies that relate to the protection and exploitation of copyright works online. Finally, it describes Indian developments in licensing and collective management of rights that enable creators and rights holders to manage and exploit their rights in the digital environment.

International/Regional

1. Berne Convention for the Protection of Literary and Artistic Works, 1886 (Berne)
2. The Rome Convention for the Protection of Performers, Producers Of Phonograms and Broadcasting Organizations ,1961(RCPPPPBC)
3. WIPO Copyright Treaty 1996 (WCT)
4. WIPO Performances and Phonograms Treaty 1996 (WPPT)
5. EC E-commerce Directive ,2001(EC-D)
6. EC Information Society Directive (EC-ISD)
7. TRIPS Agreement ,1995(TRIPS)

India

1. Copyright Act 1956 (ICA)
2. The Copyright (Amendment) Act, 2012(ICAB)
3. Information Technology Act 2000 (IITA)
4. Indian Information Technology (Amendment) Act 2008(IITAA)
5. Indian Constitutional Law'1950(ICL)

UK

1. Copyright Act 1911(UKCA)
2. Copyright Act 1956(UKCA)
3. Copyright , Designs and Patent Act 1988 (CDPA)
4. E-Commerce (EC Directive) Regulations 2002(EC Directive)
5. Digital Economy Act 2010(DEA)

USA

1 Copyright Act 1976(USCA)

2 Digital Millennium Copyright Act 1998 (DMCA)
3 Stop Online Piracy Act ,2011 (SOPA)

Copyright violations have become rampant since the advent of Cyberspace and the development of related information technologies. Numerous factors like ease of sharing digital content, low cost of distribution and download, lack of supranational authority to regulate, difficulties in tracing violators, uncertainties in determining jurisdiction over infringing acts, etc., have contributed to increasing copyright infringements. Various stakeholders are faced with the dichotomy of new opportunities and threats related to copy rights in cyberspace. Unique opportunities offered by new technologies call for effective solutions to counter relevant threats, than to wither cyberspace.

This Chapter investigates the scope and limitations of legal regimes in combating copyright infringements in cyberspace.
International and National Laws for –

- Copyright Protection of Databases
- Copyright Protection of Computer Programs
- Copyright Protection of Caching,
- Protection of personal information in Database **:**
- Protection of non original database
- Test of Originality in Database
- The effect of multiple authorship
- Creation ownership issues of externally funded project.
- Abstract and article related issues in research
- Telecom issues and Database
- Issues of downloading
- Ownership issues between user and developer
- Ownership in instances of employee creation
- The role of contract/ lisencing in overriding IP legislation
- Issues of "Substantial Contribution" in creation of database
- Distribution and publication, broadcasting issues
- The current challenges faced for the drafting of database protection law are
- Jurisdiction in Cyberspace
- Fair use
- Circumvention of digital rights management system

This Research Chapter examines the definition of the term "database". It focuses on whether or not Data, Information, Compilation material may legally be regarded as database constituents. The issue, it argues, challenges of database serves as a reminder of the general need for lawmakers to address rigorously the meaning of Compilation concepts.

Databases are an essential component of the continuous advances in human knowledge and productivity. Databases, particularly computer databases touch every one's life either directly or indirectly. Many people use computer databases at work and obtain benefits from it. All those benefits are the product of labour, skill and creativity as well as monetary investment by the database producer. On that reason, database producers expect revenues for the creation. Without adequate protection for databases, the producers will not have enough incentive to produce them. The process of creating a database is extremely costly and complex. A single database can require millions of dollars in development costs.

In addition to compiling the data, a producer must solve many complex marketing, programming and information science problems. Lack of adequate protection would encourage free riding activities. The database producers waste their efforts because end users as well as competitors in the industry can quickly copy the final product. [99] Thus, the objective of this research is to analyse the difference between categories of database and to what extent it is protected under legal regime.

A database is a collection of data arranged in a systematic way to allow for the easy and efficient retrieval of information. It is usually in an electronic form[100]. A database must be distinguished from a database system which is a software or computer program which administers the database. This is an important distinction to keep in mind when considering what is protected in a database.[101]

Computer database means a representation of information, knowledge, facts, concepts or instructions in text, image, audio, video that are being prepared or

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[99] Nazura Abdul Manap, Safinaz Mohd Hussein, and Mahmud Zuhdi Mohd Nor, Member, IACSIT , Abstact of Is Database Protected Under Copyright? A Legal Analysis.

[100] http://www.oznetlaw.net/FactSheets/DatabaseProtection/tabid/930/Default.aspx.

[101] ibid.

have been prepared in a formalized manner and have been produced by a computer, computer system or computer network.[102]

Database is a term with no precise definition. At its most generic, a collection of independent components, such as pieces of information, data, or works, arranged in a systematic or methodical way and which are individually accessible by electronic or other means[103]. there are ambiguities and the concept of database is not always clearly understood. This ambiguity implies that there is scope to debate what are the best means of protecting databases[104].

The present debate regarding database protection can be viewed simply as an extension of the historical clash between two conflicting models of copyright protection for compilations[105].

1. The first model advocates that databases and factual compilations receive protection per se, i.e., without any showing of creativity or original authorship. Proponents of this theory, better known as the "sweat of the brow" or "industrious collection" doctrine, justify their position by arguing that protection should be extended to databases as a reward for the hard work and investment required to compile the facts and information contained in the database[106]. Such a reward provides compilers with the incentive to develop new databases. Under this doctrine, protection extends to the otherwise unprotected facts contained in the compilation[107].
2. The second model of intellectual property rejects the notion that databases without any originality or creativity should be protected[108].

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[102] See Explanation (ii) of Section 43 of the Information Technology Act, 2000.

[103] Brill, Charles, "Legal Protection of Collection of Facts", Computer Law Review & Technology Journal Vol.1, 1998, pp. 2.

[104] Kumar, Ranjit G., "Database Protection--The European Way and Its Impact on India", Idea Journal of Technology, Vol. 45, 2005, pp. 99.

[105] Alok kumar yadav ,copyright in digital era.

[106] Nelsen, Russell G. "Seeking Refuge from a Technology Storm: The Current Status of Database Protection Legislation", Journal of Intellectual Property Law, Vol.6, 1999, pp.453.

[107] Stephen Maurer, "Raw Knowledge: Protecting Technical Databases for Science and Industry, Proceedings of the Workshop on Promoting Access to Scientific and Technical Data for the Public Interest: An Assessment of Policy Options, Jan. 14-15, 1999 (Feb 1, 2011) [Online] Available :http://www.nap.edu/html/proceedings_ sci_tech/appC.html.

[108] Panchnanda, Amol, "Scientific Databases Should Be Protected Under A Sui Generis Regime" Buffalo Law Review, Vol.51, p.219; Deveci, Hasan A. (2004), "Databases: Is Sui Generis A Stronger Bet Than Copyright?", International Journal of Law and Information Technology, Vol. 12, p.178.

Instead, advocates of the second model would only extend copyright protection to the "expression" contained in the database, which is limited to the original selection, coordination, or arrangement of facts in the database -- but not the facts themselves[109].

NEED TO PROTECT THE DATABASE:

Databases are useful collections of materials which consequently have value independently of their several items of content[110]. They are often creative, and usually costly to compile, present and maintain. In the information society, they are of increasing economic significance. Those who create databases, and those who invest in their development and maintenance, may reasonably expect to enjoy a return on their investments, but once a database has been made publically available securing a financial return from it is likely to be difficult, if not impractical, unless some form of property right is recognized in the database as such[111]. There is a view that taking a database and simply rearranging the data, creates something new and is not infringement of the original database copyright[112].

The alternative view is that now a days the data in a database are not placed in the computer memory in any particular order, and are simply available for retrieval so the former view implies an infringement of the original database.[113] Another view states that if there was no skill in selecting the individual items that go in a compilation or database and if there is no skill in the arrangement (no addition of keywords or indexing terms, simply a listing), then such a compilation should not justify copyright protection[114]. Database manufacturers base their call for a new right on purely economic grounds, unlike existing forms of intellectual property that are grounded philosophically on the

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[109] Patteron & Joyce, "Monopolizing the Law: The Scope of Copyright Protection for Law Reports and Statutory Compilations", UCLA Law Review, Vol. 36, p.776; Bastian, Michael J. (1999), "Protection of "Noncreative" Databases: Harmonization of United States, Foreign and International Law", International and Comparative Law Review, Vol.22, p.429.

[110] Carstemns, David W. (1994), "Legal Protection of Computer Software: Patents, Copyrights, and Trade Secrets", J. CONTEMP. L., Vol.20, p. 13, 16.

[111] Boyarski, Jason R, "The Heist of Feist: Protection for Collections of Information and the Possible Federalization of "Hot News"", Cardozo Law Review, Vol.21, 1999, pp.871, 906-08.

[112] Reichman, J.H. & Samuelson, Pamela. "Intellectual Property Rights in Data?", Vand. L. Rev., Vol. 50,1997, pp. 51, 145-58.

[113] Yandle, Bruce & Morriss, Andrew P. "The Technologies of Property Rights: Choice Among Alternative Solutions to Tragedies of the Commons", Ecology L.Q., Vol. 28, 2001, pp.123, 148.

[114] Ginsburg, Jane C. "Creation and Commercial Value: Copyright Protection of Works of Information" Columbia Law Review, Vol. 90 No. 6, 1990, pp. 1865-1938.

promotion of creativity, or “moral rights” in the European tradition. An author tends to maintain the copyright on a creative work even when he or she receives no remuneration for it (as in the case of this article) simply so other people won’t change it and ship it around in garbled form. But database manufacturers have little reason to be concerned about how people use facts from the collections unless the manufacturers’ markets are threatened. Printed compilations have always been protected under copyright law, the protection of computer databases is fairly recent[115]. As with all copyright law, copyright on databases protects only original works. As such, in most instances only the layout the database is protected and not the inherent data itself.[116] The underlying data would be part of the public domain if not novel[117] as only originators may receive the benefits of copyright--”Only those who add to human knowledge may receive an exclusive right in what they added.”[118] The problem for many scientific fields and the databases that service these fields is that they only deal with compilations of fact[119]. Database owners, unsure of their rights, create long and complicated licenses in an effort to protect their investments from competitors[120]. Academia, also unsure of its rights, counters

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115 The National Commission of New Technological Uses of Copyrighted Works (CONTU) determined in 1978 that computer databases should fall under the protection of the copyright act. See Askanazi, Jennifer, et al.(2001), “The Future of Database Protection in US Copyright Law”, Duke Law and Technology Review, p. 17, 5.

116 Mridushi Swarup. “Protection of Databases – An Analysis of the International Scenario and the Indian Position – The Road Ahead.

117 Copyright law does not prohibit the copying of facts, even newly discovered or expensively acquired facts. See Harper & Row Publishers, Inc. v. Nation Enterprises, 471 U.S. 539, 556 (1985); Kregos v. Associated Press, 937 F.2d 700, 703-10 (2d Cir. 1991).

118 In Graham v. John Deere, 383 U.S. 1, 5 (1966), the Supreme Court reaffirmed the constitutional limits on copyrights and patents ("Congress in the exercise of the patent power may not overreach the restraints imposed by the stated constitutional purpose . . . [and may not recognize exclusive rights] whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available. See also Benkler, Yochai (2000), “SYMPOSIUM: Constitutional Bounds of Database Protection: The Role of Judicial Review in the Creation and Definition of Private Rights in Information, Berkeley Technology Law Journal, Vol.15, p. 535.

119 This is contrasted with the postmodern view that scientific research involves a "de minimis of quantum creativity," that the scientists' data are the results of the human social and political situation, and as such are not an objective truth. This is ridiculed in the scientific community. The reality lies somewhere in the middle. Data, in essence, does not attain the status of fact until it is peer reviewed or even replicated. Moreover, many times that which is published is not the raw data, but rather data that has been 'massaged' to account for irregularities. Taken as a whole though, it can be assumed for the most part that data is not novel. See, e.g., McSherry, Corynne (2001), “Who Owns Academic Work”; Kimball, Roger (May 29, 1996), “A Painful Sting Within the Academic Hive”, The Wall Street Journal, p. A18.

120 The Nat'l Acad. of Sci., Proceedings of the Workshop on Promoting Access to Scientific and Technical Data for the Public Interest: An Assessment of Policy Options §§ 7-8 (1999) (Jan 12, 2011) [Online] Available : http://www.nap. edu/html/proceedings_sci_tech/.

with long and complex negotiations, to insure that it is not being roped into an unfair situation.[121]

Data has become the currency of a knowledge-based economy, driving innovation and boosting businesses at various levels, and must be protected at all cost, the conference insisted.[122] So there should be the need for data protection in organizations, describing it as key factor for promoting knowledge-based economy. The need for a law on data protection is paramount if India is to sustain investor confidence, especially among foreign entities that send large amounts of data to India for back-office operations. Data protection is essential for outsourcing arrangements that entrust an Indian company with a foreign company's confidential data or trade secrets, and/or customers' confidential and personal data The proposed legislation for data protection will ensure adequate safeguards, and also appoint a regulator to monitor the collected data and its usage.[123]

COPYRIGHT PROTECTION OF DATABASES

International/Regional Conventions

- **WIPO Copyright Treaty**

The WIPO Copyright Treaty originated in a WIPO work program to update the Berne Convention. This work program, which began in 1989, was known as the "Berne Protocol" process, since it was conceived as a mechanism to modernize the Berne Convention through a "protocol" without engaging in a full revision of the Convention.[124] The original purposes were to make explicit in the Berne Convention that computer programs and databases must be protected as copyright subject matter, and generally to update the Convention with respect to use of copyrighted works is digital, electronic environments.

The United States later sought 'to have updated protection for sound recording: included in the "Berne Protocol" process. In this attempt, the United

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121 Mridushi Swarup. "Protection of Databases – An Analysis of the International Scenario and the Indian Position – The Road Ahead.

122 http://allafrica.com/stories/201407282640.html.

123 Majmudar & Co., International Lawyers, India, DATA PROTECTION IN INDIA.

124 Implicit in the idea of a protocol was the likelihood that the Convention could upgraded for some countries and not for others. While that option theoretically exists when the Convention is revised, the protocol device might have made it more feasible for a smaller number of countries to agree on the upgrade of the Convention. The Berne Convention last revised at Paris in 1971.

States was opposed by the European Union and other countries who do not protect sound recordings under copyright law.

Ultimately, a decision was taken in 1992 to split the "Berne Protocol" process into two phases: an update of copyright protection, and preparation of a possible "new instrument" (i.e. treaty) concerning protection of the rights of performers an producers of phonograms (i.e., sound recordings).

This dual copyright and "new instrument" work program culminated in the adoption of two new intellectual property treaties at a WIPO Diplomatic Conference which met in Geneva, Switzerland, from December 2-20, 1996.

The WIPO Copyright Treaty is both a special copyright agreement updating the Berne Convention for those Berne members who ratify or accede to the agreement[125] and a separate treaty, which must be ratified or acceded to in accordance with the treaty approval procedures of the respective countries. The Senate gave its assent to United States ratification of the WIPO Copyright Treaty on October 21, 1998.[126] The Congress passed the Digital Millennium Copyright Act of 1998 ("DMCA")[127] to implement the changes in United States copyright law required by ratification of the WIPO Copyright Treaty and for other purposes, including clarification of United States copyright law in digital, electronic environments.

With respect to database protection, Article 5 of the WIPO Copyright Treaty essentially tracks the language of the TRIPS Agreement concerning creative databases. This new intellectual property treaty establishes an obligation to protect compilations of data that result from the application of intellectual effort. Copyright protection does not extend to the content itself unless the content is independently a work of the intellect, in which case the content enjoys a separate copyright.

The 1996 Geneva Diplomatic Conference also adopted an "agreed statement," whose purpose is to encourage consistent interpretation of the database protection obligations under Berne, the TRIPS Agreement, and the

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125 Article 20 of the Berne Convention permets such special agreements involving Berne members, but only if the agreement improves the level of copyright protection for authors.

126 The Senate also gave its assent to ratification of the second treaty, the WIPO Performances and Phonograms Treaty. Since that treaty has no relevance to database protection, it is not discussed further in this report.

127 P.L 105- 304, October 28, 1998.

WIPO Copyright Treaty. The statement reads as follows:

"The scope of protection for compilations of data (databases) under Article 5 of this Treaty, read with Article 2, is consistent with Article 2 of the Berne Convention and on a par with the relevant provisions of the TRIPS Agreement."

- **TRIPS Agreement**

The first success in clarification of international database protection came in the form of the intellectual property standards forged by the 1994 Uruguay Round Agreements under the GATT.

The issue of intellectual property ("IP") standards was placed on the agenda of the Uruguay Round largely at the insistence of the United States. Prior to the Uruguay Round negotiations, the GATT, which of course deals with obligations related to trade in goods and to some extent trade in services, had not encompassed obligations related to intellectual property, whose rights are intangible in nature[128] The inclusion of IP standards on the GATT agenda recognizes the increased importance of intellectual property protection to the well-being of any modern economy in this digital, information age world. Effective and adequate lP standards translate into profits and growth for national and global enterprises.

Article 10(2) of the TRIPS Agreement

The TRIPS Agreement established minimum standards of protection in virtually all fields of intellectual property. With respect to databases, the TRIPS Agreement explicitly requires that "compilations of data or other material" must be protected against unauthorized copying if the selection or arrangement of the data or other material constitutes an "intellectual creation.·"

The reference to "compilations of data or other material" improves the level of protection for databases under the TRIPS Agreement in comparison with the existing Berne Convention. The literal text of the Berne Convention protects only compilations of "works" - that is, material that is independently

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[128] Efforts to include trademark protection standards in the earlier Tokyo Round of the GATT were not successful. By the time of the 'Umguay Round, the United States, with the support of the European Union, was able to make the case for inclusion of intellectual property standards because intellectual property has become a major part of modern, highly developed economies. Computer software and databases comprise essential components of modern economic systems.

copyrightable, unlike data elements, which are frequently not independently copyrightable. This is a critical clarification of the obligation to protect databases since a high percentage of databases are not compilations of "works." If the obligation to protect databases extends only to those databases that constitute compilations of works, the protection accorded databases is seriously eroded from the viewpoint of producers and owners of databases.[129]

Copyright protection for compilations under the TRIPS Agreement does not extend to the data or other material itself,[130] nor does protection extend to "ideas, procedures, methods of operation or mathematical concepts as such[131]

The Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases.

It harmonizes the treatment of databases under copyright law, and creates a new sui generis right for the creators of databases which do not qualify for copyright.

Article 1(2) defines a database as "a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means". Non-electronic databases are also covered (para. 14 of the preamble). Any computer program used to create the database is not included (para. 23 of the preamble).

Article 3, databases which, "by reason of the selection or arrangement of their contents, constitute the author's own intellectual creations" are protected by copyright as collections: no other criterion may be used by Member States. This may be a relaxation of the criterion for protection of collections in the Berne Convention for the Protection of Literary and Artistic Works, which covers collections "of literary and artistic works" and requires creativity in the "selection and arrangement" of the contents: in practice the difference is likely to be slight. Any copyright in the database is separate from and without prejudice to the copyright in the entries.

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129 Some experts may argue that the existing Berne Convention can be interpreted to protect against copying of databases consisting of un copyrightable data elements, Copyright protection for compilations under the TRIPS Agreement does not extend to the data or other material itself.

130 TRIPS, Article 10(2).

131 TRIPS, Article 9)2).

Article 5 of the acts restricted by copyright is similar to those for other types of work :

- ✓ temporary or permanent reproduction by any means and in any form, in whole or in part;
- ✓ translation, adaptation, arrangement and any other alteration;
- ✓ any form of distribution to the public of the database or of copies thereof, subject to the exhaustion of rights;
- ✓ any communication, display or performance to the public;
- ✓ any reproduction, distribution, communication, display or performance to the public of a translation, adaptation, etc.

This shall not prevent the lawful use of the database by a lawful user [Art. 6(1)]: Member States may provide for any or all of the following limitations [Art. 6(2)], as well as applying any traditional limitations to copyright:

- ✓ reproduction for private purposes of a non-electronic database;
- ✓ use for the sole purpose of illustration for teaching or scientific research, as long as the source is indicated and to the extent justified by the non-commercial purpose to be achieved;
- ✓ use for the purposes of public security of for the purposes of an administrative or judicial procedure.

Sui generis right

Copyright protection is not available for databases which aim to be “complete”, that are where the entries are selected by objective criteria: these are covered by sui generis database rights. While copyright protects the creativity of an author, database rights specifically protect the "qualitatively and/or quantitatively [a] substantial investment in either the obtaining, verification or presentation of the contents": if there has not been substantial investment (which need not be financial), the database will not be protected [Art. 7(1)]. Database rights are held in the first instance by the person or corporation which made the substantial investment, so long as:

- the person is a national or domiciliary of a Member State or
- the corporation is formed according to the laws of a Member State and has its registered office or principal place of business within the European Union.

Database rights last for fifteen years from the end of the year that the database was made available to the public, or from the end of the year of completion for private databases (Art. 10). Any substantial change which could

be considered to be a substantial new investment will lead to a new term of database rights, which could, in principle, be perpetual. Database rights are independent of any copyright in the database, and the two could, in principle, be held by different people (especially in jurisdictions which prohibit the corporate ownership of copyright): as such, database rights can be compared to the rights of phonogram and film producers.

In India: Position for Protection of Databases:

Article 300A of the Constitution ensures the right not to be deprived of property except by authority of the law. However, this right can be claimed only against the State and not against private individuals or employees. Further, the data in question has to be regarded as property.

In India, There are two main current national legislations specifically dealing with collection or compilations which consequently impact on databases. They are the Copyright Act, Information Technology Act

Indian Copyright Act 1957:

Databases are protected as collections or compilations of literary and artistic works. and the meaning of 'literary work' included works such as computer programmes, tables and compilations including computer databases[132] The Act also provides for the subsistence of copyright protection for literary works under Section 13(1).[133] The necessary requirement is that a database should be the result of its creator's own intellectual effort and that it achieves a sufficient level of originality[134] there can be no copyright in databases that are the result of effort alone, without any skill or judgment in selection of the material to be entered into the database.[135]

Originality does not mean the expression of original or inventive thought. Copyright laws are not concerned with the origin of ideas, but with the expression of thoughts and in the case of literary work with the expression of thoughts in print or in writing.[136] The originality, which is required, is related to the expression of thought, but copyright law does not require that the

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132 Section 2(o), Indian Copyright Act 1957 with amendments in 1994.

133 Section 13: Work in which copyright subsists: Subject to the provisions of this section and the other provision of this Act, copyright shall subsist throughout India in the following classes of works, that is to be say, original, literary, dramatic, musical, and artistic works.

134 Pankaj Jain and Pandey Sangeet Rai, "Copyright and Trademark Laws relating to computers" Eastern Book Company.

135 G.A. Cramp & Sons Ltd v. Frank Smythson Ltd., (1944) AC 329.

136 Pankaj Jain and Pandey Sangeet Rai, "Copyright and Trademark Laws relating to computers" Eastern Book Company,p.49.

expression must be in original or novel form, only, that work must not be copied from another work and it should originate from the author.[137] Much depends on the skill, labour, knowledge and the capacity to digest and utilize the raw materials contributed by others in imparting to the product some quality and character which those raw materials did not possess and which differentiates the product from the materials used.[138]

Doctrine of "'sweat of the brow',: "Sweat of the brow" is an intellectual property law doctrine, basically related to copyright law. According to this doctrine, an Copyright owners /Creators gains rights through simple diligence during the creation of a work, such as a database, i.e Telephone Directory
Under a "sweat of the brow" doctrine, the creator of a copyrighted work, even if it is completely unoriginal, is entitled to have his effort and expense protected, and no one else may use such a work without permission, but must instead recreate the work by independent research or effort.

The United States rejected this doctrine in Feist Publications v. Rural Telephone Service[139] on mere collections of facts are considered unoriginal and thus not protected by copyright, no matter how much work went into collating them. The arrangement and presentation of a collection may be original, but not if it is "simple and obvious" such as a list in alphabetical or chronological order[140]

Position of Sweat of Brow In India[141]:

Section 13 of Indian Copyright Act, 1957 provides, inter alia, that copyright shall subsist in every original literary, dramatic, musical and artistic works. Thus originality is the cardinal requirement for getting protection of copyright. But the term "original" is nowhere defined in the Act; hence it is uncertain what amounts to originality.

According to section 14 of the Act, only author of the work, subject to sec.17 of the Act is entitled to have copyright protection and can enjoy the exclusive

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137 Macamillin And Co v. K and J Cooper, AIR 1924 PC 75.
138 Also see Mishra Bandhu Karyalaya v. S. Koshal. AIR 1970 MP 261 at p. 267; S.K.Dutt v. law Books Co., AIR 1954 All 570; V Errabhadrarao v. B.N. Sharma, AIR 1960 AP 415; C. Cunniah & Co v. Balraj & Co., AIR 1961 Mad 111 at p 112.
139 499 U.S. 340 (1991)
140 http://en.wikipedia.org/wiki/Sweat_of_the_brow
141 Hailshree Saksena" Doctrine Of "Sweat Of The Brow"SSRN.com

rights therein. So the person who devotes his labour, skill and judgment can have an monopoly right over the work.

In respect of compilations, the Copyright Act, 1957 does not limit protection only to compilations which "by reason of the selection or arrangement of their contents constitute intellectual creations". Nor does it mandate supplementary criteria to selection and arrangement expressly. India is a commonwealth country and therefore follows the "sweat of the brow" doctrine[142].

It was held that a compilation of addresses developed by any one by devoting time,money, labour and skill though the source may be commonly situated amounts to a 'literary work' wherein the author has a copyright[143].

In the case of Indian Express Newspaper (Bombay) Pvt Ltd v Jagmohan[144], the Bombay

High Court has emphatically stated that there is no copyright for happenings and events which could be news stories, and a reporter cannot claim any copyright over such events because he/she reported it first. The Court said that the ideas, information, natural phenomena, and events on which an author expends his/her skill, labour, capital, judgment and literary talents are common property and are not the subject of copyright. Hence, there is no copyright in news or information per se. However, copyright may be obtained for the form in which these are expressed because of the skill and labour that goes into the writing of stories or features and in the selection and arrangement of the material Again in the case of RG Anand v Delux Films and Others[145] , it was held that there can be no copyright in ideas, subject matter, themes, plots, or historical or legendary facts and where the same idea is developed by different people in different ways it is obvious that similarities are bound to occur since the source is common. In order to be actionable the copy must be substantial and material.

In the case of Eastern Book Company v. D.B. Modak[146]89, the court gave the judgment which was different from the leak which is followed by Indian

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142 http://academiccopyright.typepad.com/403copyrightcourse/2005/10/assignment_3_or.html
143 Burlington Home Shopping v Rajnish Chibber,(1995 PTC (15) 278)
144 (AIR 1985 Bom 229)
145 (AIR 1978 SC 1614).
146 2002 PTC 641.

judiciary. Supreme Court took a tentative step in altering the jurisprudential surrounding in Indian Copyright with regard to the concept of Sweat of the brow. The court leant towards the "modicum of creativity" arguments followed in America. The judgment given by court is mesmerizing as it showed the inclination on the part of our Judiciary to move away from the close association that Indian copyright law shares with its English counterpart.

The basic fact situation was that SCC and SCC – Online were aggrieved by individuals who launched a software package entitled "The Laws" and "Jurix". Allegedly they infringed the copyright of the copy-edited judgments published by SCC .The said suits were filed, inter alia, on infringement of copyright and unfair competition. The issue was Whether the copy-edited judgments reported by SCC were entitled to copyright protection as derivative works and what standard of originality is required by derivative works to evoke that protection.

The notion of "flavour of minimum requirement of creativity" was introduced in this case, being required with regard to derivative works. This was an attempt to reconcile the sweat of the brow doctrine with the notion of modicum of creativity. It was held that "The derivative work produced by the author must have some distinguishable features and flavour to raw text of the judgments delivered by the court. The trivial variation or inputs put in the judgment would not satisfy the test of copyright of an author." Novelty or invention or innovative idea is not the requirement for protection of copyright but it does require minimal degree of creativity."

The judgment dealing with this doctrine of sweat of the brow was the Dr. Reckeweg and Co. Gmbh. and Anr. Vs.Adven Biotech Pvt. Ltd[147], the contention of the plaintif was rejected as their work was held to be mere compilation. And in this case Delhi High court completely rejected the phenomena of the doctrine of sweat of the brow.

These decisions are the authority on the proposition that the work that has been originated from an author and is more than a mere copy of the original work would be sufficient to generate copyright. This approach is more or less consistent with the "sweat of the brow" standards of originality. The creation of the work which has resulted from little bit of skill, labour and capital are sufficient for a copyright in derivative work of an author. An author deserves to have his or her efforts in producing a work, rewarded

[147] MANU/DE/0961/2008.

The originality requirement in derivative work is that it should originate from the author by application of substantial degree of skill,- industry or experience. Precondition to copyright is that work must be produced independently and not copied from another person. Where a compilation is produced from the original work, the compilation is more than simply a re-arranged copyright of original, which is often referred to as skill, judgment and or labour or Capital.. The courts have only to evaluate whether derivative work is not the end-product of skill, labour and capital which is trivial or negligible but substantial. The courts need not go into evaluation of literary merit of derivative work or creativity aspect of the same.

Database Protection under Information Technology Act, 2000

Indian Information Technology Act also provides for protection to database from unauthorized copying and destruction under Section 43 of the Indian Information Technology Act, 2000 ,"If any person without permission of the owner or any other person who is in charge of a computer, computer system or computer network, downloads, copies or extracts any data, computer database or information from such computer, computer system or computer network including information or data held or stored in any removable storage medium, he shall be liable to pay damages by way of compensation not exceeding one crore rupees to the person so affected."

The ambiguity of the present laws governing the protection of databases creates a situation where database creators and owners are unsure of how Intellectual Property laws safeguard their information, hence, there are more reasons than one for the Indian Government to consider enacting a separate data protection law so that the country is in the forefront of legal developments around the world.

In United Kingdom

The Copyright, Designs and Patents Act, 1988 (CDPA)
Section 3A, database as : A collection of independent works, data or other materials which (a)are arranged in a systematic or methodical way; and (b)are individually accessible by electronic or other means.

In ***Football Data Co Limited and ors v Brittens Pools Limited and ors***, the English and Scottish professional football leagues and two of their licensees brou ght proceedings against various defendants including Yahoo!, Stan James

and Brittens Pools who had been publishing the English and Scottish league fixture lists on their websites without licence.
The claims comprised allegations of infringement of:

1) the EU-wide "sui generis" database right;
2) the EU-wide "database copyright"; and
3) the literary copyright in the fixtures themselves.

The court held that the fixture lists were protected by database copyright, but not by the "sui generis" database right or UK literary copyright.

The judgment affords stronger protection to sporting organisations in relation to their fixture lists, so long as more than mere "sweat of the brow" work goes into their creation. It also means that information providers and bookmakers will most likely need to ensure they obtain the relevant licence if they wish to reproduce a substantial portion of the fixture lists.

Originally, **Football League v Littlewoods Pools**[148] established that literary copyright subsisting under the Copyright Designs and Patents Act 1988 ("CDPA 1988") could protect football league fixture lists, as long as sufficient labour, skill or judgment had been exercised in creating the work. This was a relatively low threshold, which a wide range of sporting data could satisfy. In 1996, the Database Directive (96/9/EC) came into force and created two new rights to deal with "collections of independent works, data or other materials arranged in a systematic way and individually accessible by electronic or other means", i.e. a database, and this included fixture lists and other sporting data:

- Article 7 created a "sui generis" database right which protects databases for which there had been a substantial investment in obtaining, verifying or presenting the content of the lists.
- Article 3 created EU-wide copyright in databases which protects databases which, due to the selection or arrangement of their contents, represent the author's own creative work

In UNITED STATES OF AMERICA

- **U.S. Copyright Act ,1976**

In the US, database protection is addressed in its Copyright Laws**. Article 101** states that a compilation is "a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated or arranged in

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such a way that the resulting work as a whole constitutes an original work of authorship"[149] Copyright in a compilation in US law[150]only extends to the compilation as a whole and does not affect the copyright in any preexisting or underlying works included in the compilation. Furthermore, the law does not confer copyright protection on underlying works that may not meet the standard of creativity required to warrant copyright protection. Finally, as per US legislation, facts are not copyright protected and therefore, where a compilation consists of statistical data, for example, copyright in the compilation is restricted to the original selection and arrangement.[151]

Court decisions in the US have largely concluded that factual data is not copyright protected and that there must be genuine originality "a uniqueness" in its selection or arrangement in order to claim copyright on the database as a whole.

Three court decisions have interpreted the above to provide, arguably, clarity on the breadth of data and database protection in the US. The seminal decision is Feist v. Rural Telephone Service Co.[152] In this case, the US Supreme Court ruled that the telephone white pages could not be protected because they lacked original expression. The court rejected the "sweat-of-the-brow theory" to ascertain originality, i.e. that copyright should subsist in a compilation if effort, skill or judgement had been employed to create the compilation. Instead, the court endorsed the concept that only where there is some creativity in the selection or arrangement of the data housed in the compilation can the compilation itself be protected by copyright. Finally the courts reinforced the notion that copyright in factual data, such as names, addresses and telephone numbers, could not be protected by copyright[153]

The reasons given by the court to deny copyright protection to facts is particularly interesting for the scientific community. The US Supreme Court viewed it as fundamental that copyright law cannot protect facts because facts are not created, rather, they are discovered. Facts are not original to an author

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149 17 USC ,art.101 (1988) see also Susan Nycum, Patents, Copyrights Trademarks, and Literary Property Course Handbook Series, (1999) 574 PLI/Pat 469 at 473.
150 12 USC, art. 103(b) (1988.
151 17 USC, art. 102(b), Ibid.
152 Feist Publications Inc. v. Rural Telephone Service Co. 499 US 340 (1991).
153 see also Pamela Samuelson, "Copyright Law and Electronic Compilations of Data", Legally Speaking, February 1992 http://www.ifla.org/documents/infopol/copyright/samp2.txt.

who might write about them, "although the collocation of words used by an author to describe the facts would be "original" in a copyright sense".[154]

Since Feist, several other court decisions extend our understanding of data and database protection. In BellSouth Advertising & Publishing Corporation v. Donnelly Information Publishing Inc.[155], BellSouth prepared business yellow pages. They accused Donnelly of copyright infringement, alleging that Donnelly copied original elements of their selection and arrangement of their yellow pages. The 11th Circuit Court held that activities such as choosing geographic scope, cutoff dates to make changes to listing information and marketing techniques were not "acts of authorship, but techniques of the discovery of facts". The court held further that the selection and arrangement chosen by BellSouth were inevitable and not original, dictated by standards employed in the industry. The US Supreme Court denied BellSouth's petition for a writ of certiorari, thereby ending BellSouth's appeal process.[156]

In Mathew Bender & Co., Inc. v. West Publishing Co.,[157] Matthew Bender, legal publishers, sought a declaration of the court that West Publishing Company did not hold copyright in their selection and arrangement, i.e. volume number and pagination, of court decisions being published by them. Matthew Bender sought a declaration further that it was free to copy the decisions, and their selection and arrangement from West's CD-ROM because their selection and arrangement were not sufficiently original to warrant copyright protection. (Court decisions in the United States fall into the public domain, and are therefore treated like facts). A third party, Hyper law, another legal publisher, intervened seeking a declaration that they did not infringe West's copyright when they scanned titles, text and other content directly from the West CD-ROM. The Courts ultimately decided in favour of both Matthew Bender and Hyperlaw on the issues of selection and arrangement finding that they were not sufficiently original, i.e. lacking a modicum of creativity.

Courts in the US have decided in favour of copyright protection of the selection and arrangement data. However, it appears that where courts have found the selection and arrangement of data sufficiently original to warrant

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154 Ibid., Samuelson.

155 BellSouth Adv. & Pub. Corp. v. Donnelly Info. Pub. 999 F.2d 1436 (11th Cir.1993), cert. Denied 114 S. Ct. 943 (1994)., see also Ibid., footnote 11 at para. 474.

156 Ibid.,

157 Matthew Bender & Co. Inc. v. West Publishing Co., 158 F. 3d 693 (2d Cir. N.Y. 1998) cert. Denied, 1195 S. Ct. 2039 (1999).

copyright protection, the courts first determined that the facts in question were not just facts but valuation requiring some creativity. In other words, Courts may only be willing to find copyright protection for compilations where the data is actually non-factual and contains valuations that require intellectual analysis.[158]

Since the advent of the Feist decision and in particular, the WIPO Copyright Treaty, several attempts had been made to introduce database protection bills in Congress. To date all have either failed or have stalled in the congressional process. It is likely, however, that at least one database bill will be introduced or re-introduced (remaining from the last session of Congress) in the 107th session of Congress.[159]

COPYRIGHT PROTECTION OF COMPUTER PROGRAMS

Under copyright laws, protection is available only to the form or expression of an idea and not to the idea itself. The object of copyright protection in a computer program is not the underlying idea, but the computer language used to express that idea. The coding of the program is carried out independently. In that case, the idea underlying the program is expressed in a way that differs from the way in which the originator of the program has expressed this idea. The new code thus constitutes the expression (of the underlying idea) and is protected but the methods and algorithms within a program are not protected. Algorithm is a list of well-defined instructions for completing a task. It is a set of instructions on what steps are essential to process information by the computer and in what specific order it has to perform these operations in order to carry out a specified task. Thus, algorithms are mere ideas which cannot be protected under the copyright law. Source code[160]and object code[161] are the products of algorithms; they are the expressions of the ideas contained in the algorithms and, therefore, they can be protected against literal copying under copyright law[162]. “Look and feel” of a computer program given by a programmer

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158 CCC Info. Services Inc. v. MacLean Hunter Market Reports Inc. 44 F. 3d 61 (2d Cir. 1994), cert. Denied 115 S. Ct. 72 (1995).

159 See Ron Eckstein, "The Database Debate", Legal Times, Law.com 2000, http://www.law.com Brenda Sanburg, "Full Steam Ahead, IP Bills Continue to Float Along Despite Shift in Control of US Senate"; July 10, 2001; 2001 Law.com; www.law.com.

160 Source code is a level of computer language consisting of words, symbols and alphanumeric labels. It is a high level language and is incomprehensible to human beings.

161 Object code is a level of computer language which is intelligible to human beings.

162 Bonito Boats, Inc. v. Thunder Craft Boats, Inc. 489 U.S., 141, 103 L. Ed. 2d 118, 109 S. Ct. 971 (1989); Whelan Associates, Inc. v. Jaslow Dental Laboratory Inc., 797 F.2d 1222 (3d Cir. 1986).

or an interface designer also can be termed as the expression of ideas of the programmer and the interface designer. Though this is a non-literal expression, it has been afforded protection under the copyright law. These and various other issues concerning software protection have been dealt with in the international instruments. Following is an account of the various international instruments for software protection.

TRIPS

This is the first international Treaty to explicitly include computer programs within the illustrative list of copyrighted works. TRIPS sets forth three different forms of protection for software: copyright, patent and trade secret regime. TRIPS includes a specific provision in Article 10 that expressly requires member states to protect software, whether in source or object code, as literary works under the Berne Convention. However, the member countries have a right to provide more extensive protection of intellectual property rights within their national legal systems. Article 27.1 recognizes patent protection for software related invention for the member states so long as the invention satisfies the other requirements[163] (6) for patentability which are country specific. Therefore, software may be granted patent protection in a particular country if it fulfils the specific conditions set forth under the laws of that country.

Article 39 of TRIPS provides an alternative to copyright protection. It talks about protection for undisclosed information and offers a trade secret regime for software protection. Trade secret regime is applicable for the protection of trade secrets which may include software. A particular software may contain lot of valuable and confidential information about a company which forms its trade secret. Civil and criminal actions are provided for in most legislation against the unauthorized disclosure or use of confidential information. In this case, there is no exclusive right, but an indirect type of protection based on a factual characteristic of the information (its secret nature) and its business value. Unlike patents, trade secrets are protected as long as the information is kept secret.

Thus, TRIPS does not preclude additional forms of protection for computer programs and a member can offer patent, copyright and trade secret protection

[163] In India the requirements of patentability as per the Patents Act, 1970 are that the invention must be new, useful and non-obvious. Invention means a new product or process involving inventive step and capable of industrial application.

for computer programs. Keeping in mind the higher standards of creativity required by patent law the software developer can choose any form of protection which is most desirable to him. As the source code is comprehensible only by a trained programmer and not by normal persons, the proprietors generally protect the source code under the trade secret regime and the object code is protected as a copyright. Reverse engineering[164] is one practice which is very common to software. There has been a debate as to whether reverse engineering amounts to infringement. TRIPS allows reverse engineering of computer programs only by honest avenues. Wholesale copying of computer programs is prohibited under TRIPS. Copying with modifications here and there is permitted and copying amounting to fair use is also permitted under the copyright laws of many countries. Consequently, the practice of re-implementing functional components of a protected program in "clones" is not prohibited. It is pertinent to mention here that programs that are independently coded and deliver the same functional performance or behavior as the originator's own software are not said to infringe the latter's rights in his software as this will amount to fair use. This encourages competition and innovation by firms in all countries.

Berne Convention

The Berne Convention does not explicitly mention computer programs in its illustrative list of copyright works. However, as per TRIPS, member states should recognize computer programs (software) as literary works. Article 2 (7) of the Berne Convention makes the protection of works of applied art dependant on domestic legislation i.e. the extent to which protection may be granted and the conditions under which such works will be protected is dependant on the statute of the particular country where the work originated. Works enumerated in Article 2 of the Berne Convention are mere illustrations of the kinds of works to which copyright might extend. These illustrations are not exhaustive. Therefore, works such as computer programs that exhibit utilitarian characteristics and also contain expressive elements can be brought under the ambit of work of applied art. However, Article 7 (4) of the Berne Convention exempts, inter alia, the works of applied art from the general term of protection and sets up a minimum term of only 25 years from the making of the work. As article 2 (7) makes the protection of works of applied art

[164] Reverse engineering is the process of discovering the technological principles of a device or object or system through analysis of its structure, function and operation. It often involves taking something (e.g. a mechanical device, an electronic component, a software program) apart and analyzing its workings in detail, usually to try to make a new device or program that does the same thing without copying anything from the original.

dependant on domestic legislations, the term of protection may be applicable accordingly with respect to different countries.

Universal Copyright Convention ("UCC")

Under the UCC's national treatment provisions, software created by a U.S. author or first published in the US is protected in other UCC member countries to the extent that the member country's copyright laws protect software. The UCC provides that any member country that requires, as a condition of copyright protection, compliance with formalities (such as registration, deposit or notice) must treat such formalities as satisfied if all published copies of a work bear the symbol "©", the name of the copyright proprietor and the year of first publication. This provision applies, however, only to works that (i) were first published outside the country requiring the observance of the formalities, and (ii) were not authored by one of that country's nationals. In contrast to Berne Convention, formalities such as registration are permitted under the UCC in order to bring an infringement suit. India being a member to the UCC, authors of software in US will get protection in India also as per the terms and conditions laid down in the Indian Copyright law.

WIPO Copyright Treaty

In 1996, two copyright treaties were negotiated under the auspices of WIPO. These treaties are: WIPO Copyright Treaty ("WCT") and the WIPO Performances and Phonograms Treaty ("WPPT"). The WCT of 1996 is a special agreement to the Berne Convention and requires compliance with Berne Convention. This treaty makes explicit that computer programs are protected as literary works under Berne Convention. It also states that compilations of data for which the selection or arrangement of the contents are sufficiently original are protected as compilations. Software makers are granted a right to control rentals of computer programs. It requires treaty nations to provide adequate and effective protection against the circumvention of technical measures that restrict the ability of others to exercise the rights owned by the copyright owner. Among the countries where subject matter protection exists for software, there are substantial differences in the laws and regulations governing protection. For example, the author of a "U.S. origin" work who desires to file suit for copyright infringement in the US must first register the work with the U.S. Copyright Office. This is not the case with most other countries. In some countries, registration provides certain evidentiary benefits. In Japan, for example, the legal effect of one type of optional registration is to create a

rebuttable presumption that the program was created on the date declared in the application, but a program must be registered within six months of its creation. In Venezuela, unless a U.S. author has already registered its software in the U.S. Copyright Office, when the author seeks to register its copyright in Venezuela (which one might do to prove originality for purposes of possible litigation in Venezuela), the author must also file assignments from each person who worked on the software.

European Community Directive on the Legal Protection of Computer Programs ("EC Software Directive" ("ESD"))

In 1991, Article 1.1 of the ESD required member countries to extend copyright protection to computer programs. In the midst of many restrictions imposed on the use of software by another except the owner, ESD has introduced relaxation in these restrictions concerning mainly reverse engineering. Article 6 of the ESD conditions reverse engineering for compatibility purposes on the fact that the information necessary to accomplish compatibility must not have been previously readily available and it should be confined to the aspects of the program related to the need for compatibility. There is no specific exception for research, and the limited scope of reverse engineering permitted by the terms of the ESD is not to be construed in a manner that would unreasonably interfere with the owner's normal exploitation of the computer program. Reverse engineering for purposes of creating competing products is thus prohibited under the ESD.

In India

Initially in India, the **Copyright Act, 1957** did not protect computer programs. However, after the Amendment Act of 1999, it has given protection to computer programs as literary works, which are already protected under copyright.[165] The Amendment Act of 1999 has added definitions of 'Computer' and 'Computer Program' to the Act. Section *2(ffb)* provides that:
"Computer" includes any electronic or similar device having information processing capabilities.

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[165] Section 13 of the Copyright Act, 1957 provides:
Works in which copyright subsists.- 'Subject to the provisions of this section and the other provisions of this Act, copyright shall subsist throughout India in the following classes of works, that is to say,- original literary, dramatic, musical and artistic works, cinematograph films, and sound recordings.'

Section *2(ffc)* further defines:
"Computer program" means set of instructions expressed in words, codes, schemes or in any other form, including a machine-readable medium, capable of causing a computer to perform a particular task or achieve a particular result.

Section *2(0)* provides that:
"Literary work" includes computer programs, tables and compilations including computer databases

In United Kingdom

In United Kingdom, **Copyright Designs and Patents Act, 1988** does not define computer and computer program. Probably, the country would allow courts to develop the meaning of computer and computer program depending upon technological changes. However, computer programs are protected under Copyright, Designs, and Patents Act, 1988. Section 3 of Copyright, Designs and Patents Act, 1988, states that:

"(1) In this part-
'Literary work' means any work, other than a dramatic or musical work, which is written, spoken or sung, and accordingly includes-
a.) table or compilation, and
b.) a computer program; .....
(2) Copyright does not subsist in a literary, dramatic or musical work unless and until it is recorded in writing or otherwise; and references in this part to the time at which such a work is made are to the time at which it is so recorded."

Thus, the Act places computer programs firmly within the literary works category for purposes of copyright. Under this Act, computer programs are protected through the definition of "writing" as it includes any form of notation or code, whether by hand or otherwise and regardless of the method by which, or medium on which, it is recorded.

In UNITED STATE OF AMERICA

In the United States,[166] computer programs are literary works, under the definition in the Copyright Act, .[167]
There is a certain amount of work that goes into making copyright successful and just as with other works, copyright for computer programs prohibits not only literal copying, but also copying of "nonliteral elements", such as program structure and design. These non-literal aspects, however, can be protected only "to the extent that they incorporate authorship in programmer's expression of original ideas, as distinguished from the ideas themselves." [168] In Computer Associates vs Altai, the Second Circuit proposed the Abstraction-Filtration-Comparison test for identifying these protected elements. This test attempts to distinguish copyrightable aspects of a program from the purely utilitarian and the public domain.
The graphics sounds, and appearance of a computer program also may be protected as an audiovisual work; as a result, a program can infringe even if no code was copied.[169] The set of operations available through the interface is not copyrightable in the United States under Lotus v. Borland, but it can be protected with a utility patent. In Apple v. Microsoft, the courts established that a look and feel copyright claim must demonstrate that specific elements of a user interface infringe on another work. A program's particular combination of user interface elements is not copyrightable.

COPYRIGHT PROTECTION OF CACHING,

The Berne Convention

The set of exploitation rights guaranteed under the Berne Convention is surprisingly limited. The most important right by far is the right of reproduction of Article 9 (1) of the BC: “the exclusive right of authorizing the reproduction of these works, in any manner or form”. There is general agreement that the storage of a protected work in a digital medium amounts to “reproduction” within the meaning of Article 9 (1) of the BC. The words “in any manner or form” are clearly meant to cover all methods of reproduction, either analogue or digital.[170] Whether this is also true for acts of temporary copying inherent to the technique of caching will be discussed below.

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166 17 U.S.C. § 101.
167 Apple v Franklin, 714 F.2d 1240 (3d Cir. 1983).
168 Computer Assocs. Int'l v. Altai, Inc., 982 F.2d 693 (2d Cir. 1992).
169 Stern Elecs., Inc. v. Kaufman, 669 F.2d 852, 855 (2d Cir.1982).
170 WIPO Copyright Treaty, Geneva, December 20, 1996.

The reproduction right may be limited in accordance with Article 9 (2) of the BC: "in certain special cases, provided that such reproduction does not conflict with a normal exploitation of the work and does not unreasonably prejudice the legitimate interests of the author". Even if Article 9 (2) was adopted unanimously at the Stockholm conference that led to its introduction, there is considerable dispute over the precise meaning of this "three-step test". The wording "in certain special cases" seems to indicate that limitations may only be introduced in exceptional cases. However, Article 9 (2) in fact gives Union countries ample latitude; it is understood to permit all exemptions that existed at the time of the Stockholm Conference in 1967.

World Copyright Treaty

According to Article 8 of the WCT, "authors of literary and artistic works shall enjoy the exclusive right of authorizing any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them". Article 10 (1) of the WCT allows the contracting parties to provide for limitations to the right of communication to the public, or any other rights granted under the Treaty, subject to the three-step test.

In addition to the set of economic rights, the Berne Convention provides for certain moral rights that protect the personality interests of the author of a work. Pursuant to Article 6bis of the BC, the moral right includes the right to claim authorship of the work (droit de paternité), and the right to object to any distortion or mutilation of the work that might affect the author's honour or reputation (droit au respect). The catalogue of moral rights granted under national law may also include a right of first publication (droit de divulgation) and a right to amend or withdraw the work (droit de repentir). Neither of these moral rights is presently codified in the Berne Convention. The WIPO Copyright Treaty is silent on the protection of moral rights. However, Article 12 of the WCT does bear a relationship to the droit de paternité in that it prohibits the unauthorized removal or alteration of electronic rights management Information.[171] Article 7 of the Copyright Directive contains a similar provision.

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[171] See Annemique de Kroon, "Protection of Rights Management Information",Copyright and Electronic Commerce, (P. Bernt Hugenholtz ed., 2000), p. 229 et seq.

In India

Copyright Act, 1957, and Copyright Amendment Act 2012

Section 52(1). – 'acts not to be infringement of copyright' - with the following wording:
"(i) the transient and incidental storage of a work or performance purely in the technical process of electronic transmission or communication to the public;
(ii) such transient and incidental storage for the purpose of providing electronic links, access or integration, where such links, access or integration has not been expressly prohibited by the right holder, unless the person responsible is aware or has reasonable grounds for believing that such storage is of an infringing copy; Provided that if the person responsible has prevented the storage of a copy on a complaint from any person, he may require such person to produce an order from the competent court for the continued prevention of such storage."

The wording appears similar to that contained in S. 512(b) of the DMCA relating to caching. There are some discernible ambiguities in the wording of the section, most significantly, the complete absence of the word 'cache' being used, unlike the DMCA which explicitly uses this word. Most importantly however, is the fact that the safe harbour-enabling provision contained in Section 79 of the IT Act has a direct relation with Section 81 of the IT Act and there is no clarity in that regard as well (see our posts on the issue). Thus, the S.79-S.81 controversy has a direct bearing on the ability of an ISP to take an affirmative defence under the Copyright Act, as suggested above, and only when that question is resolved while the proposed amendment have any effect.

Current position:

Perhaps the crucial question is - What is the current position, if not for the amendment? The Researcher would hesitate to point out any definite position, given the lack of any clear judicial precedent, but to venture a guess, The Researcher would say that the reasoning employed in Field would apply in India as well. The fair use provisions under U.S. law are admittedly more detailed, but The Researcher would surmise that Indian courts would see a reasonably clear transformative character in the act of caching. The additional benefits that arise from caching cannot be easily dismissed, although the nature of the copyrighted work that is being cached is significant. Indian OSP's right now will have to contend with the ambiguity in the interpretation of S.79

and S.81 of the IT Act and this may also have a bearing on the outcome. Thus, The Researcher feel that based on a purely fair-use analysis and the theory of 'implied license' herladed in Field, The Researcher see the same outcome in Indian courts, irrespective of the proposed amendment coming into force. The statutory defence would be an additional shield for an ISP, but even without it, the 'implied license' and 'fair use' defences would be sufficient for Google, in India, to exclude liability.

In UK

The Electronic Commerce (EC Directive) Regulations 2002

The Electronic Commerce (EC Directive) Regulations 2002 were laid before Parliament on 31 July 2002 and largely came into force on 21 August 2002. The regulations are intended, amongst other things, to transpose articles 12, 13 and 14 of the EU Electronic Commerce Directive concerning the liability of Internet intermediaries for carrying, caching or hosting information provided by others, and will potentially provide statutory defences for Internet intermediaries in respect of defamatory material which they carry, cache or host, but which they did not create - regulations 17, 18 and 19. However, regulation 22 clearly provides that those defences in regulations 18 and 19 for intermediaries who cache or host defamatory Internet material which they did not create will ordinarily be defeated where the intermediaries are put on notice, even by e-mail, of the existence of the offending material.

The government has said it is prepared to consider including in the future additional regulations providing protection from liability for other categories of intermediaries, such as providers of hyperlinks, location tools and content aggregation, but has rejected calls for the inclusion of a regulation transposing article 15 of the Directive on Electronic Commerce which would prohibit the imposition of a general obligation on intermediaries to monitor the information they transmit or store, or a general obligation actively to seek facts or circumstances indicating illegal activity.

The Electronic Commerce (EC Directive) Regulations 2002 would not appear to change the legal situation as regards web archives, as a person or organisation providing a web archive is not a ‘mere conduit’, is not engaging in ‘caching’ within the meaning of the Regulations, and would seem to fall outside the definition of ‘hosting’.

In USA

The U.S. Copyright Act,1976

A copyright is a right of intellectual property. Copyright grants authors, for a limited time, certain exclusive rights to their works. Copyright is exclusively federal law, and derives from the "copyright clause" of the Constitution which provides that, "The congress shall have the Power To promote the progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."

To be eligible for copyright protection, a work must meet two conditions: 1) it must be an original work of authorship, and 2) be fixed in a tangible medium of expression.

The U.S. Copyright Act grants a copyright owner the exclusive right to do and to authorize any of the following: (1) to reproduce the copyrighted work in copies; (2) to prepare derivative works based upon the copyrighted work; (3) to distribute copies to the public; (4) to perform the copyrighted material publicly; (5) to display the copyrighted work publicly; and (6) to digitally perform the work.

Caching can encroach on most of the copyright holders' six exclusive rights. First, both proxy caching and client caching implicate the copyright holders' reproduction rights because they both "reproduce" a copy into their caches. Second, proxy caching implicates the public display, public performance, and digital performance rights. To perform or display a work "publicly" means to transmit a performance or display of the work to the public (i.e. to a substantial number of people outside of a normal circle of a family and its social acquaintances) , by means of any device or process, whether the members of the public receive the performance in the same place or in separate places and at the same time or at different times. Proxy caching makes its cached copy available to all those who use the proxy, which clearly places proxy caching within the definition of public display, public performance, and digital performance (the nature of the work, e.g. music or literature or computer program, determines which of these three rights are implicated). Third, proxy caching encroaches on copyright holders' distribution rights. The United States' Task Force on Intellectual Property states that making copies of a copyrighted work widely available online constitutes infringement of the copyright holder's distribution rights. Proxy caches regularly make copyrighted works widely available online to all their clients.

JURISDICTION :

Copyright Act 1957

In India, every suit or other civil proceeding for the civil remedies in respect of infringement of copyright in any work or for the infringement of any other right is to be instituted in the district court having jurisdiction.[172]
'District court having jurisdiction' includes a district court within the local limits of whose jurisdiction, at the time of the institution of the suit or other proceeding, the person institution the suit or other proceeding or, where there are more than one such persons, any of them actually and voluntarily resides or carries on business or personally works for gain.

Code of Civil Procedure, 1908

According to the Code of Civil Procedure 1908 pecuniary jurisdiction limits the power of court to hear cases upto a pecuniary limit only (s6). Jurisdiction also depends on where subject matter is situated (s 16), where suit is for compensation for wrong done to the person or to movable property (s 19) or where defendants reside or cause of action arises (s 20). In *Rajasthan High Court Advocates Association v Union of India*[173] the Supreme Court elucidated the meaning of 'Cause of action' as every fact which would be necessary for the plaintiff to prove, if traversed, in order to support his right to the judgement of the court. Every fact, which is necessary to prove each fact, comprises in 'Cause of action'. In *Casio India Co Ltd v Ashita Tele Systems Pvt. Ltd,*[174] the Delhi High Court held that once a website can be accessed from Delhi, it is enough to invoke the territorial jurisdiction of the court. The court held that since the plaintiff does not need to prove actual sale or a particular act of deception in a passing off case it was not required that actual deception should take place in Delhi.

Information Technology Act 2000

The information Technology Act 2000, cl 2 of s 1 states that the Act extends to the whole of India and save as otherwise provided in the Act, it applies also to any offence or contravention thereunder committed outside India by any person. Clause 2 of s 75 states that this Act applies to an offence or

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172 Copyright Act 1957, s 62.
173 (2001) 2 SCC 294.
174 (2003) 27 PTC 265 (Del).

contravention that involves a computer, computer system, or network located in India. Practically speaking, such provision confers prescriptive jurisdiction on Indian courts where any material displayed on a foreign website accessible through a computer stationed in India may offend the provisions of IT Act 2000 and constitute an offence. This confers too wide a power on Indian courts as what may be offensive in India may be perfectly legal in the country where the website is hosted. Furthermore, assuming Indian court prosecutes the offender and passes a judgement, there are bound to be difficulties in enforcing the same as the foreign court may not recognize the order/judgment and decline Indian courts any jurisdiction. It is pertinent therefore in this context to draw principles that are reasonable and define circumstances in which India may hold jurisdiction in cross border disputes as American courts have propounded.

Information Technology Amendment Act 2008

The Information Technology (Amendment) Act, 2008[175] is a significant advance in codifying the legal positive relating to OSP liability in India. Section 79(1) of the IT Act, 2000 (as amended by the IT (Amendment) Act. 2008) provides immunity to intermediaries from liability for any data, or communication link made available or hosted by him. Section 79(1) , as amended, significantly changes the law with respect to OSPs liability as compared to the old Section 79. Section 79, prior to amendment, provided immunity to service providers only with respect to liability under the IT Act, 2000 and the rules and regulations thereunder[176]. Therefore, the service providers were not entitled to immunity with respect to liability arising under other statues. In contrast, Section 79(1), as amended, contains a non – obstante clause to the effect 'Notwithstanding anything contained in any law for the time being in force.', and, therefore, it affords protection to service providers with respect to liability arising under all other statues. In contrast, Section 79(1), as amended, contains a non-obstante clause to the effect 'Notwithstanding anything contained in any law for the time being in force', and, therefore, it affords protection to service providers with respect to liability arising under all statues

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175 The Information Technology (Amendment) Act, 2008 (No. 10 of 2009) [hereinafter IT (Amendment) Act, 2008.].

176 Section 79 of the IT Act, 2000 prior to amendment read as: 'Network Service Providers not to be liable in certain provider shall be liable under this Act, rules or regulations made thereunder for third party information or data made available by him if he party information or data made available by him if he proves that the offence or the contravention was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence or contravention.

(for instance liability arising under the copyright Act, 1957 discussed hereinafter), thereby significantly heightening the level of immunity available to service providers. That being said, it is pertinent to not that the proviso to Section 81 of the IT Act, 2000 (as amended) must be analysed while considering the question of intermediary liability in the copyright context. The proviso to Section 81 reads person from exercising any right under the Copyright Act, 1957 or the Patents Act, 1970'. On a *prima facie* reading of the provision, it appears that the copyright infringement. However, a finer reading is necessary for reaching an interpretation which is consistent with the object underlying Section 79 was introduced with the object of embracing horizontal approach to intermediary liability in India.

Doctrine of Fair Dealing

The U.K. doctrine of fair dealing that has developed in the country's courts over almost two centuries eventually made its first statutory appearance in the U.K.Copyright Act, 1911. The Copyright Act's fair dealing provision has been the subject of pronounced academic debate. Some scholars have argued that the U.K. doctrine offers no principles or vision and that it contains too many obstacles undermining its operation; its purposes are too rigid and have been interpreted restrictively.[177] Others maintain that U.K. courts "have construed the specific purposes liberally."[178] Chapter III of the Copyright, Designs and Patents Act 1988[179] is entitled "Acts Permitted in Relation to Copyright Works". Its fair dealing provisions in sections 29 to 30 stipulate enumerated purposes similar to those in Canadian law: (1) research orprivate study, (2) criticism or review, and (3) reporting current events.[180] As in Canada, at least pre-CCH, the defendant must overcome three hurdles: (1) the dealing must fall into an enumerated category, (2) the dealing must be fair (in accordance with the common law criteria set out below), and (3) in the last two cases, there must be

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177 Craig, Fair Dealing,; Kevin Garnett et al., Copinger and Skone James on Copyright, 15th ed. (London: Sweet & Maxwell, 2005) at 481.

178 Lionel Bently & Brad Sherman, Intellectual Property Law, 2d ed. (Oxford: Oxford University Press, 2004) at 193. Press, 2004) at 193.

179 (U.K.), 1988, c. 48 [CDPA].

180 Ibid. In addition, s. 31 of the CDPA permits certain instances of incidental inclusion of copyrighted work; ss. 32-36 provide for permitted uses for the purposes of education; ss. 37-44 contain rules regarding libraries and archives; ss. 45-50 concern public administration; ss. 51-53 deal with designs; ss. 54-55 deal with typefaces; s. 56 is about works in electronic form; ss. 57-75 contain miscellaneous provisions; and s. 76 ensures the effectiveness of defences with respect to adaptations (ibid.).

sufficient acknowledgement.[181]Against the conclusions of previous government studies, the recent Gowers Review of Intellectual Property[182] does not recommend that fair dealing be amended.[183] Rather, its recommendations follow the U.K. tradition of carving out specific exceptions. Gowers recommends adding several new exceptions, including parody and format shifting.[184] These two exceptions appear not to have attracted any controversy to date.[185] The U.K.'s enumerated purposes are said to be liberally construed.[186] By adopting an objective test, courts have made it reasonably easy to prove that a dealing fits in one of these categories. Still, this liberal construction is not consistent with CCH, which arguably has expanded the allowable purposes enough to render possible the future inclusion of a parody right.

In U.S.

Against the U.K.'s fair dealing, U.S. fair use has been championed as the most flexible and ideal model for copyright law. In the United States section 107 of the U.S. Copyright Code entrenches the jurisprudence accumulated up until the 1976 revision and provides that the "fair use of a copyrighted work for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research" does not infringe

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181 But for reporting current events by means of a sound recording, film, broadcast, or cable program, acknowledgement is not required. See ibid., s. 30(3). The purported explanation for this distinction is that acknowledgements would unduly clutter reporting by these forms of media. A similar provision was contained in s. 6(3) of the Copyright Act, 1956 ((U.K.), 4 & 5 Eliz. II, c. 74, as amended by Andrew Gowers with The Copyright and Related Rights Regulations 2003, S.I. 2003/2498, giving effect to EC, Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the information society, [2001] O.J.L. 167, art. 5(3)(c) [Information Society Directive]).

182 U.K., HM Treasury, Gowers Review of Intellectual Property, December 2006 (London: Her Majesty's Stationery Office, 2006), online: HM Treasury <http://www.hm-treasury.gov.uk/media/6/E/pbr06_gowers_report_755.pdf> [Gowers Review].

183 In December 2005, the Chancellor of the Exchequer asked Andrew Gowers to lead an independent review; the one-year target was met and the U.K. Government accepted all of the recommendations the day the review was tabled in Parliament. See ibid. Gowers goes against previous reports, such as U.K., H.C., "Report of the Committee to Consider the Law on Copyright and Designs", Cmnd 6732 in Sessional Papers (1976–77) 1 ("[t]he greater the number of special cases, the greater the scope for uncertainty [regarding the applicability of the fair dealing defence] in relation to cases not specifically dealt with" at 175).

184 Gowers Review, ibid. at 6, recommendations 10b (format shifting), 12 (parody).

185 Interview of United Kingdom Patent Office (5 February 2007) [unpublished, transcript on file with author].

186 See Bently & Sherman, supra note 147 at 193; Newspaper Licensing Agency Ltd. v. Marks & Spencer Plc, [1999] R.P.C. 536, [1999] E.M.L.R. 369 (C.A.) [Marks & Spencer]; Pro Sieben Media A.G. v. Carlton U.K. Television Ltd. (1998), [1999] 1 W.L.R. 605 (C.A.), Walker L.J. [Pro Sieben]; Ashdown, supra note 64 at para. 64.

copyright. The United States offers an open list of permissible purposes and the case law has generally seen similar uses exonerated under fairuse. The decision of whether a particular use is fair mandates the consideration of four statutorily entrenched factors: the purpose and character of the work, its nature, the substantiality of the use, and its effect on the potential market for or value of the copyright.

Four Fair Use Factors

1. The Purpose and Character of the Use, Including Whether Such Use Is of a Commercial Nature or Is for Non-Profit Educational Purposes
2. The Nature of the Copyrighted Work,For this factor, courts consider whether the work is factual or fictional and whether it is published or unpublished. If there is substantial creativity, this tends to favour the owner.
3. The Amount and Substantiality of the Portion Used in Relation to the Copyrighted Work as a Whole
4. The Effect of the Use upon the Potential Market for or Value of the Copyrighted Work

In India

The Copyright (Amendment) Act, 2012

The Constitution of India has expressly declared the Right to Education as a Fundamental Right and imposes duty on the State to ensure that the right is realized by virtue of the 86th Constitutional Amendment Act. Prior to the amendment the Supreme Court in various judgments has read right to life to include Right to read and Right to adequate education. The Court also observed that

"The right to life enshrined in Article 21...means something much more than just physical survival. Every limb or faculty through which life is enjoyed is thus protected by Article 21 and a fortiori, this would include the faculties of thinking and feeling. The right to life includes the right to live with human dignity and all that goes along with it, namely, the bare necessaries of life such as adequate nutrition, clothing and shelter and facilities for reading, writing and expressing oneself in diverse forms..."
However, a mere Constitutional Right is not sufficient for realizing this right. In order to achieve this it is pertinent to enact legislations and amend inconsistent laws to facilitate the process. One such legislation which requires changes is the Copyright Act, 1957. Accessibility of information is paramount

in creating a knowledge society. No one should be denied their rightful access owing to the legal friction created by Copyrights. However, equilibrium needs to be maintained so as not to prejudice the interests of holder of intellectual property. In the light of the proposed The Copyright (Amendment) Act, 2012, it is appropriate to introduce changes in this regard.

The Existing Provision

''52. (1) The following acts shall not constitute an infringement of copyright, namely —
(a) a fair dealing with a literary, dramatic, musical or artistic any work not being a computer programme for the purposes of —
(i)private and personal use, including research;
(ii)criticism or review, whether of that work or of any other work;''

The Government Proposal

The government proposes to replace Section 52(1)(a) with the following:
''(a) a fair dealing with any work, not being a computer programme, for the purposes of-
(i)private or personal use, including research;
(ii)criticism or review, whether of that work or of any other work;
(iii) the reporting of current events, including the reporting of a lecture delivered in public.''

The scope of the provision has been widened to include “any work” save for computer programmes as opposed to only literary, dramatic, musical and artistic work. Also, included in this fair dealing provision is an exception for reporting of current events (including the reporting of a lecture delivered in public).

Inadequacy of The Government Proposal

The usage of the work other than a computer programme for research or private purposes is qualified only if the “dealing” with the copyrighted work is “fair”. Some common law jurisdictions (which share a similar legal system with India) such as the US have held that a fair dealing exception often cannot be taken up when the entirety of the work is copied. Yet from a policy perspective, it is critical to provide such an exemption in favour of the making of an entire copy of a work for research purposes. In particular, this would particularly aid

education throughout a country, which now recognizes the right to education as a fundamental right.

Safeguards
To remedy this situation we recommend that

a.“Fair dealing” be replaced with “Fair use” in Section 52(1)(a) of the Copyright Act, 1957.

b. India have a general provision permitting the making of private personal copies of any work. Illustratively, the Dutch Copyright Act provides in Article 16 (B) for such personal copies (both physical and electronic copies).

Countries such as the US have adopted “Fair use” instead of “Fair dealing”. This way copying of a work completely for research purposes would not amount to infringement. Further, an expression provision permitting personal copies of any work would eliminate any ambiguity in interpreting the sub-clause.

The Amendment We propose replace the existing Section 52(1)(a) with the following:

"(a) a fair use with any work, not being a computer programme, for the purposes of—

(i)private or personal use, including research;ii) criticism or review, whether of that work or of any other work;(iii)the reporting of current events, including the reporting of a lecture delivered in public."
We propose to insert the following explanation to Section 52(1)(a): "For the purpose of this sub-clause, reproduction of any work in its entirety in any format is deemed as fair dealing of the work for private use provided it is reasonably assumed that no new copies will be made available for any payment."[187]

[187] http://www.spicyip.com/wikilaws/tikiindex.php?page=Amendment+to+Copyright+Act+relating+to+Fair+Dealing+Exception,Last Access on 11 Feb 2012.

CIRCUMVENTION OF DIGITAL RIGHTS MANAGEMENT SYSTEM

The Anti-Circumvention Provisions

The WCT and the WPPT have established the new international legal norms for protection of technological measures, such as DRM technologies, used to safeguard content from unauthorized access and use. The WIPO Treaties were the product of a substantial amount of negotiation both before and during the Diplomatic Conference itself. To understand the obligations imposed by the treaty language that was ultimately adopted, it might be useful to compare the Basic Proposal,[188] which was before the delegates to the Diplomatic Conference, with the final text.

Article 13 of the Basic Proposal would have prohibited "protection-defeating"–or circumvention–devices and services, knowing that they would be used in connection with the unauthorized "exercise of rights" provided "under this Treaty," i.e., "copyright rights."[189] The Article would also have required that Contracting Parties provide "appropriate and effective remedies" against those unlawful acts. Finally, technological protection measures were not defined by the Basic Proposal, but the draft text would have prohibited circumvention of "any process, treatment, mechanism or system that prevents or inhibits any of the acts covered by the rights under this Treaty."

This Basic Proposal would have applied only to copyright control (not access control) measures, and only to devices and services, not to the act of circumvention. During the course of the Diplomatic Conference, the text was

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[188] See Basic Proposal for the Substantive Provisions of the Treaty on Certain Questions Concerning the Protection of Literary and Artistic Works to be Considered by the Diplomatic Conference, prepared by the Chairman of the Committees of Experts on a Possible Protocol to the Berne Convention and on a Possible Instrument for the Protection of the Rights of Performers and Producers of Phonograms (WIPO doc. CRNR/DC/4 of August 30, 1996), available at http://www.wipo. int/eng/dip/conf/ 4dc_all.htm ["Basic Proposal"].

[189] Article 10: Obligations concerning Technological Measures
(1) Contracting Parties shall make unlawful the importation, manufacture or distribution of protection-defeating devices, or the offer or performance of any service having the same effect, by any person knowing or having reasonable grounds to know that the device or service will be used for, or in the course of, the exercise of rights provided under this Treaty that is not authorised by the rightholder or the law.
(2) Contracting Parties shall provide for appropriate and effective remedies against the unlawful acts referred to in paragraph (1).
(3) As used in this Article, "protection-defeating device" means any device, product or component incorporated into a device or product, the primary purpose or primary effect of which is to circumvent any process, treatment, mechanism or system that prevents or inhibits any of the acts covered by the rights under this Treaty.

modified. Article 11 of the WCT, entitled "Obligations Concerning Technological Measures," provides:

"Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law."[190]

The WPPT, in Article 18, adopts largely the same wording.

The two Articles give substantial leeway to the Contracting Parties in determining how to implement these obligations. So long as the legal protection is "adequate" and the legal remedies "effective," the obligations will be met. They do not have to be air-tight and prevent every single type of act of circumvention. In particular, the texts do not bar Contracting Parties from crafting appropriate exceptions and limitations to the legal protections and remedies, so long as those carve-outs do not undermine the protections envisioned by the Contracting Parties for "effective technological measures."

What, then, does Article 11 require? First, does it require prohibiting both the act of circumvention and the trafficking in circumventing devices and services? Although the language is ambiguous, it does lend itself to the interpretation that it focuses more on the act of circumvention rather than on the devices, as had the Basic Proposal. Nevertheless, prohibiting technologies alone may be permissible because that would be one (or an additional) way in which such actual acts of circumvention could effectively be prevented.

Second, Article 11 only prohibits circumvention of "effective" technological measures. A measure need not be completely "effective," however, to enjoy the protections that would be mandated by Article 11; if it were completely effective, then obviously no legal prohibition against its circumvention would be needed, since the technology would seem to be, by definition, immune from circumvention.

Third, Article 11 addresses measures used in connection with authors' exercise of their copyright rights under the Berne Convention and the WCT. To

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190 WIPO Copyright Treaty, Art. 11 (adopted December 20, 1996).

the extent that a technological measure is used by an author to exercise rights that are beyond those granted by the Berne Convention (e.g., where uses fall within limitations or exceptions to copyright, such as fair use), arguably Article 11 would not require a Contracting Party to prohibit circumvention in connection with such a use.

Fourth, are technological measures that effect only "access control," but not copyright control, subject to protection under Article 11, given that there is no express "right of access" in the Berne Convention? It also has been argued that because authors can and do authorize access to their works, and given that an access control measure can effectively "restrict" any unauthorized access, then the last clause of Article 11 does cover such technological measures (in addition to measures that implement copyright control).

In any event, as suggested above, Article 11 does not prohibit Contracting Parties from affording protections for technological measures that exceed the requirements of the WIPO Treaties. Furthermore, the WIPO Treaties permit Contracting Parties to use existing legal remedies against the circumvention of technological measures, including DRMs. In this regard, Article 11 of the WCT and Article 18 of the WPPT do not require specific new anti-circumvention legislation and, indeed, some states have since determined that their existing legal regimes are adequate and effective to meet their obligations under the WIPO Treaties.

Rights Management Information

The WIPO Treaties also establish benchmarks for protection of rights management information. Rights management information is defined as information that identifies the work, the author of or the owner of any rights in the work, or information about the terms and conditions of use of the work, as well as any numbers or codes that represent such information.

Article 12 of the WCT and Article 19 of the WPPT require that the Contracting Parties provide "adequate and effective legal remedies" against two types of acts. Persons who knowingly perform acts that they know will induce, enable, facilitate or conceal an infringement (or have reason to know that their acts will do so) may not:

–Remove or alter any electronic rights management information without authority; or

–Distribute, import for distribution, broadcast or communicate to the public without authority works or copies of works knowing that the electronic rights management information has been removed or altered without authority.

The Digital Environment

The WCT also established certain rights under copyright, including authors' right of distribution and right of communication to the public, "including the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them."[191] Rights holders have thought that having these rights would be critical to best make use of the opportunities in the digital environment. These rights were especially important for the distribution of content over the Internet and through other digital media, including television, broadcasting and cable. To address concerns of certain nations and user communities, however, Article 10 states expressly that the Contracting Parties may provide for "limitations of or exceptions to the rights granted to authors," so long as such exceptions are confined to "special cases that do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the author."[192] Importantly, the Agreed Statement accompanying Article 10 makes clear that Member States may "extend into the digital environment limitations and exceptions" and "devise new exceptions and limitations" appropriate for the digital environment.[193] The extent to which DRMs and national legislation to implement the anti-circumvention provisions of the WIPO Treaties have, as a practical and technical matter, accommodated the policies reflected in Article 10.

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191 WCT, Art. 6 (right of distribution) and Art. 8 (right of communication to the public).
192 Id. at Art. 10.
193 Id. at Agreed Statement concerning Article 10.

Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement)

Scope of TRIPS Agreement

The World Trade Organization (WTO) TRIPS Agreement is another critically important international treaty for rights holders who are distributing their content through the means of eCommerce, including via DRM schemes. The TRIPS Agreement was concluded in 1995 as an integral part of the broader set of trade negotiations undertaken during the Uruguay Round of the General Agreement on Tariffs and Trade.[194]

The TRIPS Agreement came into effect on January 1, 1995. It provides protection and enforcement for various types of intellectual property rights, including copyrights, patents, trademarks and trade secrets, among others. Specifically, Part II of the TRIPS Agreement establishes minimum standards for substantive areas of intellectual property to which members must adhere. Part III sets minimum standards regarding members' domestic enforcement of intellectual property rights. Part V addresses dispute prevention and settlement and Part VI sets out certain transitional arrangements.[195] The TRIPS Agreement also generally requires national treatment (by a Member State with respect to its treatment of nationals of other states) and most-favored-nation treatment (forbidding discrimination between the nationals of other Member States).

With respect to Part II, the TRIPS Agreement incorporates by reference and, to some extent, expands upon the substantive protections that are required by the Berne Convention for copyrights, the Paris Convention for the Protection of Industrial Property and others. These are minimum standards, so members are entirely free to provide greater protections for intellectual property. As to Part III, the TRIPS Agreement requires that member states implement and comply with procedures to enforce intellectual property rights, including civil and administrative procedures and remedies, the right of rights holders to obtain provisional measures against alleged infringers and special requirements related to border measures and criminal procedures.

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[194] Agreement on Trade-Related Aspects of Intellectual Property Rights, available at http://www.wto.org.

[195] Among the transitional provisions are the timetables for coming into full compliance with the TRIPS Agreement. Developed countries were required to comply with the entirety of the TRIPS Agreement by January 1, 1996. Developing countries had five years, until January 1, 2000. The least developed countries were given ten years, until January 1, 2005.

Although the TRIPS Agreement establishes an important common and basic international legal framework for protecting copyrights and other intellectual property, and for enforcing those rights domestically, the agreement was largely negotiated by December 1991, and then came into effect before the WIPO Treaties. In this regard, some commentators have observed that the TRIPS Agreement did not adequately take into account the intellectual property issues implicated by the digital distribution of content, including via the Internet, and that the protections for DRMs afforded by the WIPO Treaties are not covered by the Agreement.[196] Much of the debate over electronic distribution has, however, shifted from the fundamental issues of the basic standards of copyright protection, which the TRIPS Agreement provides, to the challenges of the digital environment and the more novel issues of protecting technical safeguards from circumvention, which are among the subjects of the WIPO Treaties. Thus, it has been noted that the WIPO Treaties were prompted, in part, by the need to fill "lacuna" in the TRIPS Agreement and the Berne and Rome Conventions.[197]

In US

In October 1998, the United States of America implemented the anti-circumvention provisions of the WIPO Treaties in Title I of the Digital Millennium Copyright Act ("DMCA")[198] states 'No person shall circumvent a technological measure that effectively controls access to a work protected under this title'.[199]

The Act defines what it means in Section 1201(a) (3)
(A) to circumvent a technological measure means to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner; and Thus, if there is some "technological measure that effectively controls access to a work", it is

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196 See S. Baker, P. Lichtenbaum, M. Shenk and M. Yeo, E-Products and the WTO, 35 The International Lawyer 5, 20 (2001).

197 See Submission from Australia, Electronic Commerce Work Programme, WTO Document IP/C/W/233, at paragraph 28 (December 7, 2000). See also Work Programme on Electronic Commerce: Background Note by the Secretariat, WTO Document IP/C/W/128, paragraph 75 (February 10, 1999) (technological measures were not raised in TRIPS negotiations and TRIPS Agreement contains no specific provisions concerning such measures) ["Background Note"].

198 WIPO Copyright and Performances and Phonograms Treaties Implementation Act of 1998, Title I of the Digital Millennium Copyright Act (codified at 17 U.S.C. Chapter 12).

199 Section 103 (17 U.S.C Sec. 1201(a) (1)) of the DMCA.

illegal to circumvent that measure. However, S.1201creates several exceptions to this rule, and the Library of Congress is empowered to create additional exceptions.

Distribution of Circumvention Tools

Anti - Circumvention

The Act also prohibits the distribution of tools that enable a user to circumvent access controls or controls that protect a right of the copyright holder.

• Anti-circumvention refers to laws which prohibit the circumvention of technological barriers for using a digital good in certain ways which the right holders do not wish to allow. Now there arises a clash between fair use and anti- circumvention.[200]

Fair Use and Circumvention

Critics of the DMCA have often noted the absence of an explicit exception for circumvention to enable fair use. Section 103(c)(1) of the DMCA (17 U.S.C. Sec. 1201 (c) (1) does state that nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title. However, a violation of the anti-circumvention provisions of the DMCA is not itself copyright infringement and therefore it is unclear whether fair use can be raised as a defense in circumvention cases. Courts have come out both ways on the issue. Some have held that the anti-circumvention provisions can only be violated when the circumvention has a connection to copyright infringement.

Storage Tech. Corp. v. Custom Hardware Engg. & Consulting, Inc[201]., the Federal Circuit held that a copyright holder must show a connection to copyright infringement in order to succeed in a claim under the DMCA.[202] Chamberlain Group, Inc. v. Skylink Technologies, Inc[203]. the court held that distribution of a circumvention device did not violate the anti-circumvention provisions because its use did not lead to any copyright violation.[204]

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200 Ibid
201 421 F.3d 1307, 1318-19 (Fed. Cir. 2005).
202 421 F.3d 1307, 1318-19 (Fed. Cir. 2005).
203 381 F.3d 1178 (Fed. Cir. 2004).
204 381 F.3d 1178 (Fed. Cir. 2004).

Lexmark International, Inc. v. Static Control Components, Inc.[205], The computer printer company Lexmark, which had locked its printers using a microcontroller so that only authorized toner cartridges could be used. copyright protection cannot be applied to ideas, but only to particular, creative expressions of ideas. "Lock-out" codes—codes that must be performed in a certain way in order to bypass a security system—are generally considered functional rather than creative, and thus unprotectable.[206]

Thus, the Digital Millennium Copyright Act,1998 has clear provisions preventing circumventing of digital technologies but at the same time has taken care of the fair use doctrine and so concurrently has come up with anti-circumventing laws as well where court has been applying such provisions and given priority to the Fair Use Doctrine.

In Indian:

DRM and other Implications of the Copyright (Amendment) Act, 2012
there have been no provisions in the Indian Copyright Act, 1957 which deal with Digital Rights Management (DRM). The Indian Copyright (Amendment) Act, 2012 is, however, poised to change this: it includes three sections [viz. Sections 2(xa), 65A and 65B] which deal with DRM.

DRM is basically an umbrella term which includes any technology used (by a copyright owner) to restrict / allow access to and use of works protected by copyright which are embodied in media such as CDs or communicated to the public by digital means. In its most generic sense, Digital Rights Management refers to a system which is used to control access to, and possibly, the use of copyrighted works through technological means. It can broadly be classified into Rights Management Information (RMI) and Technological Protection Measures (TPMs).

The provisions in the in the Copyright (Amendment) Bill which deal with DRM are soporific. And to the average person, they seem to mean nothing. They are, nonetheless, provisions which are industry-oriented. They could control the locations (i.e. countries) in which a copyrighted work is enjoyed — consider a DVD of a film which is playable in just one continent. The could control the formats in which a work can be enjoyed — they could prevent a

[205] 387 F.3d 522 (6th Cir. 2004).
[206] 387 F.3d 522 (6th Cir. 2004).

consumer from changing a song from .wav to MP3. They could limit the number of copies which may be made of a work — so a consumer may not be able to buy one copy of a Music CD and copy it on to his laptop, desktop, notebook, and MP3 player.

DRM goes beyond establishing respect for the territorial divisions of rights on which many copyright industries thrive whether it be with respect toInternet streaming of TV shows or country-specific editions of books. TPMs and RMIs can be used to try to ensure not just that consumers use copies of copyrighted works in a legal manner but also that they comply with what may be far more stringent requirements unilaterally imposed by copyright owners.

Conclusion

Databases or collections of information used to be protected initially as compilations under copyright law.[27] Under the copyright system, original works are protected and the level of originality is generally low, although the term "original" has not been defined. In the case of compilation, emphasis was on selection and arrangement. India Skill.... It offered extended protection but it was only limited to expression as per the regular notion of copyright.
How best the intellectual property in databases is to be protected? Whether or not the efforts put in establishing a database qualify the basic conditions for being protectable under the copyright laws? Is it essential to seek stricter control measures for the protection of databases or somewhat lesser control measures are better? Although protection of databases under copyright is the most sought after arrangement yet there are alternative opinions preferring lesser control in the database area in the interest of creating a strong database industry.

Generally, three broad approaches are followed in the protection of databases, these are:

(i) Firstly, steps have been taken to incorporate database protection in the copyright laws.

(ii) Secondly, in addition to copyright protection, additional restrictions are put on the use of databases through `Contracts'.

(iii) Thirdly, legislative measures should be enacted for a sui generis system of protection for databases.

In the absence of specific legislation, data protection in India is achieved through the enforcement of privacy and property rights. Privacy rights are

enforced under the Indian Constitution ("Constitution") and the Information Technology Act, 2000, whereas the Indian Contract Act, 1872, the Copyright Act, 1957, and the Indian Penal Code, 1860, protect property rights.

The need for a law on data protection is paramount if India is to sustain investor confidence, especially among foreign entities that send large amounts of data to India for back-office operations. Data protection is essential for outsourcing arrangements that entrust an Indian company with a foreign company's confidential data or trade secrets, and/or customers' confidential and personal data. The proposed legislation for data protection will ensure adequate safeguards, and also appoint a regulator to monitor the collected data and its usage.

CHAPTER IV
ISSUES AND CHALLENGES PERTAINING TO DATABASE PROTECTION

COPYRIGHT PROTECTION OF DATABASES

It is an accepted fact that copyright does not protect the raw materials from which work is created but the result, which is the outcome of skill and labour employed by the author in creation of the work. According to Lord Atkinson, for the subsistence of copyright, 'it is necessary that labour, skill and capital should be expended sufficiently to impart to the product some quality or character which the raw material does not possess and which differentiate the product from the raw material'.[207]

Database refers to a collection of data, works, information or other independent material arranged in a systematic or methodical way following some basic principle of compilation; databases should be given copyright protection even if they are the compilation of non- original works as they are the result of skill and labour employed by the author in creating the work. If anyone by pain and labour collects and reduces into the term of a systematic course of instruction those questions which he may find an ordinary person asking in reference to common phenomena of life, with answers to those questions, and explanation of phenomena of whether those explanations and answers are furnished by his own recollection of his former general readings, or out of works consulted by him for the express purpose, the reduction of questions so collected, with such answers under certain heads and in scientific form, is amply sufficient to constitute an original work which will be protected by copyright.[208] Cerina[209] observes that databases are invaluable tools of vital importance for users in many segments of the economy, but can be copied in a minute with almost no effort, despite the considerable effort and expenditure necessary to their development. Therein lies the skill of the author of the work which brings to him commercial success. Though the originality of the author may be small but the extent of his thought, skill and labour may be tremendous and thus, it should be protected by law. Moreover, what is worth

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207 Macmillan & Co. Ltd v. Cooper, (1924) 40 TLR 186 at p. 188. Also see Fredrich Emersion v. Chas Devices Story's United States Rep., Vol. 3, 768.

208 Jorrold v. Houlston, (1857) 3 KJ 708: 69 ER 1294.

209 Cerian, P: The Originality requirement in the protection of databases in Europe and United States", (1993) 24 IIC 579.

copying is prima facie worth protecting.[210] For example, a database of articles on 'Indian Intellectual property laws' should be given copyright protection as it is a work that is the result of labour, skill and capital employed and judgment expended in selecting and arranging the articles by the creator of the database. And thus, many countries have treated database as literary work and copyright protection has been extended to databases, provided, they are original.[211]

In India too, databases have been treated as literary works.

According to Section 2(0) of the Copyright Act, 1957: 'literary work' includes computer programs, tables and compilations including computer databases."

The Act further provides for the subsistence of copyright protection for literary works under Section 13(1).[212] Apart from the protection given under the Copyright Act, 1957, the Information Technology Act, 2000 also provides for a high degree of protection to databases from un-authorized copying and destruction. Section *43(b)* of the Information Technology Act, 2000 provides:
"If any person without permission of the owner or any other person who is in charge of a computer, computer system or computer network, downloads, copies or extracts any data, computer database or information from such computer, computer system or computer network including information or data held or stored in any removable storage medium, he shall be liable to pay damages by way of compensation not exceeding one crore rupees to the person so affected."

Further, it is important to note that if a database is a collection of individual copyrighted works then copyright on the database exists without prejudice to any individual copyright subsisting in the individual work. For example, in a database of various articles regarding politics, social, cultural issues, the creator of database becomes the owner of database as a whole, but nonetheless, writers on the various issues still remain the owners of their independent articles. Hence, copyright in a database subsists at two levels, first at the level of individual works and second at the database as a whole if the selection and arrangement of material contained within it is the result of

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210 Observed by Peterson, J in University of London press Ltd. v. University Tutorial Press Ltd., (1996) 2 Ch 601, at p. 601.

211 The UK, it was long since recognized that non-original matter may be protected by copyright See Macmillan & Co. Ltd v. K. & l. Cooper, (1923) 40 TLR 186.

212 Section 13: Work in which copyright subsists: Subject to the provisions of this section and the other provision of this Act, copyright shall subsist throughout India in the following classes of works, that is to be say, original, literary, dramatic, musical, and artistic works.

skill and judgment. In a database containing simply the names and address of all the employees in a company there exists no copyright protection as there is no judgment or selectivity as to what should be included and what should not be included in the database. There is no decision-making process involved in the creation of such database. Mere compilation of information without any arrangement and formulation based on some judgment would not be protected under copyright. Thus, in *GA Cramp* & *Sons Ltd.* v. *Frank Smythson Ltd.*[213], copyright protection was denied to a simple diary because of lack of judgment in the selection and organisation of information. In relation to databases, which are the result of labour alone, there exists a great controversy regarding the subsistence of copyright protection. An example is a telephone directory stored in a computer database which may be the result of great effort without, or with little judgment in the design of the database. The US Supreme Court in *Fiest Publications Inc.* v. *Rural Telephone Service Co. Inc*[214], has precluded granting copyright protection to works which are the product of labour only. The 'sweat of the brow' test, which the common law courts tended to look to for the subsistence of copyright, was not accepted by the US Court. The Court held that white pages in a typical telephone directory were not protected under copyright as there is lack of creativity. The Court, however, did recognise and suggest that copyright could subsist in the 'yellow pages' section of a telephone directory because of the presence of original material. There is also skill and judgment in devising the classification system and the structure of the yellow pages. Hence, there can be no copyright in databases that are the result of effort alone, without any skill or judgment in selection of the material to be entered into the database.[215]

1. Test of Originality in Database

A database requires copyright protection as it is the result of a great deal of effort, skill and labour. However, to attract such protection it has to satisfy the test of originally. Factual compilations or the compilation of non-original works may also possess the requisite originality.

Originality does not mean the expression of original or inventive thought. Copyright laws are not concerned with the origin of ideas, but with the expression of thoughts and in the case of literary work with the expression of thoughts in print or in writing. The originality, which is required, is related to

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213 (1994) AC 329.
214 (1991) 111 S Ct 1282.
215 G.A. Cramp & Sons Ltd v. Frank Smythson Ltd., (1944) AC 329.

the expression of thought, but copyright law does not require that the expression must be in original or novel form, only, that work must not be copied from another work and it should originate from the author.[216] Much depends on the skill, labour, knowledge and the capacity to digest and utilize the raw materials contributed by others in imparting to the product some quality and character which those raw materials did not possess and which differentiates the product from the materials used.[217]

The compiling author typically chooses which facts to include, in what order to place them, and how to arrange the collected data so that they may be used effectively by readers. These choices as to selection and arrangement, so long as they are made independently by the compiler and entail a minimal degree of creativity, are sufficiently original,[218] and hence, any work satisfying these requisites can possess copyright protection. The Court in the above case held that originality is the only standard for deciding whether a factual compilation is protectable by copyright or not.

2. Identity of the owner of Computer database

Computer database is generally a collection or compilation of works, data, information, or other independent work stored in any computer or computer system. The impediment that arises here is with relation to the identity of the owner of database. Generally, we see that person compiling the information which is to be entered is considered the author or creator of the database. However, with respect to this new technology, there arise three ways by which a new computer compilation can be formed.

(a.) There can be a traditional database (paper compilation) and a computer database similar to or same as the traditional database.

(b.) There can be a direct formulation of a computer database from the organs of independent paper works.

(c.) The computer database can also be the compilation of computer generated independent works.

In such cases it becomes very difficult to identify the rightful owner of the

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[216] Macamillin And Co v. K and J Cooper, AIR 1924 PC 75.

[217] Also see Mishra Bandhu Karyalaya v. S. Koshal. AIR 1970 MP 261 at p. 267; S.K.Dutt v. law Books Co., AIR 1954 All 570; V Errabhadrarao v. B.N. Sharma, AIR 1960 AP 415; C. Cunniah & Co v. Balraj & Co., AIR 1961 Mad 111 at p 112.

[218] Fiest Publication Inc v. Rural Technology Service Constitution Inc., US SC 113 L Ed 2d 358 (1991).

computer database. It is easier to find the identity in the first case. If a paper compilation has been transformed to a digital compilation, the creator of the original database is said to be the owner of computer database and any other person making the computer compilation is said to infringe the adaptation right of the true owner. A great deal of confusion however, arises in the next two cases. There may be a number of copyright owners of the independent paper works or independent computer works through which a computer database may be formed. Thus, a conclusion can be drawn that true owner of the computer database can either be the person compiling or all those persons together who possess the copyrights in the independent works (paper or computer depending on the facts). It then it becomes difficult to identify the true owner of the computer database. This problem can be solved only with the assistance of 'idea/expression dichotomy' of the work in dispute. In order to identify the owner of computer database, it is to be seen whether the compiler has laid down his ideas and expressed the original work as it is, or whether the compiler has laid down. his expressions while the ideas expressed might be of the original works. In the first situation the owner of the original work would become the computer database owner, while, in the second situation the compiler would become the first owner of the computer database.

3. Database Rights

The principle of 'sweat of the brow', affording copyright protection to the works which are the result of labour only, has become controversial in the common law world. The rule that courts have to see whether the compilation of unoriginal work called for skill or expense to decide if it is entitled to be considered original and to be protected has become fragile. The US Supreme Court has also rejected this test in *Fiest Publications Inc.* v. *Rural Telephone Service Co. Inc.*[219] However, the EC Database Directive has designed a right to protect the investment[220] in obtaining, verifying or presenting the content of the database called the 'database right'. It is a right given to the maker of a database, for a limited period of time, to prevent or re-utilize[221] the whole or a substantial part of the content of that database in which substantial investment has been made by its maker.

The directive further provides that the right shall apply irrespective of the

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219 111 S Ct 1282 (1991).

220 'Investment' includes any investment, whether of financial, human or technical resources.

221 'Reutilization' shall mean any form of making available to the public all or substantial part of the contents of a database by the distribution of copies, by renting, by on-line or other forms of transmission.

eligibility of that database for protection by copyright or by other rights. In other words the right is not restricted to non-copyrighted databases. It is possible for a database to possess both copyright as well as database right. The database right will remain unaffected if database contains works, which are themselves subject to or possess copyright.

The meaning of substantiality in respect of database right is some what broader than what is accepted in respect of copyright. For the purpose of copyright 'substantiality' refers more to quality than that of quantity, whereas in respect of database right, substantiality, in relation to any investment, extraction or re-utilization, refers to quality as well as quantity or the combination of both.

The directive also provides that repeated and systematic extraction and/or re-utilization of insubstantial parts of the content of the database, implying acts which conflict with normal exploitation of that database or which unreasonably prejudice the legitimate interests of the maker of the database shall not be permitted.

This database directive was implemented in UK by the Copyright and Rights in Databases Regulation 1997, and Database Right is contained in Part III of the Regulation. The basic database right is contained in Regn. 13, which states:

"A property right ('database light') subsists in a database if there has been substantial investment in obtaining, verifying or presenting the content of the database.

Any person who without the consent of the owner of the right extracts or reutilizes all or a substantial part of the content of the database, infringes the database right of the owner."

4. Database Structure

Another important issue in relation to copyright as far as database is concerned is the structure of the database. Structure of database here refers to the design of the database in terms of the fields allocated for storing various types of information. Such field allocation and division of record specification in a database may require considerable degree of skill and intellect and thus need copyright protection. However, in *Total Information Processing System Ltd.* v.

Daman Ltd.[222], it was held that data division of a COBOL program did not form a substantial part of the program as it itself did not produce any executable code or speak anything about the program. The data division in a particular program defines the variable used and the structure and nature of files used by the program. However, many programmers consider data division an important and essential part of the program. Subsequently, in *IBCDS Computers Ltd.* v. *Barclay Mercantile Highland Finance Ltd.*[223], Jacob, J. disagreed with Paul Baker in *Total Information Processing case,* and said that there may be considerable skill involved in setting up the data division of a COBOL program and it could therefore be considered a substantial part of the program as a whole.

Database is protected in India under the Copyright Act, 1957. However, the Act is silent with regard to the structure of the database. The creator of the structure invests his intellectual creativity to formulate a particular format, lay-out and get-up for the fields allocated to store various types of information. Thus, the authors are of the view that the structure is a secondary act and it should be given extensive protection. The database protected under literary works should be given broader interpretation by including the database structure within its scope. In other words, database structure is implicit in the definition of database and, therefore, no explicit protection to the structure is required.

3. Copyright Protection of computer programs:

Certain problems were faced while giving copyright protection to computer programs and software, like

- Does Copyright subsist in a computer program?
- If it does, does the copyright in the BBC program?
- If the above question are affirmative, what should the court's approach be to a claim of Non-literal Copying?

The law assumes that if a thing is in writing, it can be protected through copyright and if it is a machine or invention then it can be protected by patent. Computer programs have both aspects i.e. authorship as well as invention - which law generally does not assume simultaneously. One of the views is that a computer program uses mathematical algorithms and functions in a technical

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222 (1992) FSR 171.
223 (1994) FSR 275.

manner. Thus, it needs patent protection. Another view is that it cannot be protected under patent as granting monopoly like protection i.e. patent in computers, may hamper technological development of society. However, it is apparent that a computer program subsists only in material form in which ideas are expressed and it is to be protected under copyright as copyright protects expression of ideas and not ideas themselves. Thus, most countries have protected computer software and programs under copyright.

Initially in India, the Copyright Act, 1957 did not protect computer programs. However, after the Amendment Act of 1999, it has given protection to computer programs as literary works, which are already protected under copyright.[224] The Amendment Act of 1999 has added definitions of 'Computer' and 'Computer Program' to the Act. Section *2(ffb)* provides that: "Computer" includes any electronic or similar device having information processing capabilities.

Section *2(ffc)* further defines: "Computer program" means set of instructions expressed in words, codes, schemes or in any other form, including a machine-readable medium, capable of causing a computer to perform a particular task or achieve a particular result.

Section *2(0)* provides that: "Literary work" includes computer programs, tables and compilations including computer databases.

Copyright is a collection of various rights. According to the Indian Copyright Act, 1957 different rights have been granted to owners of copyright depending upon the nature of work. The owner of a dramatic work possesses certain specified rights. Likewise owner of a literary work possesses certain other specified rights mentioned in the Act. Computer program is included in the definition of literary work. Thus the owner of a computer program possesses rights provided in literary work. However, depending upon additional features of this new type of literary work, certain additional rights have also been enumerated in the Act. The owner of a copyrighted computer program thus has the following rights under Indian Copyright Act, 1957. Section 14 of Copyright Act, 1957 provides that:

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224 Section 13 of the Copyright Act, 1957 provides:
Works in which copyright subsists.- 'Subject to the provisions of this section and the other provisions of this Act, copyright shall subsist throughout India in the following classes of works, that is to say,- original literary, dramatic, musical and artistic works, cinematograph films, and sound recordings.'

"For the purpose of this Act, "copyright" means the exclusive right subject to the provisions of this Act, to do or authorise the doing of any of the following acts in respect of a work or any substantial part thereof, namely-

a) in the case of a literary, dramatic or musical work not being a computer program,-
i. to reproduce the work in any material form including the storing of it in any medium by electronic means;
ii. to issue copies of the work to the public not being copies already in circulation;
iii. to perform the work in public, or communicate it to the public;
iv. to make any cinematograph film or sound recording in respect of the work;
v. to make any translation of the work;
vi. to make any adaptation of the work;
vii. to do in relation to a translation or an adaptation of the work, any of the acts specified in relation to the work in sub-clauses (i) to (vi);

b) in the case of a computer program,-
(i) to do any of the acts specified in clause (a);
(ii) to sell or give on hire, or offer for sale or hire any copy of the computer program, regardless of whether such copy has been sold or given on hire on earlier occasions ... "

Thus, the owner of a computer program in India has the following rights:

1) Reproduction right;
2) Right to issue to public;
3) Public performance or public communication right;
4) Right to make a cinematograph film or sound recording;
5) Translation right;
6) Adaptation right;
7) Right to do in relation to a translation or an adaptation of the work of any of the acts specified above; and
8) Right to sell or give on hire, or offer for sale or hire any copy of the computer program.

However, right to copy (reproduction right), adaptation right, public distribution right (right to issue to public) and rental rights (right to give on hire, or offer for hire any copy of computer program) are the four most important rights that need to be discussed.

(i) Copying[225]

Copying generally means reproducing work in any material form. As in any other literary work, copyright of the owner with respect to computer is infringed by making without copyright owner's permission, which can be by way of licence, a copy of program or of a substantial part of it.[226] Reproducing work in any material form includes storage in any medium by electronic means like making a copy of computer program on a magnetic disk. Thus, an act of loading a computer program into a computer only for the purpose of running the program may be considered to be making a copy of the program. The owner of a computer program thus has exclusive right to reproduce work in any material form including its storage in any medium by electronic means.[227] However, in order to determine whether such computer program is a copy of the original computer program or not, there must be a substantial similarity or causal connection between both computer programs. It is not necessary that the program should be exactly copied, even if a substantial part of the program is copied, it will suffice.

(a.) Substantial Part

Any inherent, inseparable and indispensable part of work is called substantial part of that work. For infringement of copyright of work it is not necessary that work should be exactly copied. It is sufficient even if a substantial part of the work is copied. In respect of a computer program, substantial part is an essential part of the program. It is an essence without which the program will not function properly and, if copied, will amount to infringement. What is substantial part is something that must be decided by quality and not quantity.

The reproduction or copying of a part, which by itself has no originality, will not normally be a substantial part of copyright and, therefore, will not be copyright infringement. It is also important to note here that, where an author or compiler produces a substantially similar result by independent work without copying, it does amount to reproduction. For example, if essential part of source code of a computer program is copied which enables the user to perform essential features of a computer program, it would amount to violation of reproduction right. However, in the latest case of *Cantor Fitzgerald International v. Tradition (UK) Ltd.*[228], it was suggested that each and every part

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225 The Copyright Act, 1957 has provided the term 'reproduction' instead of 'copying'.

226 M.S. Associates v. Power,[1998] FSR 242.

227 See Section 14(b)(i) of the Copyright Act, 1957; also see Section 17(2) of the (English) Copyrights, Designs and Patents Act, 1988.

228 [2000] RPC 95.

of a computer program is an essential element and can be a substantial part of the program. In a computer program, the moment a particular code is diluted, it would indicate an error or would not run properly. However, this approach is subject to controversy/criticism from the copyright aspect. To grant copyright in a substantial part that part must be the outcome of the creator's own skill and labour along with possessing the element of essentiality.

In *Total Information Processing System Ltd* v. *Daman Ltd.*[229], Judge Baker held that the data division of a COBOL program did not form a substantial part of program as it itself did not produce any executable code or speak anything about the program. The data division in a particular program defines the variables used and the structure and nature of files used by the program. However, by many programmers the data division would be considered an important and essential part of the program. **In** *IBCOS Computers Ltd.* v. *Barclay Mercantile Highland Finance Ltd.*[230], Jacob, J. disagreed with Paul Baker in *Total Information Processing System Ltd.* v. *Daman Ltd.*[231], and said that there may be considerable skill involved in setting up the data division of a COBOL program and that it could be considered as a substantial part of the program as a whole.

(b) Literal Copying and Non-literal Copying

1) Literal Copying

Literal copying is generally understood as line by line copying which can be noticed within no time. The new work, which is derived from the original work, is similar to all aspects of the original work. Copying of an original program with regard to structure, screen displays, formats, methodology, micro and macro functions and programming language along with all other functions to create a duplicate work is literal copying. **In** literal copying of a computer program, the work of creation is so similar that printouts taken out of both programs would extract no dissimilarity. There arises no difficulty in disputes where there have been allegations of literal copying. In *IBCOS Computers Ltd. v. Barclays Mercantile Highland Finance ltd*[232], the second defendant Mr. Poole had written a cluster of computer programs and made MK version of it. Subsequently Mr. Poole obtained copyright of the programs. Then he established a firm named PK Computer Services with another person. At the time of leaving the firm. Mr Poole transferred all rights of the software and its

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229 [1992] FSR 171.
230 [1994] FSR 275.
231 [1992] FSR 171.
232 [1994] FSR 275.

programs to the firm and joined another company (the first defendant) to write similar software. After some days PK computer services transferred all its assets to the plaintiff Company. The plaintiff Company came to know about the creation of similar software by Mr. Poole and thus took an action against Mr. Pool and that Company where he was doing the work of preparing such software. Mr Poole had argued that the similarity was the result of style in programming. However, this argument completely failed to impress the judge. Jacob J. held that there existed literal copying between both works. Mr Poole and his company were held liable for copying all elements of the software program along with the programming language and thus leaving no room got doubt that there had been an infringement of the plaintiff's copyright by defendant. Thus we find that literal copying is comparatively easier to test for infringement.

2) Non-literal copying

Copying of an original program by programmer into a new program with similar features of structure, screen displays, formats, and methodology, micro, macro functions but with different programming language can be called non-literal copying. Thus language used in a new program many be different than that used in the original work. In non-literal copying, elements of the original program are copied, although the program code is not directly copied. The printout of the original work and the new work would indicate little or no similarity unlike a case of literal copying. In such cases discovering the extent of copying is a very difficult task and to prove copying becomes perplexing. The programmer would use, analyze and inspect the source or the original program and would then in his own programming language, perform the same tasks in the new work with the assistance of other elements of the original work. This might be done to cover up the copying and make the origin of program unrecognizable. Now the question that arises here is whether the use of one program in writing the second program or non-literal copying of program is beyond the scope of copyright protection? If the answer is in the positive copyright protection over computer programs would become fragile and the whole object of copyright would fail and get defeated. Any program infringe could indulge in non-literal copying of work with changes only in the programming language of the original work.

There is no copyright in ideas. Copyright subsists only in the material form in which ideas are expressed. In the European Council Directive on the Legal Protection of Computer Program[233], Article 1.2 provides that, "ideas and

[233] EU Directive, supra note 7.

principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected by copyright under this directive". Even in the United States, Section *102(b)* of Title 17 USC provides, "in no case does copyright protection extend to any idea, procedure, process, system, method of operation, concept, principle or discovery, regardless of the form in which it is described, explained, illustrated or embodied in such work". Copyright does not give monopoly in ideas. It only protects expression of ideas. However, if the structure, flow, and the sequence of operations expressed in a computer program were copied using a different programming language it would infringe the copyright in the original work. Hence, copyright is not limited to duplication of the original work or substantial part of the work but extends its scope over a wider area.

To analyze the scope of copyright protection over computer programs it is important for us to analyze a few precedents of United States and United Kingdom, which have given a systematic interpretation of the idea/expression doctrine in determining the non-literal copying of computer programs. Although copyright essentially protects expression and not ideas, nevertheless copying the expression goes beyond just literal copying.

Let us first refer to the case of *Baker* v. *Selden*[234], which provided a way to distinguish idea (non-protectable) from expression (protectable). In this case, plaintiff Selden obtained a copyright on his book, *Selden's Condensed Ledger, or Bookkeeping Simplified,* which described a simplified system of accounting. **In** this book certain 'blank forms', pages with ruled lines and headings, for use in Selden's accounting system were included. *The* dispute in this case was whether Selden's blank forms were part of the method i.e. idea of Selden's book and hence not copyrightable or part of the copyrightable text i.e. expression. **In** deciding the dispute that distinguished what was protectable and what was not protectable under the copyright. 'Where the art i.e. the method of accounting, it teaches cannot be used without employing the methods and diagrams used to illustrate the book, or such as are similar to them, such methods and diagrams are to be considered as necessary incidents to the art, and given to the public.'

The court held that the blank forms were necessary incidents to Selden's method of accounting and therefore they were not copyrightable. The court's test in *Baker* v. *Selden* suggests a way to distinguish idea from expression. It focused on the end sought to be achieved by Selden's book, which is the line

234 101 US 99 (1879).

between idea and expression. The line may be drawn with reference to the end sought to be achieved by the work in question.

In a US case, *Whelan Associates, Inc.* v. *Jaslow Dental Laboratory Inc*[235], the court held that the purpose or function of a utilitarian work would be the work's idea and everything that is not necessary to that purpose or function would be part of the expression of the idea. If there are several ways of achieving the desired purpose, none of which is necessary to the purpose, then the way chosen is expression and, consequently, protected by copyright. In this case two programs were designed to assist dental laboratories, written in different computer languages. The first one was written in EDL and the second one was written in BASIC. The original program was devised to keep records in a dental laboratory and to assist in the running of the laboratory. There were several different methods which could be employed to achieve that same purpose, and hence, the structure was expression and not idea. The purpose itself being the idea was not protected by copyright. It is quite acceptable for others to write programs to help with the running of dental laboratories. In this case the structure of the two programs was similar, the programs had a similar look and feel even though written in different computer programming languages and this suggested a strong presumption that there had been copying which infringed the copyright of the original.

In *Broderbund Software* v. *Unison World*[236], which was inconsistent with the generic rule of *Whelan case,* the Court held that as there were several means, by which the screens could have been structured, sequenced and arranged, the actual way selected by the plaintiff was copyrightable expression. The defendant argued that there existed no other way to structure the screens or design the input formats. But the Plaintiff rebutted the above argument in a comprehensive manner by producing another competing program which performed a similar function but which had screen displays, sequences, etc. which were very different from the original copyrighted expression in the computer program of the Plaintiff. The Court thus concluded that the structural copying of screen displays infringes the copyright in similar programs like that of the Plaintiff.

The *Whelan case* had been considered to a far greater extent but some of its prescriptions were struck down by many later reported cases. In *Plains Cotton*

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235 797 F2d 122 (3rd Cir 1986).
236 648 F Supp 1127 (ND Cal 1986).

Cooperative Association of Lubbock Texas v. *Goodpasture Computer Service Inc.*[237], the Court of Appeals for the Fifth Circuit rejected the principles of *Whelan.* It held that the structure of the Plaintiff's program was 'idea' and not 'expression' because the application itself dictated the structure of the program. The application of the program was to aid in cotton marketing, which could be expressed only in computer programs exhibiting a substantially similar structure. The case of *Digital Communications Associates* v. *Softklone Distributing Corpn.*[238], rejected the view of *Whelan* and *Broderbund Software case* and held that a screen display cannot be a copy of part of a program because various programs can produce the same screen display in different ways. The Court regarded the 'idea' as the concept of the screen in the screen display whereas the 'expression' as the means used to communicate the screen's manner of operation. Nevertheless, the Court did afford protection to the screen display in its own right.

Even in *Computer Associates Int'l* v. *Altai Inc.*[239], the Federal Court of Appeals rejected the scope of copyright protection given in *Whelan case.* It commented that the *Whelan* approach to separate idea and expression relies too heavily on metaphysical distinctions. The Court observed that, "Whelan has dealt poorly in the academic community where its standard has been widely criticised for being overboard". **In** this case Computer Associates developed an 'operating system compatibility component', which enabled a program to work with a number of different operating systems. One of the members of the team that developed this system was employed by Altai to develop a version of one of its own programs, which could be used on various operating systems. The programs based that program on the Computer Associates' program and also literally copied some 30% of the code of the original program. When Computer Associates sued Altai for copyright infringement, Altai used different programmers to create a new version. However, Computer Associates alleged that even the second program made use of the non-literal elements of their original program and went on to sue for infringement of both programs. Apparently, the Court found that there had been infringement as far as the first program is concerned. However, the Court precluded from establishing the liability of Altai with regard to the second program. Computer Associates then appealed to the second circuit, which established a three-step test for determining the scope of copyright over the non-literal elements of computer program:

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237 807 F 2d 1256 (5th Cir 1987).
238 659 F Supp 449 (ND Ga 1987).
239 20 USPQ 2d 1641 (1992).

I. Abstraction

In the first step the computer program is divided into its various levels of abstraction. Through this stage the reverse engineering process discovers various non-literal elements.

II. Filtration

This involves the examination of the structural components of the software at each level of abstraction to determine:

(a.) Whether their particular inclusion at that level was "idea" or was dictated by consideration of efficiency. If yes, then it is a non-protectable expression.

(b.) Whether their inclusion was required by factors external to the program itself, such as required data input or output protocol.

(c.) Whether their structural components were taken from the public domain.

If any of the three conditions is satisfied then it is not protectable and need not to be considered in the third and the final step of the test.

III. Comparison

The third and final step involves the comparison of both the programs. In this stage it is determined whether the defendants have copied a substantial part of the protected expression in the plaintiff's computer program.

As against the *Whelan case,* which was inclined in favour of the original 'author' of the program and gave a monopoly-like protection to the programmer, the test in Altai minimized this protection. Some commentators support the *Whelan case* and are of the view that it would provide the proper incentive for programmers by protecting their most valuable efforts. The other view is that giving computer programs too much of copyright protection will restrict the progress in the field of computers. They are of the view that progress in the field of computer technology can be achieved by plagiarizing in some way the copyrighted work.

The three-step test known as the abstraction-filtration comparison test was thus subsequently used in the *Gates Rubber Co.* v. *Bando Chemical Industries Ltd.*[240], to maintain a balance between the protection of owner's right and technological development. The Court added one more rule to the above test and suggested that before beginning the working of the test it must first compare the programs as a whole.

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[240] October 19 (10 Cir 1993) discuss in 10 CLSR 101(1994).

United Kingdom

There is no legal provision in UK that restricts ideas from being protected under copyright. However, the precedents have indicated that there exists no copyright in ideas.[241] It is not an infringement of copyright to adopt the ideas of another. This feature of copyright law limits its potency. As it is difficult to draw a line between idea and expression, it has been rightly said by the eminent Jurist Learned Hand, "nobody has ever been able to fix that boundary and nobody ever can".[242] It is even more cumbersome to bifurcate ideas and expression because of the confinements that delimit different ways in which the ideas contained in a computer program can be expressed. In UK, in *Plix Producls Ltd.* v. *Frank M. Winstone (Merchants)*[243], the Court has distinguished two different kinds of ideas. The first type of idea was termed as the general idea which is basic and thus is not protected under copyright whereas the second kind of idea is mostly applied in the exercise of giving expression to the basic concepts. This is generally protectable under copyright. The difficulty is to determine where the general concept ends and the exercise of expressing the concept begins –the basic idea is not necessarily simple. It may be complex. It may be something innovative or it may be commonplace, utilitarian or banal. The way the author treats the subject, the forms he uses to express the basic concept, may range from the crude and simplistic to the ornate, complicated involving the collation and application of a great number of constructive ideas. It is in this area that the author expends the skill and industry which give the work its originality and entitle him to copyright. Anybody is free to use the basic idea unless it is a novel invention which is protected by the grant of patent. But no one can appropriate the forms or shapes evolved by the author in the process of giving expression to the basic idea. So he who seeks to make a product of the same description as that in which another owns copyright must tread with care. It was accepted that where there is only one way of expressing an idea, the idea and expression merged and were not the subject of copyright.[244] But this has led to a great deal of controversy, as it becomes difficult to locate the evidence of copying. In *IBCOS case,* Jacob, J. held that, "the real position is that where an idea is sufficiently general, then even if an original work embodies it, the mere taking of that idea will not infringe. But if the idea is detailed, then there may be infringement. It is a question of degree. The same applies whether the work is fictional or not, and whether visual or

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241 Donoghue v. Allied Newspaper Ltd., (1938) Ch 106.
242 Nichols v. Universal Pictures Corpn., (1930) 45 F 2d 119.
243 (1986) FSR 63.
244 Total Information Processing Systemv. Daman Ltd., (1992) FSR 171.

literary".

The first case involving the issues of copyright infringement in computer software in UK was that of *John Richardson Computers Ltd.* v. *Flanders*[245]. The 'look and feel' approach was fully observed in this case. It also had a detailed discussion on the literal and non-literal copying of computer programs. As there were no precedents in United Kingdom to support the case, American cases and precedents were cited by both the parties. Mr Richardson, the chairman and managing director of the Plaintiff company, who was a pharmacist and self-taught computer programmer, developed a program written in BASIC to produce labels suitable for the Tandy computer. He was not an expert at writing programs and he, therefore, engaged a self-employed programmer to help complete the program and make it more reliable. In 1983, Mr Flanders joined the plaintiff Company as an employee to write an equivalent program for the BBC computers. In 1986, Mr Flanders left the employment of the Plaintiff Company but did further work for it as a self-employed consultant, during which he rewrote the program in assembly language, a low level language, adding some new features to it. Later, Mr Flanders wrote a new version of the program in the BASIC language for the IBM personal computers. The Plaintiff was also working on a version for the IBM personal computers and sued for infringement of its copyright in the BBC version of the program. Ferris, J. decided the case by drawing the filtration and comparison tests of *Altai case* of US but ignored to apply the abstraction test as it was not suitable to be applied in the circumstances of the case. In fairness to Ferris, J. he did not profess to follow the Altai test precisely. The comparison test was also unique from that which was generally practiced. The codes of the programs were not compared by Ferris, J. but he relied on the visual evidence of the user interface level. The Court separated idea from expression with the assistance of the *Computer Associates case.*

Finally, Ferris, J. held that there was a limited infringement of copyright subsisting in the Plaintiff's program based on the non-literal elements of the program. A literal comparison was but obviously not helpful as both the programs had been written in different languages and had absolutely no similarity in literal elements.

In *IBCOS Computers Ltd.* v. *Barclays Finance Ltd.*[246], Jacob, J. took a slightly different view. He rejected the idea that the English courts should apply United

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245 (1992) FSR 497.
246 (1994) FSR 275.

States precedents. However, he agreed with Ferris, J. that consideration must not be limited to the actual code of the programs in question. Jacob, J. applied more traditional views in determining the infringement of the programs and held that 28 out of 55 of the Defendant's programs infringed the Plaintiff's copyright.

Spreadsheet Programs

In *Lotus Development Corpn.* v. *Paperback Software International*[247], Keeton, J. understood that there was an infringement by defendant by way of non-literal copying of the Plaintiff's work. In this particular case, the Defendant had developed a spreadsheet program[248] called VP-Planner. The test was applied to determine whether the Defendant's software package 'VP-Planner' infringed the copyright in Lotus's copyright protected '1-2-3' package. District Judge Keeton identified three elements which appeared to him to be the principal factors relevant to decision of copyright-ability of a computer program such as Lotus 1-2-3. (1) Some kind of conception or definition of idea for the purpose of distinguishing between idea and its expression. (2) Whether an alleged expression of idea is limited to elements essential to the expression of that idea or instead includes identifiable elements of expression not essential to every expression of that idea. (3) It must have identified elements of expression not essential to every expression of idea. It must focus on whether those elements are a substantial part of allegedly copyrightable work.

In applying his three elements test, Judge Keeton looked at the user interface of two programs. He seemed to accept as a basis for analysis the Plaintiff's description of user interface as including such elements as menus, long prompts, screens on which they appear, function key assignments and macro commands[249] and language. The judge found that menu command system was copyrightable because it was affected in different patterns in different spreadsheet programs. Keeton, J. concluded that non-literal elements

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247 740 F Supp 37 (D Mass 1990).

248 A spreadsheet program is one which comprises a grid of cells into which the user can enter text, numbers and formulae. It is usually formed for assisting in preparation table of calculations from which graphs and bar charts can be derived. Non-literal elements of spreadsheet programs include its menu system by which the user interacts with the spreadsheet and the system for denoting cell references.

249 Macro commands are commands stored in a separate executable file. The purpose usually is to save time. For example, the user might want to combine several spreadsheets, total them, find the average and change the display format and, rather than having to enter into the whole series of commands each time he wants to do this, he can call up and execute it in future at a keystroke. The command language of VP-Planner would have to be same as that in Lotus 1-2-3 for macros to be compatible.

of the spreadsheet program developed by the claimants were copyrightable and thus the Defendant infringed the claimant's work by way of non-literal copying. However, in *Brown Bag Software* v. *Symantec Corpn* [250], the Plaintiff's application to consider the *Lotus case* was rejected by the Court. The Court held that, "it should engage in analytic dissection for the purposes of defining scope of Plaintiff's copyright rather than comparing similarities and identifying infringement".

Precedents thus provide clarification that computer programs and software are literal elements within the copyright laws and hence protection can be extended to computer programs and software. The judgments provide that not only software as a whole but even a small part of software can be protected from unauthorised copying provided it is a substantial part of program and not an idea but expression of the author creating such software.

There should be a balance between protection and dissemination keeping in mind that directly or indirectly all intellectual developments stem from our ancient intellectuals. Hence, when there is a very limited way of expressing an idea such expression may not be given copyright protection.

With the least effort, an infringer can grab both, computer materials like software programs and the contents of the web, which are copyrighted. The next section thus discusses various rights of copyright holder in relation to computers and determines the essentials of safeguarding copyright from violation in computers.

(i) Adaptation Right

With respect to literary work, adaptation means conversion of work by way of performance in public or otherwise an abridgement of work or any version of work in which the story or action is conveyed wholly or mainly by means of pictures in a form suitable for reproduction in a book or in a newspaper, magazine or similar periodical or any use of such work involving its rearrangement or alteration. In relation to musical work it means, any arrangement or transcription and any use of such work involving its rearrangement or alteration.

With respect to computer programs, adaptation may take place when a high-level source code computer program is compiled into an object code program. Adaptation in relation to a computer program means any

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250 960 F 1465 (9th Cir 1992).

arrangement or altered version of the program or translation of it.[251] It is important to discuss this right because one may argue that the object code possesses very little copyright protection with respect to the computer program as a whole, as it might not be the original work of a programmer in the sense that when a programmer writes a program using a source code, he has to compile that program into the object code using a compiler or any other program which is not created by him. Hence, it can be said that the originality of program after compilation decreases, because the compiler or program which is converting source code written by programmer, into the object code has not been created by him. On the basis of the reverse engineering of object code one may say that the work is not an original work of the programmer and, therefore, it possesses little or no copyright protection.

However, even if object code is not original work, it will be protected by copyright as an adaptation of such a work, and since adaptation right is a restricted right available to the owner of copyright, copying an adaptation of a program will infringe the copyright of the owner.

Reverse engineering

Reverse engineering attracts important considerations with respect to copyright. As it is a process where a computer program is analyzed by converting object code into high level language to determine the features of program, it can be used to discover details and structure of a computer program and may enable the author of another program to build his program following the structure and details of original program which will perform the same tasks. However, the extent and scope of the permissibility of such a process is of supreme importance for both copyright owners as well as for the technological expansion of society.

Reverse engineering may fall within the ambit of adaptation as it is an adaptation of an adaptation and hence such a process of de-compilation may violate the exclusive right of the copyright owner as adaptation is in itself a right of the copyright owner. The copyright owners are of the view that reverse engineering should not be allowed as it enables the user to determine the

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[251] This meaning of adaptation in relation to a computer program has been laid down in Section 21(3) (ab) of the Copyright, Designs and Patents Act, 1988, UK. The Indian Copyright Act, 1957 merely provides that the owner of the computer program possesses the right of adaptation. It does not explain the adaptation right with relation to the computer program.

operation of a program with regard to how it works, its structure, and its algorithms and to make another program similar to the original program with the same functions and features. The owners of computer software thus believe that such adaptation should not be permitted. However, researchers generally argue that such exclusivity of adaptation right should not be granted to the owner with respect to reverse engineering as it may hamper technological development of society.

Adaptation of a computer program would not constitute an infringement of copyright if the lawful possessor of a copy of such computer program does it from such copy in order to utilize the computer for the purpose for which it was supplied.[252] However, adaptation of an adaptation may constitute infringement of copyright and it would not fall under the ambit of Section 52 of Indian Copyright Act, 1957 as the provision refers only to adaptation and that too for the purposes for which the program was supplied. The authors believe that though adaptation right is an exclusive right of the copyright owner and reverse engineering may violate his statutory right, it should not be given stem protection as it may obstruct technological growth. It should be given limited protection and any de-compilation of program to obtain information necessary to create an independent work, which can be operated with de-compiled program, should be permitted.[253] Further, any de-compilation for the purpose of research should be treated as fair use and be allowed.

(ii) Public Distribution right[254]

Distributing copies of work to the public is a restricted act under copyright law and will infringe copyright if done without the permission of the owner of copyright. The right to issue copies to the public not being copies already in circulation is the exclusive right of the owner of the computer program.[255] Distribution amounts to a copyright infringement if copies of a particular work are distributed amongst the public without prior permission of copyright owner.[256]

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252 Section 52 (aa) (i) of the copyright Act, 1957.

253 Interestingly Section 50-B [inserted by the Copyright (Computer Programs) Regulations, 1992, Reg 8] of Copyright, Designs Patents Act, 1988, UK has provided similar exception.

254 The Copyright Act, 1957 has provided with 'the right to issue copies to the public' instead of 'the public distribution right'.

255 As per Section 14(b)(i) of the Copyright Act, 1957, the owner of the computer program has certain rights to do any acts specified in clause (a) of Section 14. Section 14(a)(ii) provides the owner the right to issue copies of the work to the public.

256 See Section 51 of the Copyright Act, 1957.

With specific reference to the right of distribution of computer programs, a person who is engaged in issuing copyrighted computer programs to the public without the copyright owner's consent is held liable for violating distribution right of such copyright owner of computer software and programs. Issue to the public may be with regard to the internet. However, if the infringer exploits the original copyrighted computer generated works by distributing the said work to the public through any medium, it can also be termed as copyright infringement. The right to issue copies of a computer program is vested with the owner of such a computer program. If any person other than the owner of the computer program issues un-authorized copies of such program, it would infringe the owner's distribution right.

However, the question that arises is whether any person other than the owner has the authority to distribute such computer program to the public. The Copyright Act, 1957 clearly lays down that the owner of a computer program has the right to issue copies of work to the public not being copies already in circulation.[257] The Explanation to Section 14 provides that: "For the purpose of this section the copy which has been sold once shall be deemed to be a copy already in circulation."

The owner of a computer program is thus restricted from issuing copies which have already been sold to others. In the strict sense the Copyright Act, 1957 does not provide whether the owner has the right to restrict the purchaser of a computer program from issuing the copy which has been circulated or rather sold to him. Thus, the purchaser who issues copies of computer program which he has purchased does not violate the exclusive rights provided to the owner of computer program under the statute. However, such right of the purchaser needs to be restricted with regard to computer programs due to the peculiar features of computers. If the purchaser of traditional literary works further issue copies of the circulated work to others, the purchaser is not permanently issuing the physical copy. However, in computer program, the purchaser preserving the original copy of the computer program with him in his computer can further issue the original computer program to others. The features of computers can enable the purchaser to produce many copies of computer program which can be likened to the original copy. The purchaser can issue such computer program to others retaining with him the original copy of the work. Such other person may further install the program, and return the original back to the purchaser. It is thus apparent

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257 See Section 14 (a)(ii) of the copyright Act, 1957.

that once computer program is in circulation, the purchaser may distribute such copies, which have already been circulated, retaining with him the purchased copy. Thus, it amounts to higher degree of commercial exploitation but at the same time it does not violate any legal right of the copyright owner of computer program. Such restriction on the purchaser of not issuing copies of a circulated computer program is generally provided under the terms and conditions of the agreement at the time of sale of the computer program. However, if such kind of restriction is not statutorily imposed, the purchaser can never be held criminally liable merely on the basis of an agreement. Hence, a new amendment in the Copyright Act, 1957 providing for the exclusive right of the owner to restrict the purchaser from further issuing copies of a computer program that is already in circulation is required.

(iii) Rental rights

Rental right of the owner of a computer program generally means the right of making available the computer program for use on the terms that copy will be returned to the owner for direct and indirect economic or commercial advantage. Section *14(b)(ii)* of the Copyright Act, 1957 deals with rental rights possessed by the owner of a computer program. It provides that:

"For the purpose of this Act, 'copyright' means the exclusive right subject to the provisions of this Act, to do or authorise the doing of any of the following acts in respect of a work or any substantial part thereof, namely-

(b) in the case of a computer program,

(ii) to sell or give on hire, or offer for sale or hire any copy of the computer program, regardless of whether such copy has been sold or given on hire on earlier occasions."

Though the Act does not uses the term 'rental right', it provides that the owner of a computer program has the right to give computer program on hire, regardless of whether he has already given such computer program on hire to someone else. The proviso thus includes the renting of computer program as an exclusive right of the owner of computer program. The owner of a computer program has the option of distributing any number of copies on hire at the same time or he may distribute his one single copy any number of times on hire. Furthermore, it can be inferred that the owner of a computer program has the right of giving on hire the computer programs irrespective of whether such computer programs have been sold to other people. Sale or other distribution does not exhaust rental rights which demonstrates that rental is a further form of commercial exploitation and recognizes that authors and performers should be better able to recoup the substantial investment in the creation of new

works.[258]

Copyright Protection of Caching

Caching' is a technical process which essentially involves the storage of data so that future requests for that particular data can be served faster.

- Does the creation of a cached copy constitute unauthorised copying?

At this time, no case has straightforwardly addressed the issue **of** direct infringement during the initial "copying" step in the search engine **caching** process, or the legality **of cached** links, but three cases illustrate the interplay between the search engine **caching** process and **copyright**.

1. Field v. Google

One of the first cases highlighting the issues surrounding indexing and caching was *Field v. Google*.[259] In this case, Field argued that Google infringed his rights when a search engine user clicked on the cached link to Field's writings, which were available for free on his web site. However, the *Field* court specifically made an extra effort to discuss that Field was not claiming infringement during the initial scan and copy by the "googlebot." This distinguishes *Field* from a situation in which a web site owner sues a search engine for the initial copying of his web site. The *Field* court indicated that the result may have been different if Field would have claimed infringement during the initial copying step.[260]
Ultimately, the *Field* court held there was no direct infringement by Google when a search engine user clicked on the cached web site link.[261] In addition to the copyright issues in the case, the *Field* court indicated that it was punishing Field for manufacturing a claim against Google because of his bad faith prior to the lawsuit.[262] The *Field* court also applied several defenses that

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258 Metronome Musik GmbH v. Music Point Hokamp GmbH, (1999) FSR 576.
259 412 F. Supp. 2d 1106 (D. Nev. 2006).
260 See generally id. (explaining "Field does not allege that Google committed infringement when its Googlebot ... made the initial copy of the Web pages containing his copyrighted works and stores those copies in the Google cache."). Although the court points out what Field did not allege, they do not discuss the potential outcome of such a cause of action.
261 granting Google's motion for summary judgment that "by operating its cache and presenting 'Cached' links to works within it, Google does not directly infringe Field's copyrighted works."). Additionally, the court notes that Field did not claim "Google was liable for indirect infringement (contributory or vicarious liability)." Id.
262 stating "Field's own conduct stands in marked contrast to Google's good faith".

precluded the finding of liability including: implied license,[263] estoppel,[264] fair use,[265] and DMCA safe harbor.

2. Parker v. Google

Parker v. Google[266] illustrates a direct copyright infringement claim where the court barely addresses the search engine process and copyright. Parker, an author, claimed direct copyright infringement when Google automatically archived a posting he put on USENET, an online bulletin board. Parker further claimed direct copyright infringement when Google produced a list of links in response to a user's search query with excerpts of his website within the list of links.[267] The *Parker* court addressed the direct infringement claim of the archived USENET postings by considering Google an ISP without discussion, and dismissed the complaint, following the same reasoning of the *Costar Group v. Loopnet, Inc.* court.[268] The *Parker* court dismissed Parker's claim, in part, because Google did not have the requisite volitional conduct to satisfy a claim for direct infringement.[269]

Parker's complaint regarding Google's direct infringement via Google's process of indexing and caching websites was also dismissed for failure to state a claim on which relief can be granted. The court devoted one paragraph of analysis and relied on *Field v. Google* and the DMCA safe harbor to relieve Google of liability with little explanation.[270] Parker's claims of Google's contributory and vicarious liability were dismissed as well.

3. Perfect 10 v. Google

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263 A web site publisher can instruct a search engine not to cache the publisher's web site by using a "no-archive" meta-tag .... Despite this knowledge, Field chose not to include the no-archive meta-tag on the pages of his site.".

264 See id. "A plaintiff is estopped from asserting a copyright claim 'if he has aided the defendant in infringing or otherwise induced it to infringe or has committed covert acts such as holding out ... by silence or inaction.'" Id. To prevail on an estoppel defense, a defendant must prove four elements: (1) the plaintiff knew of the defendant's allegedly infringing conduct, (2) the plaintiff intended that the defendant rely upon his conduct or acted so that the defendant had a right to believe it was intended, (3) the defendant was ignorant of the true facts, and (4) the defendant detrimentally relied on the plaintiff's conduct. See id. Because the court found that all four estoppel factors were present, the court granted Google's motion for summary judgment on the estoppel defense. Id.

265 explaining why fair use weighs in favor of Google.

266 422 F. Supp. 2d 492 (E.D. Pa. 2006).

267 Id.

268 Costar Group, Inc. v. Loopnet, Inc., 373 F.3d 544, 550 (4th Cir. 2004) .

269 Parker, 422 F. Supp. 2d at 497.

270 See id.

Another illustrative case dealing with copyright infringement and search engines is *Perfect 10 v. Google, Inc.*[271] At issue in *Perfect 10*, was whether Perfect 10's copyrights were infringed when Google displayed Perfect 10's fee-based photographs in its image search. The Google image search works the same way the text search works in that Google sends robots to make copies of photographs. After the initial copying, Google displays the full images through its image search in thumbnail form. The *Perfect 10* court held that Google directly infringed the copyrights and that the fair use defense did not apply.[272]

Safe Harbour Provisions:

Google took the statutory defence provided for under Section 512(b) of the DMCA. The court found that the conditions set out under the provisions were satisfied for the following reasons:
a) The storage was temporary as the 14 day period has been previously held to be so.
b) The work was initially transmitted by Field to the Google bot since he didn't employ the preventive measure available to him
c) The act of serving the cached page was a non-volitional act on the part of Google and an automated process based on a search query of a user.
As seen above, while the 'implied license' ruling has applicability in the given case, even if the Court had not recognised the doctrine of implied license, Google (or any other OSP for that matter) could have taken the statutory defences provided for under the DMCA.
Now, coming to Indian law, one could direct attention to the proposed amendment to the Indian copyright Act with the addition of the following to Section 52(1). – '*acts not to* be infringement of copyright' - with the following wording:

"(i) the transient and incidental storage of a work or performance purely in the technical process of electronic transmission or communication to the public;
(ii) such transient and incidental storage for the purpose of providing electronic links, access or integration, where such links, access or integration has not

[271] 416 F. Supp. 2d 828 (C.D. Cal. Feb. 17, 2006).
[272] Id. at 851. The first, second, and fourth fair use factors weigh slightly in favor of P10. The third factor weighs in neither party's favor. Accordingly, the court concludes that Google's creation of thumbnails of P10's copyrighted full-size images, and the subsequent display of those thumbnails as Google Image Search results, likely do not fall within the fair use exception. The court reaches this conclusion despite the enormous public benefit that search engines such a Google provide.Id.

been expressly prohibited by the right holder, unless the person responsible is aware or has reasonable grounds for believing that such storage is of an infringing copy; Provided that if the person responsible has prevented the storage of a copy on a complaint from any person, he may require such person to produce an order from the competent court for the continued prevention of such storage."

The wording appears similar to that contained in S. 512(b) of the DMCA relating to caching. There are some discernible ambiguities in the wording of the section, most significantly, the complete absence of the word '*cache*' being used, unlike the DMCA which explicitly uses this word. Most importantly however, is the fact that the safe harbour-enabling provision contained in Section 79 of the IT Act has a direct relation with Section 81 of the IT Act and there is no clarity in that regard as well Thus, the S.79-S.81 controversy has a direct bearing on the ability of an ISP to take an affirmative defence under the Copyright Act, the lack of any clear judicial precedent, but to venture a guess, I would say that the reasoning employed in *Field* would apply in India as well. Th fair use provisions under U.S. law are admittedly more detailed, but I would surmise that Indian courts would see a reasonably clear transformative character in the act of caching. The additional benefits that arise from caching cannot be easily dismissed, although the nature of the copyrighted work that is being cached is significant. Indian OSP's right now will have to contend with the ambiguity in the interpretation of S.79 and S.81 of the IT Act and this may also have a bearing on the outcome.

8. Jurisdiction in Cyberspace

Jurisdiction is the authority given to a legal body or to a political leader to deal with legal matters, and to pronounce or enforce legal matters. Because cyberspace has no geographical boundaries, it establishes immediate long-distance communications with anyone who can have access to any website. Usually an internet user has no way of knowing exactly where the information on a site is being accessed from. Here, i.e., in cyberspace, jurisdiction issues are of primary importance. As Internet does not tend to make geographical and jurisdictional boundaries clear, Internet users remain in physical jurisdictions and are subject to laws independent of their presence on the Internet. Therefore, any kind of use of the World Wide Web and any related activities on the internet may expose the person to risk of being sued in any state or foreign country where another internet user may establish a claim. Accordingly, in each case, a determination should be made as to where an online presence will

subject the user to jurisdiction in a distant state or a foreign company. As such, a single transaction may involve the laws of at least three jurisdictions:

1) The laws of the state/nation in which the user resides,
2) The laws of the state/nation that apply where the server hosting the transaction is located, and
3) The laws of the state/nation which apply to the person or business with whom the transaction takes place.

So a user in one of the United States conducting a transaction with another user in Britain through a server in Canada could theoretically be subject to the laws of all three countries as they relate to the transaction at hand. Jurisdiction is an aspect of state sovereignty and it refers to judicial, legislative and administrative competence. Although jurisdiction is an aspect of sovereignty, it is not coextensive with it. The laws of a nation may have extra-territorial impact extending the jurisdiction beyond the sovereign and territorial limits of that nation. This is particularly problematic, as the medium of the Internet does not explicitly recognize sovereignty and territorial limitations. There is no uniform, international jurisdictional law of universal application, and such questions are generally a matter of conflict of law, particularly private international law. An example would be where the contents of a web site are legal in one country and illegal in another. In the absence of a uniform jurisdictional code, legal practitioners are generally left with a conflict of law issue.

The court, in *Zippo Mfg. v. Zippo Dot Com.Inc* Said that, "there is a global revolution looming on the horizon, and the development of the law in dealing with the allowable scope of personal jurisdiction based on Internet use is in its infancy."

Thus the major problem of cyber law lies in whether to treat the Internet as if it were physical space, and thus subject to a given jurisdiction's laws, or to act as if the Internet is a world unto itself, and therefore free of such restraints. Those who favor the latter view often feel that government should leave the Internet community to self-regulate.

But it is seen that in practical terms, a user of the Internet is subject to the laws of the state or nation within which he or she goes online. This system runs into conflicts, however, when these suits are international in nature. Simply put, legal conduct in one nation may be decidedly illegal in another.

POSITION IN INDIA

The principle of lex foris applicable with full force in all matters of procedure. No rule of procedure of foreign law is recognized. It was held in *Ramanathan Chettier v SomaSunderam Chettier* that India accepts the well-established principle of private international law that the law of the forum in which the legal proceedings are instituted governs all matters of procedure.

In India, the law of personal jurisdiction is governed by the Code of Civil Procedure 1908. The Code does not lay any separate set of rules for jurisdiction in case of international private disputes. It incorporates specific provisions for meeting the requirements of serving the procedure beyond territorial limits. In matter of jurisdiction what is treated differently is the question of subject-matter competence and not of territorial competence, i.e. the question of territorial jurisdiction arises in the same way in an international private dispute as in a domestic dispute.

The Code provides general provisions regarding jurisdiction on the basis of pecuniary limit, subject matter and territory. Sections 16 to 20 of the Code regulate the issue of territorial jurisdiction for institution of suits.

Rules as to the nature of suit

Jurisdiction in case of cyberspace can be under S.20 of C.P.C. A court can exercise jurisdiction in actions involving persons where:

(a) The defendant, or each of the defendants where there are more than one, at the time of the commencement of the suit, actually and voluntarily resides, or carries on business, or personally works for work; or
(b) Any of the defendants, where there are more than one, at the time of commencement of the suit actually and voluntarily resides, or carries on business, or personally works for gain, provided that in such case with the leave of the court has been obtained or the defendants who do not reside or carry on business, or personally work for gain, as aforesaid, acquiesce in such institution; or
(c) The cause of section wholly or partly arises.

Rules enforcing "agreement of parties"

It is well-established law in India that where more than one court has jurisdiction in a certain matter, an agreement between the parties to confer jurisdiction only on one to the exclusion of the others is valid. The Indian law therefore recognizes and gives effect to the principle of party autonomy.

Thus the position of law on the point is that? First, a choice of law agreement is permissible; and secondly, the agreement operates only in respect of a court, which does not otherwise inherently lack jurisdiction. In any such case, the courts also consider the balance of convenience and interests of justice while deciding for the forum.

Thus, in India, the principle is well settled that residence in the territorial limits of a court furnishes a ground for exercise of jurisdiction. Similarly, conduct of business by a defendant in a forum also gives to the forum court to exercise jurisdiction, irrespective of his non-presence within the jurisdiction. The Indian courts also assume adjudicative jurisdiction on the basis of the territorial nexus with the cause of action. In this regard, the consistent view of the courts in India is that the courts are empowered to pass judgments even against non-resident foreigners, if the cause of action arises in whole or part within the territorial limits of court.

Personal jurisdiction in cyberspace

Unfortunately, only a very few cases concerning personal jurisdiction in cyberspace have been decided by the superior courts in India. The approach adopted is similar to the "minimum contacts" approach of the United States coupled with the compliance of the proximity test of the Code. Considering the present rules of international jurisdiction and the tendency of the Indian courts to "suitably modify", the existing domestic rules to international situations in other areas of private international law may be analyzed. The reaction of the court would much depend on whether the contract contained a choice of court clause or not.

Case I: where the contract contains a choice of court clause

In such a case, the Indian courts would normally give effect to such a clause subject only to a survey of forum non conveniens particularly when the same would result in foreclosure of its own jurisdiction.

Case II: where the contract does not stipulate an agreed forum

In a case of this sort, the Indian courts would be inclined to apply the test of s.20 CPC since none of the other provisions seem to be of much assistance. The court would make a twin inquiry: place of habitual residence of the defendant and proximity of the cause of action to the forum, where even and 'in part' cause of action may furnish sufficient basis to exercise jurisdiction. Thus the Code provides for the tests of both objectivity and proximity to base its jurisdiction.

While the legal system favors exercise of jurisdiction on the basis of proximity of cause of action, its exercise based on the residence of the defendant is also accepted for three reasons:

(1) Ease of enforcement;
(2) Compliance with audi alteram partem; and
(3) The (draconian) law of contempt of courts in India (as in most other common law countries).

For the purpose of determining whether the cause of action arose in the local limits of a court, the courts generally go into the question of place of conclusion of the contract. However, it seems that the place of conclusion of contract would not be of much assistance in case of an e-contract. There would be an insoluble confusion between the rules governing completion of communication of offer, acceptance and revocation. The rule in the Bhagwan Dass case would neither apply nor lend much support in reaching a reasonable solution in contracts entered into through the Internet.

Thus the Indian position as may also be inferred from the trend of the Indian courts may be summarized as follows:
An Indian court would not decline jurisdiction merely on the ground that the international contract in entered through the Internet. It examines the two bases of jurisdiction: domicile of the defendant and proximity to cause of action. Even if one is found to be satisfied, the Indian court it seems would assume jurisdiction. However, it would be for the plaintiff to prima facie also convince that the courts elsewhere do not, have a better basis of jurisdiction since the Indian courts in such a case may also feel tempted to analyze the issue of jurisdiction from the stand point of the doctrine of forum non conveniens as also anti-suit injunctions and thus decline to exercise jurisdiction even where there existed legal basis to do so.

In order for a national court to adjudicate criminal and regulatory sanctions internationally, there must be some connection, or nexus, between the regulating nation (the forum) and the crime or criminal. Four nexuses have been invoked by courts to justify their exercise of jurisdiction.

1. The territoriality nexus holds that the place where an offense is committed-in whole or in part-determines jurisdiction.
2. The nationality nexus looks to the nationality or national character of the person committing the offense to establish jurisdiction.
3. The protective nexus provides for jurisdiction when a national or international interest of the forum is injured by the offender.
4. The universality nexus holds that a court has jurisdiction over certain offenses that are recognized by the community of nations as being of universal concern, including piracy, the slave trade, attacks on or the hijacking of aircraft, genocide, war crimes, and crimes against humanity.

It is not enough that these nexuses exist; the connection between the forum and the person or activity also must be "reasonable." In determining reasonableness, courts consider one or more of the following factors, depending on the circumstances of the particular case:

- The extent to which the criminal or regulated activity takes place, or has a substantial, direct, and foreseeable effect, within the territory of the forum;
- The extent to which the defendant or the injured party has a "genuine link" (i.e., an ongoing and real relationship) with the forum;
- The character of the activity (that is, its importance to the forum, whether other countries regulate it, and the extent to which countries generally regard it as appropriate for regulation);
- The extent to which justified expectations will be protected or harmed by the regulation;
- The extent to which another country has an interest in regulating the activity and the likelihood of a conflict with those regulations;
- The importance of the regulation to the international community; and
- The extent to which the regulation is consistent with the traditions of the international community.

There is one final preliminary matter to note before we look at examples of cases in which the different nexuses have been used. That is: the nexuses are

not mutually exclusive. Courts routinely rely on more than one in assuming jurisdiction.

Law passed in India and its enforcement

In India, The Information Technology (IT) Act 2000 has been passed to deal with cyber crimes and there are specific forums in the Act which have the sole jurisdiction to deal with the cyber crimes mentioned in the Act.

1. Adjudicating Officers Appointed by Controller

The Controller appoints adjudicating officers to hear and resolve alleged violations of the aforementioned rules and determines the geographical locations where each may exercise jurisdiction. After giving all parties an opportunity to present their cases at a hearing officer will render a decision in the matter. The officer will take into account: the wrongdoer's "gain of unfair advantage;" the amount of loss caused by the wrongful acts; and the number of times the wrongdoer committed the acts. Penalties will be imposed or awards will be made on a case-by case basis. The qualifications for adjudicating officers will be stated by the government and will include both information technology experience and legal/judicial experience. The officer's authority will be both civil and criminal in nature.

2. Cyber Regulations Appellate Tribunal

The government of India is authorized to establish one or more Cyber Regulations Appellate Tribunals, and to specify the "matters and places" pertinent to their jurisdiction. Their general purpose is to serve as the first appellate level to which cases may be appealed from decisions of the Control Board or adjudicating officers established in the ITA. No other court has jurisdiction to meddle in the affairs of an adjudicating officer under the ITA or in the affairs of the Appellate Tribunal by issuing an injunction against their orders or acts, so long as the adjudicating officer or the Tribunal has been properly empowered by the ITA. If the parties previously agreed to an order of an adjudicating officer, it may not be appealed. An appeal to the Tribunal must be filed within 45 days from the date on which the aggrieved party received a copy of the order of the Controller or the adjudicating officer. The Tribunal will make every effort to dispose of each appeal within six months from the date it is received The Tribunal will hear all parties to the controversy and may affirm

the previous order, modify it or set it aside. All parties and the concerned Controller or adjudicating officer will be given a copy of the Tribunal's order.

3. Appeal to High Court

Decisions rendered by the Appellate Tribunal may be appealed to the High Court. The appeal must ordinarily be filed at the High Court within 60 days after the decision has been received. However, for good cause shown, the High Court may allow up to an additional 60 days in which to file the appeal.

Extra territorial jurisdiction

The main problem arises when a citizen of some other country causes harm to citizens of a native country, let's take for an example in India, though IT Act does have extra territorial jurisdiction but it's very difficult to enforce it and excise it. If a crime is committed in Delhi by a citizen of US by hacking the systems of an Indian Company, that maximum the court can do is pass an order in favor of the plaintiff but the problem arises that how to punish the US citizen, the only thing which the hacker has to do is avoid coming to India, moreover as it's an international matter collection of evidence will also be a trouble for all. Hacking is still a crime of greater degree but it creates problem in case of crimes like publishing obscene materials on websites, if a citizen of U.K posts obscene material. Are the international Extradition laws strict enough enforce an arrest? What if the Act is an offence in India but not in his native country? Prosecuting and trying a person also raises difficult problem in the field of jurisdiction. These problems relate to determination of place where the offence was committed (locus delicti) to the application of ne bis in idem where several jurisdictions are equally competent, and to the avoidance of negative jurisdiction conflicts.

Under the IT Act, India claims "long arm" jurisdiction over foreign parties committing criminal acts outside of India which have an effect on a computer information system located within India. A court may order law enforcement authorities to seize computer equipment that is suspected of having been used in the commission of a computer crime. It is possible for more than one punishment to be administered for commission of the same unlawful acts if more than one criminal law has been violated.

Section 75 of the IT Act, 2000 deals with extraterritorial application of the law, the section states that the provisions of the Act will apply to

(a)Any person irrespective of nationality
(b)An offence or contravention committed outside India

The said offence or contravention must have been committed against a computer, computer system or computer network located in India. The Act has therefore adopted the principal of universal jurisdiction to cover both cyber contraventions and cyber offences. It is important to note that the universal jurisdiction over specified offences is often a result of universal condemnation of those activities, and requires co-operation to suppress them, as reflected in widely accepted Cyber Crime Convention.

Jurisdiction in Copyright Infringement

The Indian Courts are continuously endeavouring to enhance the scope of jurisdiction to conceal within its shield the Internet related matters where the Defendant is either an out-of-State person or entity or where such an out-of-State person or entity files a suit in a foreign Court over the Indian citizens and detains the Indian citizens for the wrongful act committed by them. In order to duly disintegrate the Internet jurisdiction intellectual property disputes, it is very important to divide the topic into two. Initially the matter is discussed with the range of Indian territorial jurisdiction over the out-of-state Defendant and subsequently the range of foreign judgments over the Indian citizens and its conclusiveness in Indian Courts.

The possibilities where infringement disputes may arise in computers may be with regard to the violation of any right of the owner of the computer software and programs or the copyrighted works on the Internet. Such works may be any literary, artistic, musical, etc. The owner of the copyright can file a civil suit in the Indian Courts for the infringement of his rights vested in such computer programs and software or the works as mentioned and possessed with him, if he fulfils the below mentioned criteria. Section 62 of the Copyright Act, 1957 provides that:

(1) Every suit or other civil proceeding arising under this Chapter in respect of the infringement of copyright in any work or the infringement of any other right conferred by this Act shall be instituted in the District Court having jurisdiction.
(2) For the purpose of sub-section (1), a 'District Court having jurisdiction' shall, notwithstanding anything contained in the Code of Civil Procedure,

1908 (5 of 1908) or any other law for the time being in force, include a District Court within the local limits of whose jurisdiction, at the time of the institution of the suit or other proceeding the person instituting the suit or other proceeding or, where there are more than one such persons, any of them actually an voluntarily resides or carries on business or personally works for gain."

It is thus evident that if there is any copyright infringement with regard to computers, the aggrieved person can file a suit either in the District Court or in the High Court of ordinary original civil jurisdiction. However, to determine whether the Court has jurisdiction or not the section further lays down certain criteria which provides that a District Court having jurisdiction shall include a District Court within the local limits of whose jurisdiction, at the time of the institution of the suit or other proceeding, the person instituting the suit or other proceeding or, where there are more than one such personas, any of them actually and voluntarily resides or carries on business or personally works for gain, in spite of any thing contained or whatever mentioned in the Code of Civil Procedure.

It is thus clear that apart from the stated provisions of the code, the owner of the copyright for filing a civil suit or proceeding must either reside, actually or voluntarily. Such owner can also file a civil suit or proceedings in such District Court within the local limits of which the owner carries on his business or personally works for gain. Before proceeding to the relevant provisions of Code of Civil Procedure, it would suitable to deal with the trademark infringement and passing-off provisions with regard to jurisdiction

9. Fair Use

The defence of fair use is available to the user while making use of the copyright material available in the traditional form. However, **whether fair use defence should be available on the Internet has widely been debated**. It has been argued that a user, perhaps mistakenly relying on fair use, has the potential to distribute a work to thousands of other users in cyberspace without diminishing the quality of the copy. Further, copyright owners may think that the continued improper exploitation of fair use will ultimately keep potential contributors out of the digital environment because the authors may not like to put their copyright material on the Internet. Copyright owners may believe that if a work may be instantly accessed for free on the web, distributed

to masses free of cost, there will be no incentive for the copyright owners who may ultimately like to keep their works away from the Internet.

On the other hand, it was contended that it is one of the objectives of the copyright system to maintain a balance between the private interest of the copyright owner and public interest at large. This balance may be maintained largely by providing fair use exceptions to the users, irrespective of the fact whether the material is available on the Internet or in traditional form. Thus overprotection of the exclusive rights of the copyright owners may turn the Internet into a closed, one-sided media, similar to an electronic book.

Internet provides unparalleled opportunities for research and innovation. But overprotection of the material available on the Internet may hider the research and innovation activities. Technological devices such as encryption[273] and digital watermarking[274] may adequately protect the interest of the copyright owners. In addition, due to the existence of copyright management information systems[275] and contractual arrangements, Internet piracy may be discouraged. However, current improvements in technological devices to prevent access to material may create a situation where access to even public domain material may functionally be blocked by cumbersome licenses and onerous fees. Thus, restriction of access and the corresponding diminution in the opportunity to gain knowledge and learning may upset the traditional copyright balance, as every use of the copyright material on the Internet does not amount to violation of copyright. The judiciary also has come out with several decisions justifying the fair use defence.

In *Religious Technology Center v. Netcom On-Line Communication Services, Inc,*[276] while upholding the defence of fair use, the court held that Netcom had copied no more of the copyright materials of the Religious Technology Center

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273 Encryption is a security technique often used to provide authentication and confidentiality. The message or work is encoded and subsequently decoded using a key.

274 A digital watermark is an electronic code or unique identifier that becomes part of the document and cannot be removed by anyone except the person who set up the system. On the screen, the image or document may seem fine, but if the infringer tries to print or distribute the work, the watermark will appear. Thus, a potential infringer will not be able to sell the work because the watermark will destroy the marketability of the work. In addition, a digital watermark may include a code number so that every time a work is sold, the distributor will be able to track the misappropriation back to the original source.

275 A copyright management information system is a technological mean whereby copyright owners can securely label works with ownership information and offer users the opportunity to license the work for specified uses on the Internet.

276 907 F Supp 1361 (ND Cal 1995).

than what was necessary to function as an ISP. In *Religious Technology Center (RTC) v. FACT Net Inc*[277] also, the court held that the defendant's use was fair use since its action was aimed at non-commercial criticism and that there was no harm to the church from such a copying endeavour since the members of the church would not consider the posting as a substitute for the church's work.[278]

In *Seven Networks v. News Interactive,*[279] Fox News displayed on its website the Olympic Medal Tally along with the latest developments of the Olympics held in Sydney. The plaintiff sued Fox News alleging that since they were the official sponsors of the Olympics, Fox News did not have the right to launch this. The court observed that there was no misrepresentation that Fox News had any connection with the Olympic. It merely amounted to a news item which was completely protected by the fair use defence.

The defence of fair use was rejected in *Religious Technology Center (RTC) v. Lerma.*[280] The court observed that the posting of 69 pages of RTC's material on the Internet without any comments or other changes could not be covered under the fair use defence. Further the volume and completeness of the materials posted by Lerma were more than what was necessary to benefit and educate the public.[281]

A fair dealing with a literary, dramatic, musical or artistic work for the purpose of research or private study or criticism or review of the copyrighted work shall not constitute an infringement of copyright.[282] The fair use exemption specifically mentions several purposes included in the fair use doctrine. It includes in it teaching, scholarship, research, etc. However, the fair use defence should be used fairly. For instance, a teacher making twenty copies of an entire text book cannot claim fair use.

To be protected under fair use, it is essential to determine the nature of work i.e. whether the work is imaginary or factual. Factual works receive less protection from fair use copying than imaginary works. Application of this test to the World Wide Web will obviously depend on the web page in question.

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277 901 F Supp 1519 (p Col 1995).
278 901 F Supp 1519 (p Col 1995), p 1525.
279 63 IPR 28.
280 40 USPQ 2df 1569 (ED Va 1996).
281 Bijju TM, 'Copyright in Cyberspace' in AK Koul and VK Ahuja (eds), *Law of Copyright: From Gutenberg's Invention to Internet, 2001, p 301.*
282 See Section 52(1)(a) of the Copyright Act, 1957.

Infringement is more likely to be found when a story on the web is copied or printed than when a research report is copied or printed. Fair use is also more likely to be accepted when the copied work is published; however, it is likely that courts will consider anything available on the web as published. One of the results of the popularity of the web is the fact that now almost anyone can publish a work. It will be interesting to see if that fact will change how much weight courts give to the published status of a work. The commercial status of the work may also make a difference to whether copying is fair use or not. If it is going to make any difference at all, a web page that serves a commercial purpose is better protected than one that does not serve a commercial purpose. If anyone copies an entire work, fair use is much less likely to be found than if someone only copies, say, a couple of pages of a large book. Web pages always tend to be very modular. Only a small amount of information is placed on a single page, and hypertext is used to link to other parts of the website.

In considering the question of fair use in copying web pages there would be an issue as to what constitutes the whole "work". The fact that making a simple hard copy of a web page for personal use does extremely little or no commercial damage to the owner of the web page is usually the deciding factor assuming that such copying is fair use. This is especially true when copying is done for academic or research purposes, or when the information obtained from the web page has its origin in fact.

In determining the fair dealing issue, a judge should take into account all the facts and circumstances of the case. Many countries have not explained the doctrine of fair use in their applicable copyright codes. However, the doctrine has been used and explained in a number of cases. In *Hubbard* v. *Vosper*[283], Lord Denning described the scope of the fair dealing defence and how a judge should assess it when he said:

"You must first consider the number and the extent of quotations. Then you must consider the use made of them. If they are used as the basis of comment, criticism or review, that may be fair dealing. If they are used to convey the same information as the author for a rival purpose, they may be unfair. Next you must consider the proportions. To take long extracts and attach short comments may be unfair. But short extracts and long comments may be fair. Other considerations may come to mind also. But... it must be a matter of impression."

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283 (1972) 2 QB 84 at p. 94: (1972) 1 All ER 1023, Lord Denninig MR.

In *Religious Technology Center* v. *Netcom On-Line Communication Services*[284], the Defendants Online Service Providers were accused of infringing material that was "mirrored" on its server as part of providing Usenet news group services to its subscribers. However, the Court held that doctrine of fair use ought to be applicable in such type of proxy caching and that Online Service Providers are not liable for violation of copyright.

In *Kelly* v. *Arriba Soft Corporation*[285], the Court of Appeals for the Ninth Circuit covering California ruled that an image search engine website copying and displaying thumbnail images in response to a user's query was not a copyright infringement but rather a fair use allowed under copyright law. The case involved Plaintiff Leslie Kelly, a professional photographer who had displayed images on his website and on authorised third party sites. Defendant Arriba operated an Internet image search engine that permitted users to enter a search query and then returned and permitted users to view images matching the query. Arriba made its database by using a Web crawler that searches the Web for images, and then downloads full-sized copies of the images to its computers. Arriba then generated smaller, lower resolution images known as "thumbnails" for display, and deleted the originals. If the user clicks on a thumbnail or a view "source" link, the user would see a full-sized version of the same image that would be displayed in the user's browser, appearing to be part of the Arriba site. Arriba's crawler copied Kelly's images into Arriba's database and made them returnable by search on the Arriba site. Kelly then sued for copyright infringement. The Court found that Arriba had copied images and displayed thumbnails without Kelly's permission. However, this was not considered a copyright infringement because Arriba's use of the thumbnails in this context was considered a "fair use".

An interesting question that arises is whether using a computer program free of cost infringes copyright in the program. Many countries have a standard view and have led to the conclusion that it does not amount to copyright infringement. Such countries have given an impressive flow of explanations to get out of the clutches of copyright infringement. It is not an infringement to read a book, listen to music or observe and admire an art work or painting. Similarly, if any computer program is supplied free of cost, the consent of Plaintiff is not required to use program in its fair dealing. Thus, the difference lies in the nature of computer programs.

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284 907 F Supp 1361: 37 USPQ 2d (BNA) 1545 (ND Cal 1995).
285 280 F 3d 934 (9th Cir., 2002).

The licence agreement of a computer program contains the provisions relating to the lawful use of that computer program, including the acts that may be done by it's lawful owner: It is customary in such agreement to provide for the act of modification as a restricted act. However, a mend which is appropriate for use of such computer program by the user is something which cannot be covered by restricting of modification by the author of such computer program. If the author agrees to mend the granted program for the user, the user should not make the corrections himself or get them done by others. However, if the author of the computer program is deprived of his duties or charges the user for such repair of computer programs i.e. to make error corrections to the programs provided to the users, then in such cases, users should have the right to make minor modifications or alterations for the proper functioning of program for the purpose which it was purchased. It is thus the discretion of the user to amend the program himself or approach any other professional person for amending the computer program. The reason behind such permissibility is the application of the non-derogation principle as held in *British Leyland Motor Corpn. Ltd.* v. *Armstrong Patent Co Ltd.*[286] The House of Lords applied the principle to restrain restriction on a free market in spare parts, and extended their refusal to enforce copyright to the manufacture of spare parts as not being just and proper to the purchaser.

(i) *Back-Up Copies*

Copyright laws provides for making of back-up copies by a lawful possessor of a computer program provided such back-up copy is made purely as a temporary protection against loss, destruction, or damage in order to utilize the computer program for the purpose for which it was supplied.[287]

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[286] (1986) 2 WLR 400. In this case, the claimant designed and made motor cars and also made spare parts for his cars. The claimant also granted licences to other companies permitting them to copy and sell spare parts for the claimant's cars in return for royalty payment. The defendant refused to obtain a licence and manufactured replacement exhaust pipes made by the claimant for the Morris Mariana car. The defendant simply bought a Morris Marine and removed the exhaust pipe and examined it to see how it was made. The claimant claimed that the drawing of the exhaust pipes infringed the copyright in the original drawing of the exhaust pipes. It was held that the Defendant had infringed the copyright subsisting in the drawing of the exhaust pipes by the process of reverse engineering, (meaning in the glossary of this book) but the claimant would not be allowed to assert his right under copyright law.

[287] Section 50-A of UK Copyright, design and Patent Act, 1988; Section 52(i)(aa) of the copyright Act, 1957.

Government use of copyright material

The Government may use copyrighted computer software and programs and even copyrighted computer literature without the permission of the copyright owner provided the use is for "the services of Government". This is likely to cover most uses which are governmental in nature. Government departments may rely on this provision, as may some statutory authorities. Although permission is not required to use the work, copyright owner must be notified of the use as soon as possible and may negotiate payment for the use. If the negotiation is unsuccessful, a determination of the amount payable may be made by the Copyright Tribunal.

Section 52 of the Copyright Act, 1957 provides certain acts which do not constitute infringement:

(A.) Acts not to be infringement of copyright not being computer programs

Section 52(1) states that:

"The following acts shall not constitute an infringement of copyright namely:

(a.) a fair dealing with a literary, dramatic, musical or artistic work not being a computer program for the purposes of-

(i) private use, including research;

(ii) criticism or review, whether of that work or of any other work;"

It is to be noted that works not being computer program are excluded from the above sub-clause however computer databases[288] may fall within the ambit of above sub-clause.

(B.) Acts not to be infringement of copyright in respect of computer programs

Section 52(1) states that:

"The following acts shall not constitute an infringement of copyright, namely:

(aa) the making of copies or adaptation of a computer program by the lawful possessor of a copy of such computer program, from such copy-

(i) in order to utilize the computer program for the purpose for which it was supplied; or

(ii) to make back-up copies purely as a temporary protection against

[288] Computer database are included in literary works. See Section 2(o) of the Copyright Act 1957.

loss, destruction or damage in order only to utilise the computer program for the purpose for which it was supplied;

(ab) the doing of any act necessary to obtain information essential for operating interoperability of an independently created computer program with other programs by a lawful possessor of a computer program provided that such information is not otherwise readily available

(ac) the observation, study or test of functioning of the computer program in order to determine the ideas and principles which underline any elements of the program while performing such acts necessary for the functions for which the program was supplied;

(ad) the making of copies or adaptation of the computer program from a personally legally obtained copy for noncommercial personal use."[289]

Apart from the acts provided in above sub-clauses, the Copyright Act, 1957 further provides for other acts which do not constitute infringement of copyright. These other sub-clauses are also applicable to computer programs along with other general literary works.[290]

10. Circumvention of Digital Rights Management System

The Intellectual Property Rights Laws intend a three-level protection, viz.

1. Legislative Protection like copyright laws
2. technological protection through digital rights management systems (DRMS); and
3. Legal protection to help technological protection—through prohibition of acts of circumvention of copyright laws.[1]

In India there have been no provisions for Digital Rights Management (DRM) in Indian Copyright Act, 1957, In the proposed Indian Copyright (Amendment) Act 2010 there are two proposed provisions to prevent anti circumvention of DMR technologies, and one provision that clarifies what is a DMR technology

[289] Inserted by Act 49 of 1999, Section 7 (w.e.f. 15-1-2000).
[290] See Section 52 of the Copyright Act 1957.

The amendment seeks to incorporate new sections (Section .2(xa), 65A and 65B,) making way for the Protection of Technological Measures and protection of Rights Management Information. Technological Protection Measures (TPMs) have also been suggested to be brought to effect vide encryption, encoding, secure digital delivery and playback.

Section 2(xa) defining the term "Rights Management Information" (RMI) has been proposed to be incorporated. The section is suggested to read as:

"Section 2 (xa) "Rights Management Information", means--

i. the title or other information identifying the work or performance
ii. the name of the author or performer;
iii. the name and address of the owner of rights;
iv. terms and conditions regarding the use of the rights; and
v. any number or code that represents the above information;

The Copyright (Amendment) Act 2010[1] seeks to insert new sections 65 A and 65 B in the Act relating to protection of technological measures and protection of rights management information.

Section 65 A reads as follows:

1. Any person who circumvents an effective technological measure applied for the purpose of protecting any of the rights conferred by this Act, with the intention of infringing such rights, shall be punishable with imprisonment which may extend to two years and shall also be liable to fine.
2. Nothing in sub-section (1) shall prevent any person from,-

a) doing anything referred to therein for a purpose not expressly prohibited by this Act; Provided that any person facilitating circumvention by another person of a technological measure for such a purpose shall maintain a complete record of such other person including his name, address and all relevant particulars necessary to identify him and the purpose for which he has been facilitated; or
b) doing anything necessary to conduct encryption research using a lawfully obtained encrypted copy: or
c) conducting any lawful investigation; or
d) doing anything necessary for the purpose of testing the security of a computer system or a computer network with the authorization of its owner; or operator; or
e) doing anything necessary to circumvent technological measures intended for identification or surveillance of a user; or

f) taking measures necessary in the interest of national security

Section 65 A has been inserted to provide for prevention of circumvention keeping in mind the public interest in access to works. According to the Indian Broadcasting Federation, the provision would have a positive impact as the person tampering with encryption of content would be punished. However it required some modifications for making it more effective. Increase in the imprisonment term from 2 years to 3 years for first offence, 5 years for second offence and all offences to be treated as cognizable and non-bailable was the first suggestion made. It was also mentioned that anyone circumventing the technology should be deemed to have circumvented the same with the intent to infringe copyright so as to shift the burden of proof to infringer. Also, copyright owner should be entitled to seek damages from the offender.[1]

The Business Software Alliance underlined the need to make this provision fully compliant with the WPO Treaties; and both civil and criminal liability needed to be imposed. However, the Google India wanted the act of unlawful circumvention to be made a civil wrong punishable by damages and not a criminal offence. It was also pointed out that record requirements in proviso to section 65 A (2) on persons facilitating circumvention by other be reduced or removed. [1]

The Motion Picture Association expressed the view that section 65A would appear to allow unlimited acts of circumvention of TPMs for the viewing of movies on all digital devices by individual viewers, since, among other things, "access controls" are not covered and the viewing of a work streamed to digital devices may never involve an infringement by the person viewing that film.[1]

Yahoo India mentioned that this section introduces the concept of 'Technological Protection Measures' which are measures used to enforce restrictions on the use of copyrighted material. It is believed that digital rights management technology considerably interferes with a consumer's right to 'fair use'. The resultant effect of DRM technology is that it gives copyright owners the right to create their own copyright protection mechanisms through technological means. For instance, DRM could impose restrictions on the right of consumers to freely play a particular type of legally purchased media which could be, inter alia, in the form of restrictions on the number of computers on which download music can be played. In such instances such restrictions result in exceeding the scope of protection granted under the Act by technologically blocking even legitimate activities which users are otherwise

permitted to do under the copyright Act. It further said that imposition of criminal and monetary liability for circumvention of DRM technology could adversely affect entities or individuals who adapt, reproduce or issue copies of any copyrighted material into a format specially designed for the use of persons suffering from any disability could adversely affect consumers and entities engaged in creating copies of any copyright material into a format specially designed for persons suffering from any disability should be deleted.

The RPG Enterprises-Saregama opined that the provision was vague as it would be difficult to establish such intentions. It should therefore be for punishing only those acts of circumvention of technological measures of protection carried out with intention to infringe. The Indian Music Industry was of the opinion that the proposed TPM provisions did not comply with WPPT standards and were inappropriate and ineffective TPM protection. It was necessary to create either civil or criminal liability or both for such circumvention in order to accede to WCT. The provision needed to be redrafted so as to make the very act of interfering with technological measures itself an offense; and also provide for both civil and criminal liabilities. The Indian Performing Right Society Limited opined that this provision sought to create criminal liability for circumvention of technological measures. As drafted this provision did not actually create a new criminal act, since an attempt to infringe copyright was criminally punishable anyway. It was necessary to redraft the provision in such a way so as to make the very act of interfering with technological measures itself an offence.

Majority of the stakeholders were of the view that the provisions as contained in section 65 A were inadequate. To them, the very act of interference with technological measures of protection should have been made punishable. This was a lacunae that the law proposed only criminal action for such circumvention whereas both civil and criminal liability should have been provided to make legal option effective[1].

Digital technology was the possibility of high rate of infringement (digital piracy) and the technological solutions were used to prevent this. Digital locks (technological protection measures -popularly known as TPM) were invented to prevent infringement of works. At the same time, duplicate keys (circumvention technology) were also developed to unlock the digital locks used by owners of copyright to prevent infringement. The use of TPM had a significant impact on users since the freedom to use the work (fair use of works) permitted by law was considerably regulated through these measures. In the absence of the

owner of the works providing key to enjoy fair use, the only option was to circumvent the technology to enjoy fair use of works. There was considerable demand to protect the TPM from circumvention by banning manufacture and sale of devices used for circumvention. On the other hand, the users argued that this would prevent the development of dual use technology and also prevent the enjoyment of fair use permitted by law. The major problem of use of law in preventing circumvention was the impact on public interest on access to work facilitated by the copyright laws. Attention was drawn to the WIPO treaties which provided a very flexible provision to protect TPM. This provision allowed member countries to develop laws to prevent circumvention of technological measures, keeping in mind the public interest of access to works. Developed countries like US, EU, Australia, Japan etc. have enacted laws to prevent circumvention resulting in abuse and affecting public interest. The unintended consequences of these laws resulted in blocking research and development of new technologies. It was pointed out that India was yet to face major problems of circumvention due to low level of penetration of digital technology. Taking note of experience of developed countries in developing laws for prevention of circumvention of technological measures section 65 A to give limited legislative guidelines and allow the judiciary to evolve the law based on practical situations, keeping in mind the larger public interest of facilitating access to work by the public..[1]

Section 65B provides for Protection of Rights Management Information as under:- 'Any person, who knowingly-

(i) removes or alters any rights management information without authority, or

(ii) 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 shall also be liable to fine: Provided that if the rights management information has been tampered with in any work, the owner of copyright in such work may also avail of civil remedies provided under Chapter XII against the personsindulging in such acts.'

the present provision prevents the removal of the information regarding the management of rights included in the digital copies of the work. It was pointed out that the proposed section would provide protection to the right holder against any attempts to remove Rights Management Information (RMI) without

authority or by distributing the work fixed performance or phonogram and provides for the punishment

CHAPTER V
CRITICAL EVALUATION AND JUDICIAL INTERPRETATION OF COPYRIGHT PROTECTION OF DATABASES

In India, Copyright protection of databases issues can be found in the following two major enactments: the Copyright Act, 1957. And the Information Technology Act, 2000. The judicial power of a State extends to the punishment of all offences against the municipal laws of the State by "whosoever committed within the territory. It also has the power to punish all such offences wherever committed by its citizens. The general principle of international law is that every person, be it a citizen or foreigner, who is found in a foreign State is subjected to, and is punishable by its law, otherwise the criminal law could not be administered according to any civilized system of jurisprudence[291]. Thus, if the copyright of a person resident in India is violated by means of Internet, then the courts in India have a jurisdiction to take note of the same by virtue of Section 62(2) of the Copyright Act, 1957. This is more so if any of the 'jurisdictional theories'. It must be noted that the laws in India do provide a jurisdiction to take action even if only a small part of the action has arisen in India. Thus, the moment a copyrighted work stored in a computer located in India is violated, the courts in India will have the jurisdiction to provide suitable remedies. The courts are also free to combine this jurisdictional power with the provisions of the Information Technology Act to do complete justice. The ultimate protection from online copyright violation can, however, come only from the provisions of the Information Technology Act.

In Gramaphone Compay of India Ltd. V. Birendra Bahadur Pande[292] case, the court observed that the comity of Nations requires *dlat mles* of international law may be accommodated in the Municipal law even without express legislative sanction provided these do not nm into conflict with Acts of Parliament. But if conflict is inevitable, the latter must yield. There is a presumption that Parliament does not assert or assume jurisdiction which goes beyond the limits established by the common consent of nations and statutes are to be interpreted, provided their language permits, so as not to be inconsistent with the comity of nations or with the established principles of international law. But this principle applies only where there is an ambiguity and must give way to a clearly expressed intention. If statutory enactments are

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291 Ajay Agrawal v. U.O.I. All India Reporter (AIR; 1993 SCI637.
292 AIR 1984 SC 667.

clear in meaning, these must be constmed according to their meaning even though they are contrary to the comity of nations or international law.

In **Super Cassetes Industries Ltd. Vs. Myspace Inc. and Anr**[293]The issue was Whether the unauthorized display of copyrighted material on websites like repertoire of songs, cinematograph films, sound recordings etc alleged that a social networking site, offers a variety of entertainment applications including sharing, viewing of music, images, cinematograph works, which infringes copyrighted material of the Plaintiff ? and Whether Plaintiff is entitled for permanent injunction ? The Court grant of temporary injunction as laid down by apex court provides that the court must test the case of the parties on threefold tests: (a) Prima Facie Case, (b) Balance of Convenience (c) Irreparable Damage. Plaintiff was also been able to establish prima facie that the acts of the Defendants are infringing in nature as the same are permitting the webspace or place on internet for profit — *Prima facie case* thus is in favour of the Plaintiff — Balance of convenience lies in favour of the Plaintiff as the Defendants would be less inconvenienced if they are directed not to infringe the Plaintiff's works — Plaintiff was totally dependants upon its works for the purposes of royalties, reaping fruits of its copyright for further investments etc., the Plaintiff would be more inconvenienced if its works allowed to be continued to be exploited for profit without its permission — Hence, Plaintiff was held to be entitled to injunction against use of copyrighted mater by the Defendants.

In Banyan Tree Holdings Limited Vs. M. Murali Krishna Reddy and Anr[294]This Court is of the opinion that the issue of territorial jurisdiction in cases concerning trademark and copyright infringement or related rights have to be considered authoritatively by a Division Bench. This is of some importance, because whenever Parliament wanted to redefine the issue of jurisdiction, it did so, in terms of Section 134(2) of the Trade marks Act, 1999 and 62(2) of the Copyright Act, 1957- in both instances omitting to provide for internet related amendments. Similarly, Parliament prescribed, with specificity, in Sections 11, 12 and 13 of the IT Act, 2000 about origination and receipt of electronic records; it also provided for international or universal jurisdiction, of Indian courts, by Section 75 of the IT Act. The court is of the opinion that these questions need to be considered and settled authoritatively, by a Division Bench. This is essential both to resolve the

[293] MIPR2011(2)303.
[294] 2008(38)PTC288(Del).

conflict in the approaches indicated by the two decisions of the court, as also decide whether assumption of such jurisdiction is feasible or justified, having regard to the existing state of law. Also, in the event the court concludes that internet based activity or behavior can in some circumstances, clothe this Court with jurisdiction, it would be appropriate to indicate standards which can be applied with some constancy "Court shall not pass any order without proper territorial jurisdiction."

In the **US**, database protection is addressed in its Copyright Laws. Article 101 states that a compilation is "a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated or arranged in such a way that the resulting work as a whole constitutes an original work of authorship"[295] Copyright in a compilation in US law[296] only extends to the compilation as a whole and does not affect the copyright in any preexisting or underlying works included in the compilation. Furthermore, the law does not confer copyright protection on underlying works that may not meet the standard of creativity required to warrant copyright protection. Finally, as per US legislation, facts are not copyright protected and therefore, where a compilation consists of statistical data, for example, copyright in the compilation is restricted to the original selection and arrangement.[297]

Three court decisions have interpreted the above to provide, arguably, clarity on the breadth of data and database protection in the US. The seminal decision in Feist v. Rural Telephone Service Co**[298].** In this case, the US Supreme Court ruled that the telephone white pages could not be protected because they lacked original expression. The court rejected the "sweat-of-the-brow theory" to ascertain originality, i.e. that copyright should subsist in a compilation if effort, skill or judgement had been employed to create the compilation. Instead, the court endorsed the concept that only where there is some creativity in the selection or arrangement of the data housed in the compilation can the compilation itself be protected by copyright. Finally the courts reinforced the notion that copyright in factual data, such as names, addresses and telephone numbers, could not be protected by copyright[299].The reasons given by the court to deny copyright protection to facts is particularly interesting for the scientific

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295 17 USC ,art.101 (1988) see also Susan Nycum, Patents, Copyrights Trademarks, and Literary Property Course Handbook Series, (1999) 574 PLI/Pat 469 at 473.

296 12 USC, art. 103(b) (1988).

297 17 USC, art. 102(b).

298 Feist Publications Inc. v. Rural Telephone Service Co. 499 US 340 (1991).

299 Pamela Samuelson, "Copyright Law and Electronic Compilations of Data", Legally Speaking, February 1992 http://www.ifla.org/documents/infopol/copyright/samp2.txt.

community. The US Supreme Court viewed it as fundamental that copyright law cannot protect facts because facts are not created, rather, they are discovered. Facts are not original to an author who might write about them, "although the collocation of words used by an author to describe the facts would be "original" in a copyright sense".[300] Since Feist, several other court decisions extend our understanding of data and database protection**.** In BellSouth Advertising & Publishing Corporation v. Donnelly Information Publishing Inc[301] BellSouth prepared business yellow pages. They accused Donnelly of copyright infringement, alleging that Donnelly copied original elements of their selection and arrangement of their yellow pages. The 11th Circuit Court held that activities such as choosing geographic scope, cutoff dates to make changes to listing information and marketing techniques were not "acts of authorship, but techniques of the discovery of facts". The court held further that the selection and arrangement chosen by BellSouth were inevitable and not original, dictated by standards employed in the industry. The US Supreme Court denied BellSouth's petition for a writ of certiorari, thereby ending BellSouth's appeal process.[302]

In Mathew Bender & Co., Inc. v. West Publishing Co.[303], Matthew Bender, legal publishers, sought a declaration of the court that West Publishing Company did not hold copyright in their selection and arrangement, i.e. volume number and pagination, of court decisions being published by them. Matthew Bender sought a declaration further that it was free to copy the decisions, and their selection and arrangement from West's CD-ROM because their selection and arrangement were not sufficiently original to warrant copyright protection. (Court decisions in the United States fall into the public domain, and are therefore treated like facts). A third party, Hyperlaw, another legal publisher, intervened seeking a declaration that they did not infringe West's copyright when they scanned titles, text and other content directly from the West CD-ROM. The Courts ultimately decided in favour of both Matthew Bender and Hyperlaw on the issues of selection and arrangement finding that they were not sufficiently original, i.e. lacking a modicum of creativity.

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300 Ibid., Samuelson.

301 BellSouth Adv. & Pub. Corp. v. Donnelly Info. Pub. 999 F.2d 1436 (11th Cir.1993), cert. Denied 114 S. Ct. 943 (1994)., see also Ibid., footnote 11 at para. 474.

302 Ibid.

303 Matthew Bender & Co. Inc. v. West Publishing Co., 158 F. 3d 693 (2d Cir. N.Y. 1998) cert. Denied, 1195 S. Ct. 2039 (1999).

Courts in the US have decided in favour of copyright protection of the selection and arrangement data. However, it appears that where courts have found the selection and arrangement of data sufficiently original to warrant copyright protection, the courts first determined that the facts in question were not just facts but valuation requiring some creativity. In other words, Courts may only be willing to find copyright protection for compilations where the data is actually non-factual and contains valuations that require intellectual analysis.[304]

Since the advent of the Feist decision and in particular, the WIPO Copyright Treaty, several attempts had been made to introduce database protection bills in Congress. To date all have either failed or have stalled in the congressional process. It is likely, however, that at least one database bill will be introduced or re-introduced (remaining from the last session of Congress) in the 107th session of Congress.[305] In India, the court have constantly relied upon the' sweet of the brow' the doctrine for the protection of databases/compilations[306] for instance ,in the Burlington Hope shopping Pvt Ltd V. Rajanish Chibber & Anr[307] This is the first case in India where the court held first that a computer database is protected under the Copyright Act 1957 as a compilation and after the 1994 amendment to the said Act (with effect from 10 May 1995) as a separate category of protectable work within the definition of literary work. Second, it is beyond any doubt from the surrounding circumstances that the defendant, who was an ex-employee of the plaintiff, had copied the list of customers in electronic format from the plaintiff's computer listing and in fact in places even the mistakes had been copied. A Local Commission's report found an objective similarity between the plaintiff's and the defendant's customer databases. The degree of similarity was beyond the pale of coincidence, however questions have been recently been raised on the viability of this doctrine, *In Eastern book Co. V Navin J Desai*[308] the court refused to apply this doctrine and insisted on a modicum of creativity to satisfy the test of originality.[309]

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304 CCC Info. Services Inc. v. MacLean Hunter Market Reports Inc. 44 F. 3d 61 (2d Cir. 1994), cert. Denied 115 S. Ct. 72 (1995).

305 See Ron Eckstein, "The Database Debate", Legal Times, Law.com 2000, http://www.law.com Brenda Sanburg, "Full Steam Ahead, IP Bills Continue to Float Along Despite Shift in Control of US Senate"; July 10, 2001; 2001 Law.com; www.law.com.

306 V.govindhan V.E.M.Gopalakrishnna Kone &Anr,AIR 1955 Mad 391.

307 (1995)PTC278(Del).

308 AIR 2001 Del 185,p.203.

309 The Decision of the Court in not granting copyright protection was largely influence by section 52(1) (q) as the work in question was a compilation of the judgments of the court, the copyright in which existed with this state.

Copyright Protection of Computer Programs:

To analyze the scope of copyright protection over computer programs it is important for us to analyze a few precedents , which have given a systematic interpretation of the idea/expression doctrine in determining the non-literal copying of computer programs. Although copyright essentially protects expression and not ideas, nevertheless copying the expression goes beyond just literal copying.[310]

Let us first refer to the case of *Baker v. Selden*[311], which provided a way to distinguish idea (non-protectable) from expression (protectable). In this case, plaintiff Selden obtained a copyright on his book, *Selden's Condensed Ledger, or Bookkeeping Simplified,* which described a simplified system of accounting. In this book certain 'blank forms', pages with ruled lines and headings, for use in Selden's accounting system were included. The dispute in this case was whether Selden's blank forms were part of the method i.e. idea of Selden's book and hence not copyrightable or part of the copyrightable text i.e. expression. In deciding the dispute that distinguished what was protectable and what was not protectable under the copyright. 'Where the art i.e. the method of accounting, it teaches cannot be used without employing the methods and diagrams used to illustrate the book, or such as are similar to them, such methods and diagrams are to be considered as necessary incidents to the art, and given to the public.'

The court held that the blank forms were necessary incidents to Selden's method of accounting and therefore they were not copyrightable. The court's test in *Baker* v. *Selden* suggests a way to distinguish idea from expression. It focused on the end sought to be achieved by Selden's book, which is the line between idea and expression. The line may be drawn with reference to the end sought to be achieved by the work in question.

In a US case, Whelan Associates, Inc. v. Jaslow Dental Laboratory Inc[312], the court held that the purpose or function of a utilitarian work would be the work's idea and everything that is not necessary to that purpose or function would be part of the expression of the idea. If there are several ways of achieving the desired purpose, none of which is necessary to the purpose, then the way chosen is expression and, consequently, protected by copyright. In this case two programs were designed to assist dental laboratories, written in

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311 101 US 99 (1879).

312 797 F2d 122 (3rd Cir 1986).

different computer languages. The first one was written in EDL and the second one was written in BASIC. The original program was devised to keep records in a dental laboratory and to assist in the running of the laboratory. There were several different methods which could be employed to achieve that same purpose, and hence, the structure was expression and not idea. The purpose itself being the idea was not protected by copyright. It is quite acceptable for others to write programs to help with the running of dental laboratories. In this case the structure of the two programs was similar, the programs had a similar look and feel even though written in different computer programming languages and this suggested a strong presumption that there had been copying which infringed the copyright of the original.

In Broderbund Software v. Unison World[313], which was inconsistent with the generic rule of *Whelan case,* the Court held that as there were several means, by which the screens could have been structured, sequenced and arranged, the actual way selected by the plaintiff was copyrightable expression. The defendant argued that there existed no other way to structure the screens or design the input formats. But the Plaintiff rebutted the above argument in a comprehensive manner by producing another competing program which performed a similar function but which had screen displays, sequences, etc. which were very different from the original copyrighted expression in the computer program of the Plaintiff. The Court thus concluded that the structural copying of screen displays infringes the copyright in similar programs like that of the Plaintiff.

The *Whelan case* had been considered to a far greater extent but some of its prescriptions were struck down by many later reported cases. *In Plains Cotton Cooperative Association of Lubbock Texas v. Goodpasture Computer Service Inc.*[314], the Court of Appeals for the Fifth Circuit rejected the principles of *Whelan.* It held that the structure of the Plaintiff's program was 'idea' and not 'expression' because the application itself dictated the structure of the program. The application of the program was to aid in cotton marketing, which could be expressed only in computer programs exhibiting a substantially similar structure. The case of *Digital Communications Associates v. Softklone Distributing Corpn.*[315], rejected the view of Whelan and Broderbund Software cas**e** and held that a screen display cannot be a copy of part of a program because various programs can produce the same screen display in different

313 648 F Supp 1127 (ND Cal 1986).
314 807 F 2d 1256 (5th Cir 1987).
315 659 F Supp 449 (ND Ga 1987).

ways. The Court regarded the 'idea' as the concept of the screen in the screen display whereas the 'expression' as the means used to communicate the screen's manner of operation. Nevertheless, the Court did afford protection to the screen display in its own right.

Even in Computer *Associates Int'l v. Altai Inc.*[316], the Federal Court of Appeals rejected the scope of copyright protection given in *Whelan case.* It commented that the *Whelan* approach to separate idea and expression relies too heavily on metaphysical distinctions. The Court observed that, "Whelan has dealt poorly in the academic community where its standard has been widely criticised for being overboard". In this case Computer Associates developed an 'operating system compatibility component', which enabled a program to work with a number of different operating systems. One of the members of the team that developed this system was employed by Altai to develop a version of one of its own programs, which could be used on various operating systems. The programs based that program on the Computer Associates' program and also literally copied some 30% of the code of the original program. When Computer Associates sued Altai for copyright infringement, Altai used different programmers to create a new version. However, Computer Associates alleged that even the second program made use of the non-literal elements of their original program and went on to sue for infringement of both programs. Apparently, the Court found that there had been infringement as far as the first program is concerned. However, the Court precluded from establishing the liability of Altai with regard to the second program. Computer Associates then appealed to the second circuit, which established a three-step test for determining the scope of copyright over the non-literal elements of computer program:

The three-step test known as the abstraction-filtration comparison test was thus subsequently used in the *Gates Rubber Co.* v. *Bando Chemical Industries Ltd.*[317], to maintain a balance between the protection of owner's right and technological development. The Court added one more rule to the above test and suggested that before beginning the working of the test it must first compare the programs as a whole.

In United Kingdom There is no legal provision in UK that restricts ideas from being protected under copyright. However, the precedents have indicated that

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316 20 USPQ 2d 1641 (1992).
317 October 19 (10 Cir 1993) discuss in 10 CLSR 101(1994).

there exists no copyright in ideas.[318] It is not an infringement of copyright to adopt the ideas of another. This feature of copyright law limits its potency. As it is difficult to draw a line between idea and expression, it has been rightly said by the eminent Jurist Learned Hand, "nobody has ever been able to fix that boundary and nobody ever can".[319] It is even more cumbersome to bifurcate ideas and expression because of the confinements that delimit different ways in which the ideas contained in a computer program can be expressed. In UK, in *Plix Producls Ltd. v. Frank M. Winstone (Merchants)*[320], the Court has distinguished two different kinds of ideas. The first type of idea was termed as the general idea which is basic and thus is not protected under copyright whereas the second kind of idea is mostly applied in the exercise of giving expression to the basic concepts. This is generally protectable under copyright. The difficulty is to determine where the general concept ends and the exercise of expressing the concept begins –the basic idea is not necessarily simple. It may be complex. It may be something innovative or it may be commonplace, utilitarian or banal. The way the author treats the subject, the forms he uses to express the basic concept, may range from the crude and simplistic to the ornate, complicated involving the collation and application of a great number of constructive ideas. It is in this area that the author expends the skill and industry which give the work its originality and entitle him to copyright. Anybody is free to use the basic idea unless it is a novel invention which is protected by the grant of patent. But no one can appropriate the forms or shapes evolved by the author in the process of giving expression to the basic idea. So he who seeks to make a product of the same description as that in which another owns copyright must tread with care. It was accepted that where there is only one way of expressing an idea, the idea and expression merged and were not the subject of copyright.[321] But this has led to a great deal of controversy, as it becomes difficult to locate the evidence of copying. In *IBCOS case,* Jacob, J. held that, "the real position is that where an idea is sufficiently general, then even if an original work embodies it, the mere taking of that idea will not infringe. But if the idea is detailed, then there may be infringement. It is a question of degree. The same applies whether the work is fictional or not, and whether visual or literary".

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318 Donoghue v. Allied Newspaper Ltd., (1938) Ch 106.
319 Nichols v. Universal Pictures Corpn., (1930) 45 F 2d 119.
320 (1986) FSR 63.
321 Total Information Processing Systemv. Daman Ltd., (1992) FSR 171.

The first case involving the issues of copyright infringement in computer software in UK was that of *John Richardson Computers Ltd. v. Flanders*[322]. The 'look and feel' approach was fully observed in this case. It also had a detailed discussion on the literal and non-literal copying of computer programs. As there were no precedents in United Kingdom to support the case, American cases and precedents were cited by both the parties. Mr Richardson, the chairman and managing director of the Plaintiff company, who was a pharmacist and self-taught computer programmer, developed a program written in BASIC to produce labels suitable for the Tandy computer. He was not an expert at writing programs and he, therefore, engaged a self-employed programmer to help complete the program and make it more reliable. In 1983, Mr Flanders joined the plaintiff Company as an employee to write an equivalent program for the BBC computers. In 1986, Mr Flanders left the employment of the Plaintiff Company but did further work for it as a self-employed consultant, during which he rewrote the program in assembly language, a low level language, adding some new features to it. Later, Mr Flanders wrote a new version of the program in the BASIC language for the IBM personal computers. The Plaintiff was also working on a version for the IBM personal computers and sued for infringement of its copyright in the BBC version of the program. Ferris, J. decided the case by drawing the filtration and comparison tests of *Altai case* of US but ignored to apply the abstraction test as it was not suitable to be applied in the circumstances of the case. In fairness to Ferris, J. he did not profess to follow the Altai test precisely. The comparison test was also unique from that which was generally practiced. The codes of the programs were not compared by Ferris, J. but he relied on the visual evidence of the user interface level. The Court separated idea from expression with the assistance of the *Computer Associates case.*

Finally, Ferris, J. held that there was a limited infringement of copyright subsisting in the Plaintiff's program based on the non-literal elements of the program. A literal comparison was but obviously not helpful as both the programs had been written in different languages and had absolutely no similarity in literal elements.

In IBCOS Computers Ltd. v. Barclays Finance Ltd.[323], Jacob, J. took a slightly different view. He rejected the idea that the English courts should apply United States precedents. However, he agreed with Ferris, J. that consideration must

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322 (1992) FSR 497.
323 (1994) FSR 275.

not be limited to the actual code of the programs in question. Jacob, J. applied more traditional views in determining the infringement of the programs and held that 28 out of 55 of the Defendant's programs infringed the Plaintiff's copyright.

Spreadsheet Programs

In *Lotus Development Corpn. v. Paperback Software International*[324], Keeton, J. understood that there was an infringement by defendant by way of non-literal copying of the Plaintiff's work. In this particular case, the Defendant had developed a spreadsheet program[325] called VP-Planner. The test was applied to determine whether the Defendant's software package 'VP-Planner' infringed the copyright in Lotus's copyright protected '1-2-3' package. District Judge Keeton identified three elements which appeared to him to be the principal factors relevant to decision of copyright-ability of a computer program such as Lotus 1-2-3. (1) Some kind of conception or definition of idea for the purpose of distinguishing between idea and its expression. (2) Whether an alleged expression of idea is limited to elements essential to the expression of that idea or instead includes identifiable elements of expression not essential to every expression of that idea. (3) It must have identified elements of expression not essential to every expression of idea. It must focus on whether those elements are a substantial part of allegedly copyrightable work.

In applying his three elements test, Judge Keeton looked at the user interface of two programs. He seemed to accept as a basis for analysis the Plaintiff's description of user interface as including such elements as menus, long prompts, screens on which they appear, function key assignments and macro commands[326] and language. The judge found that menu command system was copyrightable because it was affected in different patterns in different spreadsheet programs. Keeton, J. concluded that non-literal elements

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324 740 F Supp 37 (D Mass 1990).

325 A spreadsheet program is one which comprises a grid of cells into which the user can enter text, numbers and formulae. It is usually formed for assisting in preparation table of calculations from which graphs and bar charts can be derived. Non-literal elements of spreadsheet programs include its menu system by which the user interacts with the spreadsheet and the system for denoting cell references.

326 Macro commands are commands stored in a separate executable file. The purpose usually is to save time. For example, the user might want to combine several spreadsheets, total them, find the average and change the display format and, rather than having to enter into the whole series of commands each time he wants to do this, he can call up and execute it in future at a keystroke. The command language of VP-Planner would have to be same as that in Lotus 1-2-3 for macros to be compatible.

of the spreadsheet program developed by the claimants were copyrightable and thus the Defendant infringed the claimant's work by way of non-literal copying. However, in *Brown Bag Software v. Symantec Corpn* [327], the Plaintiff's application to consider the *Lotus case* was rejected by the Court. The Court held that, "it should engage in analytic dissection for the purposes of defining scope of Plaintiff's copyright rather than comparing similarities and identifying infringement".

Precedents thus provide clarification that computer programs and software are literal elements within the copyright laws and hence protection can be extended to computer programs and software. The judgments provide that not only software as a whole but even a small part of software can be protected from unauthorised copying provided it is a substantial part of program and not an idea but expression of the author creating such software.

There should be a balance between protection and dissemination keeping in mind that directly or indirectly all intellectual developments stem from our ancient intellectuals. Hence, when there is a very limited way of expressing an idea such expression may not be given copyright protection.

With the least effort, an infringer can grab both, computer materials like software programs and the contents of the web, which are copyrighted. The next section thus discusses various rights of copyright holder in relation to computers and determines the essentials of safeguarding copyright from violation in computers.

The rule expressed in Whelan v. Jaslow provides a formula for drawing the line between expression and idea, but the analysis on which it rests is derived from the factors affecting literary works and is therefore difficult to apply in the context of computer protection. The copyrights of other literary works can be infringed even when there is no substantial similarity between the works' literal elements. One can violate the copyright of a play or book by copying its plot or plot devices. By analogy to other literary works, it would thus appear that the copyrights of computer programs can be infringed even absent copying of literal elements of the program.

By extending protection of computer programs beyond the works' literal elements, the Whelan court opened the door to extension of copyright

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327 960 F 1465 (9th Cir 1992).

protection beyond the expression of an idea to the idea itself, thus violating section 102(b) of the Copyright Act. This danger was created by the broad definition of idea enunciated by that court. The Whelan court could have found that the idea expressed in the contested computer program was a specific method for organizing a dental laboratory. Such a ruling would be much more consistent with the rule in *Baker v. Seldon***.** In Baker, the idea was not just to create a bookkeeping system, but the specific bookkeeping system which the author developed. Under the analysis in Baker v. Seldon, a book offering the same kind of information that a typical data processing application provides would be deemed unprotectable under the merger rule. The methods of organization "expressed" in applications are more like systems, such as the bookkeeping system in *Baker v. Seldon*, than they are like literary works. Literary works are created in an entirely different manner than computer programs. A great deal of research and development goes into the creation of most commercial computer programs. Design decisions in the development of computer programs involve technical considerations which are usually based upon utilitarian, rather than aesthetic purposes. The fundamental reason why copyright protection is inappropriate for software is that computer programs are utilitarian tools, rather than pure expressions of information, like other copyrightable works.

Computer programs are the only form of copyrightable material that interacts with the user. We read books, watch movies, or listen to music, but we don't "use" these types of works. Comparing computer programs to recipes illustrates the difference between software and other literary works:

Traditionally, utilitarian works, such as recipes, describe a process to a person who then intervenes to lend the expressive words and phrases their utility. For example, a baker follows a recipe and bakes a cake. but computer programs not only describe processes, they also implement them. The program causes physical changes to occur in the machine, and can interact with other programs, or with the environment. In short, computer program really is the recipe, the cook, and the cake itself.

The strong policy arguments that support the improvement and development of computer programs as utilitarian works do not apply to most literary works. Although need exists for better, more powerful, more easily used computer programs, no real demand exists for improved versions of most novels. Even literary works that require updating, such as textbooks and atlases, do not

receive the broad protection of their sequence structure and organization which currently extends to computer programs.

Encouraging developments and refinements of computer programs, however, is essential to maintaining and increasing the level of progress in the computer industry. No such need exists in the production of other literary works.

Now that the United States is a member of the Berne Convention, any adjustments to U.S. copyright law must be in conformity with Convention guidelines. The Convention does not extend copyright protection to computer programs; member status does not bar Congress from developing a new system of protection for computer programs outside the Copyright Act. Member countries are free to determine independently what type of protection they will extend to computer programs.

Copyright Protection of Caching

Three recent cases illustrate the interplay between the search engine caching process and copyright. Interestingly, the three cases discussed in this section implicate Google, but unfortunately for Google, it only won two of the three cases.[328]*In Field v. Google* One of the first cases highlighting the issues surrounding indexing and caching was *Field v. Google*[329]. In this case, Field argued that Google infringed his rights when a search engine user clicked on the cached link to Field's writings, which were available for free on his web site[330]. However, the *Field* court specifically made an extra effort to discuss that Field was not claiming infringement during the initial scan and copy by the "googlebot."[331] This distinguishes *Field* from a situation in which a web site owner sues a search engine for the initial copying of his web site. The *Field* court indicated that the result may have been different if Field would have claimed infringement during the initial copying step[332].

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328 Nicole Bashor, THE CACHE COW: CAN CACHING AND COPYRIGHT CO-EXIST?, 6 J. Marshall Rev. Intell. Prop. L. 101, John Marshall Review of Intellectual Property Law Fall, 2006.

329 412 F. Supp. 2d 1106 (D. Nev. 2006)

330 id. at 1115.

331 See id.

332 See generally id(explaining "Field does not allege that Google committed infringement when its Googlebot ... made the initial copy of the Web pages containing his copyrighted works and stores those copies in the Google cache.").

Ultimately, the *Field* court held there was no direct infringement by Google when a search engine user clicked on the cached web site link. In addition to the copyright issues in the case, the *Field* court indicated that it was punishing Field for manufacturing a claim against Google because of his bad faith prior to the lawsuit. The *Field* court also applied several defenses that precluded the finding of liability including: implied license, estoppel, fair use, and DMCA safe harbor. *In Parker v. Google*[333] illustrates a direct copyright infringement claim where the court barely addresses the search engine process and copyright. Parker, an author, claimed direct copyright infringement when Google automatically archived a posting he put on USENET, an online bulletin board. Parker further claimed direct copyright infringement when Google produced a list of links in response to a user's search query with excerpts of his website within the list of links[334]. The *Parker* court addressed the direct infringement claim of the archived USENET postings by considering Google an ISP without discussion, and dismissed the complaint, following the same reasoning of the *Costar Group v. Loopnet, Inc.* court[335]. The *Parker* court dismissed Parker's claim, in part, because Google did not have the requisite volitional conduct to satisfy a claim for direct infringement[336].

Parker's complaint regarding Google's direct infringement via Google's process of indexing and caching websites was also dismissed for failure to state a claim on which relief can be granted. The court devoted one paragraph of analysis and relied on *Field v. Google* and the DMCA safe harbor to relieve Google of liability with little explanation[337]. Parker's claims of Google's contributory and vicarious liability were dismissed as well.

Another illustrative case dealing with copyright infringement and search engines is *Perfect 10 v. Google, Inc*[338]. At issue in *Perfect 10*, was whether Perfect 10's copyrights were infringed when Google displayed Perfect 10's fee-based photographs in its image search[339]. The Google image search works the same way the text search works in that Google sends robots to make copies of photographs. After the initial copying, Google displays the full images through

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333 422 F. Supp. 2d 492 (E.D. Pa. 2006).
334 Id.
335 Costar Group, Inc. v. Loopnet, Inc., 373 F.3d 544, 550 (4th Cir. 2004).
336 Parker, 422 F. Supp. 2d at 497.
337 See id.
338 416 F. Supp. 2d 828 (C.D. Cal. Feb. 17, 2006).
339 See id.

its image search in thumbnail form. The *Perfect 10* court held that Google directly infringed the copyrights and that the fair use defense did not apply[340].

No court has addressed the exact question of whether copying and caching of web sites by search engines is legal. Accordingly, this section presents a hypothetical situation as to how a court might address this problem. Assume the facts of *Field v. Google* are changed so that the plaintiff, Arthur ("Art") Author, is claiming direct infringement on the initial copy of his writings and photographs on his web site[341]. Art's web site has been visited by search engine spiders and is listed in the search results with a cached link. Moreover, Art requires a subscription to his web site to view chapters of his latest book. This section will analyze the requirements for direct copyright infringement and take a closer look at the defenses, as applied to Art's situation.

1. *Direct Copyright Infringement*

First, assume that Art can prove he owns the copyright to his writings and photographs, satisfying the first requirement to prove copyright infringement[342]. Next, regarding the second requirement, even if the search engines say their robots are only taking "snapshots," the end result is that the robot is making a copy of the entire web site. This copying appears to satisfy the second requirement for copyright infringement[343]. However, it is unclear if the volitional conduct aspect of the copyright infringement claim is satisfied[344]. Because the courts have found that the copying process cannot be automatic, it remains unclear if the conduct of the robots in the hypothetical is automatic, thus shielding the search engine from liability[345].

There are three views courts can take when analyzing the volitional conduct requirement. **First,** a court could decide the volitional conduct requirement is inapplicable to the hypothetical scenario because it was initially implemented to protect innocent service providers[346]. Examples of innocent service providers include copy machine manufacturers that provide the machine to do the infringing or ISPs that provide the software that automatically forwards

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340 Id.
341 Field v. Google, Inc., 412 F. Supp. 2d 1106, 1115 (D. Nev. 2006).
342 Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 361 (1991).
343 See id. (discussing the second prong as copying by the defendant).
344 Religious Tech. Ctr. v. Netcom On-Line Commc'n Servs., Inc., 907 F. Supp. 1361, 1367-69 (N.D. Cal. 1995).
345 Id.
346 See id.

messages to bulletin board subscribers[347]. As applied to Art's situation, the search engine is most analogous to the person using the copy machine to copy a book as opposed to an innocent service provider. Therefore, under this example, an active infringer would not be able to use volitional conduct as a shield from liability.

Second, the court could apply the volitional conduct requirement and find it is satisfied because the robots' conduct is automatic. Along the same reasoning, the robot programming could still qualify as a volitional act because people program the robots to copy. Using a different example, assume that a search engine programmed a robot to search the Internet and make copies of copyrighted songs or programmed its robots to download music illegally. Surely liability has not vanished simply because the search engine programmed a robot to do the dirty work for it, even though the robots illegal music downloading was automatic.

Finally, the court could apply the volitional conduct requirement and find it is not satisfied. The *Parker* and *Field* courts adopted this view and, accordingly, the search engines did not satisfy this requirement and were not liable for direct copyright infringement.

The best view, however, is to apply the volitional conduct requirement and find it is satisfied by virtue of the back end programming by the search engines. When someone controls a software program, or in this case, a robot, liability should not be lost. As a result, search engines should be held responsible for the actions of their robots because they directed the robots to perform the web site copying

Jurisdiction in Cyberspace:

One of the first noteworthy cases arising in this early stage was *Inset Systems, Inc. v. Instruction Set*. The *Inset* court likened the company's use of the Internet to a continuous advertisement targeting customers in all states, and established an extraordinarily broad approach for Internet jurisdiction cases. Some early cases followed the *Inset* approach. For example, the *Inset* reasoning was cited by the court in *Maritz, Inc. v. Cybergold, Inc.* The court in *Bensusan Restaurant Corp. v. King,* however, deviated from *Inset*, and established its own more tailored standard. Most notably, the court in *Bensusan* began looking

[347] See, e.g., id.

into the nature of the website in question, holding that the website owned by the defendant was passive in nature. This launched a separate line of reasoning with regard to jurisdiction in Internet cases focused on the specific characteristics of the web, and was cited by *Hearst v. Goldberger*. Within the same year of the *Bensusan* decision, the *Zippo Manufacturing Co. v. Zippo Dot Com*opinion created the widely adopted *Zippo* Test. Cases such as *Cybersell, Inc. v. Cybersell, Inc.* and *Mink v. AAAA Development L.L.C.* followed the approach defined by *Zippo*.

However, more recent cases appear to be departing from the *Zippo* test and relying upon more traditional approaches to personal jurisdiction.[348]

For example, the courts in *Blakey v. Continental Airlines*, *Dudnikov v. Chalk & Vermilion*, and *Boschetto v. Hansing* utilize the *Calder* test to establish the "minimum contacts" required by *Int'l Shoe*, a rule not tailored specifically toward Internet cases

Pres-Kap, Inc. v. System One, Direct Access, Inc., 636 So.3d 1351 (Fla. App. 3 Dist. 1994).[349] From New York, Pres-Kap leased System One's computerized airline reservation system that ran off of servers located in Miami, Florida. When Pres-Kap ran into problems with the system, it stopped payment and System One sued for breach of contract in Florida. The Florida court held that a contract with an out of state party was not enough to establish minimum contacts for personal jurisdiction. The in-state server location was also not enough to establish this. Otherwise, any users of online services could be brought into court wherever the relevant servers happen to be located, which the court found to be an unreasonable result.

Holding: remote usage of server physically located in a forum state is insufficient to establish minimum contacts.

CompuServe, Inc. v. Patterson, 89 F.3d 1257 (6th Cir. 1996).[350] Patterson, a shareware programmer and resident of Texas, distributed and marketed his shareware throughCompuServe's shareware distribution service. When Patterson accused CompuServe of trademark infringement for allegedly selling substantially similar products of their own, CompuServe filed for a declaratory judgment in an Ohio federal district court asking for a declaration that it had

[348] Michael A. Geist, Is There a There There? Toward Greater Certainty for Internet Jurisdiction, 16 Berkeley Tech. L. J. 1345 (2001).
[349] Pres-Kap, Inc. v. System One, Direct Access, Inc., 636 So.3d 1351 (Fla. App. 3 Dist. 1994).
[350] CompuServe, Inc. v. Patterson, 89 F.3d 1257 (6th Cir. 1996).

not infringed Patterson's trademarks. Patterson replied with a motion to dismiss, claiming lack of personal jurisdiction.

The Sixth Circuit held that Patterson had sufficient contacts to constitute transaction of business in Ohio that would grant an Ohio court personal jurisdiction based on the Ohio long arm statute. Specifically:
1. Patterson purposefully and repeatedly dealt with an Ohio company.
2. Patterson's CompuServe-based software sales, and CompuServe's alleged infringement occurred in Ohio where CompuServe was based.
3. Patterson's business contract with CompuServe should have given him notice that he might be required to answer lawsuits in Ohio.

Holding: selling software through a company's online service is enough to establish minimum contacts in the state where that company is located.

Inset Systems, Inc. v. Instruction Set, 937 F.Supp. 161 (D. Conn. 1996).[351]
Here, Inset Systems claimed that Instruction Set's website made an infringing use of Inset's registered trademark.

The Connecticut long arm statute allows for out of state corporations to be sued by residents of Connecticut as long as the out of state corporation has conducted repeated solicitation for business in Connecticut "by mail or otherwise." The court held that this standard was met by Instruction Set's Internet presence, which it found to be at least as much of a case of solicitation as advertising through hard copy mailers and catalogs. The court also found there to be sufficient minimum contacts because Instruction Set should have realized that their nationally available phone number and Internet site could reach potential customers in Connecticut.

Holding: solicitation by advertising through an Internet website is enough to establish minimum contacts anywhere. However, other courts have distanced themselves from this concept. *See, e.g.*, *Cybersell*, *Zippo*.

Maritz, Inc. v. Cybergold, Inc., 947 F.Supp. 1328 (E.D. Mo. 1996).[352] Maritz brought action against Cyber gold, seeking an injunction to enjoin alleged trademark infringement on Cyber gold's website. Cyber gold filed a motion to dismiss for lack of personal jurisdiction. Missouri's long arm statute provides

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[351] Inset Systems, Inc. v. Instruction Set, 937 F.Supp. 161 (D. Conn. 1996).
[352] Maritz, Inc. v. Cybergold, Inc., 947 F.Supp. 1328 (E.D. Mo. 1996).

for personal jurisdiction over a non-resident defendant that has transacted any business within the state or has committed a tortious act within the state. At common law in Missouri, a tortious act committed outside with a resultant injury within Missouri was sufficient to permit jurisdiction. *See Peabody Holding Co. Inc. v. Costain Group*[353] Based on this and the following important factors, the court held that it could exercise personal jurisdiction over Cybergold.

1. nature and quality of contacts with the forum state - Cybergold was advertising and soliciting customers
2. quantity of contacts - Cybergold had made numerous contacts
3. relation of the cause of action to the contacts - Maritz's alleged injuries arose from Cybergold's website
4. interest of the forum state in providing a forum for its residents - interest established where a Missouri corporation's trademark is allegedly being infringed
5. convenience of the parties - Cybergold did not show it would be excessively burdened by the forum

Holding: similar to *Inset* (solicitation by advertising through an Internet website is enough to establish minimum contacts anywhere).

Bensusan Restaurant Corp. v. King, 126 F.3d 25 (2d Cir. 1997).[354]In this case, Bensusan Restaurant Corp. claimed that King was infringing on Bensusan's registered trademark "The Blue Note", the name of Bensusan's successful jazz club in New York City, when he created a website for his Missouri club, also called The Blue Note.

New York law allows a non-resident who does not transact business in New York to be sued if the non-resident has committed a tortious act within the state of New York. Since King's website was created by a person physically in Missouri, there was no tortious act in New York and the court held that there was no personal jurisdiction over King.

New York law also allows jurisdiction over non-residents that have caused an injury in the state even if the tortious act was committed outside. However, this is limited to people who should have reasonably expected the act to have

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353 PLC, 808 F.Supp. 1425, 1433-34 (E.D.Mo. 1992); May Dep't Stores Co. v. Wilansky, 900 F.Supp. 1154, 1159-60 (E.D.Mo. 1995).

354 Bensusan Restaurant Corp. v. King, 126 F.3d 25 (2d Cir. 1997).

consequences in the state, and who derive substantial revenue from interstate commerce, something the court held was not shown here.

Holding: an allegedly trademark-infringing website alone is not sufficient for personal jurisdiction where the website was created by someone physically located in another state.

Hearst Corp. v. Goldberger,.[355]
Holding: Same as *Bensusan*. An allegedly trademark-infringing website alone is not sufficient for personal jurisdiction where the website was created by someone physically located in another state.

Zippo Mfg. Co. v. Zippo Dot Com, Inc.,.[356]In *Zippo Manufacturing v. Zippo Dot Com*, the court considered state and federal trademark infringement andtrademark dilution claims. The plaintiff was Zippo Manufacturing, famous for their lighters. The defendant, Zippo Dot Com, operated a web portal and news service out of California. Dot Com offered three levels of service, the upper two of which required registration with the website and a payment of monthly fees. Dot Com had approximately 3,000 subscribers in Pennsylvania at the time the suit was commenced. The Pennsylvania long arm statute allowed the court to exercise personal jurisdiction for claims arising out of contracts to supply services in the state.[357] The court found that Dot Com had contracts with the 3,000 subscribers and with seven Pennsylvania ISPs. Since Dot Com's website, unlike that in CyberGold, was an active website, garnering money from people in the state where they were being sued, the court held that it could properly exercise personal jurisdiction over the defendant.[358] The court also applied the three part *Int'l Shoe* test, finding that it could also exercise jurisdiction under that standard.

Holding: A passive webpage is insufficient to establish personal jurisdiction, but an interactive site through which a defendant conducts business with forum residents, such as Zippo Dot Com's, is sufficient to establish personal jurisdiction.

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355 Hearst Corp. v. Goldberger, 96 Civ 3620, 1997 WL 97097, 1997 U.S. Dist. Lexis 2065 (S.D.N.Y. February 26, 1997).
356 Zippo Mfg. Co. v. Zippo Dot Com, Inc., 952 F. Supp. 1119 (W.D. Pa. 1997).
357 Ibid.
358 Ibid.

Cybersell, Inc. v. Cybersell, Inc.,.[359]
Cybersell, Inc. v. Cybersell, Inc. arose out of a claim of trademark infringement. The plaintiff corporation, in Arizona, sued a Florida corporation who was using the plaintiff's registered trademark on its website. The website created by the defendant was for a small company that advertised its website construction services under the name CyberSell. The website had no "active" parts, and simply offered a number for someone who viewed the webpage to call to get more information about the services offered. They had no toll-free number, only a local Florida number. Furthermore, there was no evidence that they ever advertised in Arizona, or had any contacts with Arizona. The court found that there was no evidence that the defendant's passive webpage purposefully availed itself of Arizona, and that the court could not exercise personal jurisdiction over the defendant.[360]

Holding: Same as *Zippo*. A passive webpage, such as the one operated by defendant here, is not enough to establish personal jurisdiction.

Mink v. AAAA Development L.L.C.,.[361]Plaintiff Mink discussed the possibility of marketing a software product he recently submitted a patent application for with a man named Stark. Stark allegedly shared Mink's ideas with the defendants. Mink brought suit in Texas to claim damages against defendants for conspiring to duplicate his software in violation of his patent-pending rights. Mink was a Texas resident, whereas defendants were based in Vermont. To the knowledge of the court, defendants had no dealings with Texas. The United States District Court for the Southern District of Texas dismissed the case for lack of personal jurisdiction. Plaintiff filed a motion for reconsideration, alleging that the defendant's website fulfilled the minimum contacts requirement for personal jurisdiction. The Fifth Circuit affirmed the trial court's decision, applying the *Zippo* test. It held that the defendant's website, which did not accept online orders, was little more than passive advertisement. The court held that without greater interactivity between the website and the residents of Texas, personal jurisdiction would not be appropriate.

Holding: Same as *Zippo*. A passive webpage, such as defendants' here, is not enough to establish personal jurisdiction.

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[359] Cybersell, Inc. v. Cybersell, Inc., 130 F.3d 414 (9th Cir. 1997).
[360] Cybersell, Inc. v. Cybersell, Inc., 130 F.3d 414 (9th Cir. 1997).
[361] Mink v. AAAA Development L.L.C., 190 F.3d 333 (5th Cir. 1999).

Blakey v. Continental Airlines, .[362] Plaintiff Blakey filed suit against defendants for defamation, sexual harassment, and hostile work environmentbased on defamatory statements published by defendants on the company's web-forum. The court reversed a dismissal based upon lack of personal jurisdiction granted by the lower court.

The court in this case applied the "minimum contacts" principle set forth by *International Shoe* and the "effects" test set forth by *Calder*. It held that the defendants' statements were published with the knowledge or purpose of causing harm to the plaintiff in the forum state of New Jersey, and that this satisfied the "minimum contacts" requirement for proper jurisdiction.

Holding: Personal jurisdiction for claims regarding a website require application of the *Calder* test to establish "minimum contacts" as defined by *Int'l Shoe*.

Twentieth Cent. Fox Film Corp. v. iCraveTV,[363]iCraveTV was a Canadian Internet startup that offered real time streaming of television over the Internet. Twentieth Century Fox brought suit against the startup for copyright infringement. Twentieth Century Fox obtained an injunction against iCraveTV from broadcasting within the United States. The United States court asserted jurisdiction over the Canadian company with significant ease, utilizing the United States registrant address attached to the.[364] company's website domain name. After issuance of the restraining order, iCraveTV decided to settle the lawsuit and discontinue its streaming service

Holding: The United States has used a foreign company's website domain registration in the U.S. as justification for personal jurisdiction.

Yahoo! Inc. v. La Ligue Contre Le Racisme et l'antisemitisme,.[365] the Ninth Circuit applied the *Calder* test to find that a California court could properly establish specific personal jurisdiction in a declaratory judgment action against two French civil rights organizations suing Yahoo! and Yahoo! France over the availability of Nazi content to French users of its services.[366]

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362 Blakey v. Continental Airlines, 751 A.2d 538 (NJ 2000).
363 Twentieth Cent. Fox Film Corp. v. iCraveTV, 53 U.S.P.Q.2d 1831(W.D. Pa. 2000).
364 Michael A. Geist, Is There a There There? Toward Greater Certainty for Internet Jurisdiction, 16 Berkeley Tech. L. J. 1345 (2001).
365 Yahoo! Inc. v. La Ligue Contre Le Racisme et l'antisemitisme, 433 F.3d 1199 (9th Cir. 2006) (en banc).
366 Ibid.

Under the threat of substantial financial penalty, the French Court ordered Yahoo! in two interim orders to take "all necessary measures to dissuade and render impossible" access within France to sites displaying Nazi paraphernalia or other anti-Semitic content, and directed Yahoo! France to display an interstitial warning to users in France prior to enabling their access to Yahoo.com. While Yahoo! France substantially complied with the orders, Yahoo! resisted the French court's efforts to dictate changes to its US-based services. (Yahoo! later adopted a policy change addressing many of the French complaints, allegedly for independent reasons.)

In reviewing Yahoo's claim for declaratory relief, the Court applied a three-part version of the *Calder* test to determine if the effects of LICRA's action were sufficiently directed at California to establish personal jurisdiction, including whether the defendant: 1. committed an intentional act;. expressly aimed at the forum state, and 3. causing harm that the defendant knows is likely to be suffered in the forum state. Focusing on the French Court's orders, the Ninth Circuit found that compliance would require Yahoo! to perform significant acts in California as the servers supporting yahoo.com, which would have to be modified for compliance, were located in that state, thus fulfilling the first two prongs of the test. Although the penalties contained within the orders had not been enforced and the companies were in substantial compliance, the court found that the threat of future enforcement and the "very existence" of the orders constituted "harm" under the third requirement of the *Calder* test.

Holding: Personal jurisdiction under the *Calder* test can be established where a defendant's foreign court orders require modifying data located on servers in the forum state and the threat of financial penalty for not performing the modifications constitutes harm. Note, however, that the court ordered the case dismissed because three of the judges (that believed personal jurisdiction was established) also believed that the case was not yet ripe and three other judges believed the court lacked personal jurisdiction, yielding a majority that favored dismissal, albeit for different reasons.

Dudnikov v. Chalk & Vermilion,[367]The Tenth Circuit overturned a dismissal granted by the District Court of Colorado due to lack of personal jurisdiction in a case involving a copyright dispute over an eBay auction. The Court applied a five-part test that asked:

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[367] Dudnikov v. Chalk & Vermilion, 514 F.3d 1063 (10th Cir. 2008).

1. whether the defendants have committed an intentional action That the action was expressly aimed at the forum state
2. That defendants had knowledge that the brunt of the injury would be felt in the forum state
3. That the plaintiff's injuries arose out of the defendant's forum related activities
4. And that traditional notion of fair play and substantial justice are not offended.
5. The court decided that there existed specific jurisdiction over the defendants due to their interactions with the plaintiffs via the Internet services operated by eBay.

Holding: Personal jurisdiction is established if the criteria of the *Calder* test are met.

Boschetto v. Hansing,.[368] Plaintiff Boschetto, a resident of California, purchased a vintage car through eBay from defendant car dealership in Wisconsin. Upon receiving the car, plaintiff discovered many problems with the car which were counter to how the defendant described it. After failing to resolve the issue through eBay, plaintiff brought suit in the United States District Court for the Northern District of California. The District Court granted a motion to dismiss for lack of personal jurisdiction and the Ninth Circuit affirmed this decision. The court specifically rejected the reasoning of *Cybersell*, effectively refusing to apply the *Zippo* test. Instead, the court applied a three-part test for establishing minimum contacts: (1) purposeful direction of activities toward the forum, (2) a claim arising out of or related to defendant's forum related activities, and (3) reasonableness, fair-play, and substantial justice. The court ruled that the lone transaction for the sale of one item did not establish purposeful availment.

Holding: The Ninth Circuit departed from the *Zippo* test and held that specific jurisdiction is found by "minimum contact" through a three part test: purposeful direction, a forum related claim, and fairness.

Attaway v. Omega, No.[369] Defendants purchased a used car from plaintiffs through eBay. The auction stated that winners must make their own delivery arrangements. After the completed transaction, defendants filed a claim to

[368] Boschetto v. Hansing, 539 F.3d 1011 (9th Cir. 2008).
[369] Attaway v. Omega, No. 11A01-0712-CV-608 (Ind. Ct. App. March 13, 2009).

rescind payment because they alleged that the car was not as described, and succeeded in doing so through MasterCard. Plaintiffs brought suit for damages, and the defendants moved to dismiss for lack of personal jurisdiction. The motion was denied in the lower court, and the Indiana Court of Appeals affirmed the judgment. The court noted that this case may be the first case within which an eBay Defendants purchased a used car from plaintiffs through eBay. The auction stated that winners must make their own delivery arrangements. After the completed transaction, defendants filed a claim to rescind payment because they alleged that the car was not as described, and succeeded in doing so through MasterCard. Plaintiffs brought suit for damages, and the defendants moved to dismiss for lack of personal jurisdiction. The motion was denied in the lower court, and the Indiana Court of Appeals affirmed the judgment. The court noted that this case may be the first case within which an eBay seller sued a buyer for rescission of payment after the item had been picked up in the seller's state.

The court applied the minimum contacts rule outlined by *Int'l Shoe* as well as the purposeful availment principle from *Burger King Corp. v. Rudzewicz*, which aligns with the *Calder* test. It also rejected the *Zippo* test, declaring that eBay controls the interactivity of the website and not the seller. The court cites *Boschetto* for its similar fact pattern, but distinguishes itself because the transaction in the present case went beyond the single online purchase of *Boschetto*. Rather, the defendants had notice that their bid would result in an agreement to appear in Indiana to obtain the vehicle, whether in person or by representative. The court thus ruled that this qualified as a purposeful availment of the privileges of the forum state on the part of the defendants, and that jurisdiction was proper.

Holding**:** Personal jurisdiction is established through "minimum contacts" and purposeful availment by appearing (even through an agent) in the forum state to pick up an item sold through the Internet.

The advancement of information technology, copying, modifying and distributing of copy righted material have became very simple and difficult to trace. The copy right owners are now at the mercy of a technology that has raced ahead of the law. Because the Internet is a cooperative venture not owned by a single entity or government', there are no centralized rules or laws governing its use. The absence of geographical boundaries may give rise to a situation where the material legal in the country where it is posted will violate the laws of another country. This process is further' made complicated due to

the absence of a uniform and harmonized law governing the jurisdictional aspects of disputes arising by the use of Internet. The 'theories' under which a country may claim prescriptive jurisdiction are based on the:

- 'objective territoriality' when an activity lakes place within the country,
- 'subjective territoriality' when an activity takes place outside the nation's borders, but the 'primary effect' of the action is within the nation's borders,
- nationality of either the offender or the victim,
- right to protect the nation's sovereignty when faced with threats recognized as particularly serious in the international community in exceptional circumstances.

Fair use

With all the controversy surrounding unauthorized copying and recording of copyright-protected content such as music and movies, it might seem that individuals have no legitimate rights to copy or record in the digital realm. "Fair Use" rights allowing individuals to exempt themselves from copyright restrictions were initially present only in case law[370] and were not codified until the 1976 Copyright Act.[371] As defined by the Act, U.S. copyright law exempts users of copyrighted works from copyright infringement liability with consideration to the following four criteria:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.[372]

Other exemptions exist for libraries that are immune from copyright infringement provisions when duplicating copyright protected materials for archival purposes.[373] Also, news organizations and other media outlets are protected when using copyrighted works without authorized consent. The

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370 Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 549 (1985)(citing Horace G. Ball, The Law of Copyright and Literary Property 260 (1944)).
371 17 U.S.C. [j0] 107 (2005).
372 Id.
373 17 U.S.C. [j0] 108(a) (2000).

Broadcast Flag can hinder the protected activities of librarians, news organizations, and individuals acting within statutory guidelines by restricting the video quality of the content.[374]

In Sony Corp. of Am. v. Universal City Studios, Inc.,[375] Many of today's copyright battles are not over new issues, but instead merely involve new media. The *1984 Sony v. Universal City Studios case* is the most relevant Supreme Court precedent regarding the fair use rights of consumers to duplicate copyrighted materials for time-shifting purposes.[376] The Sony Betamax Video Tape Recorder (VTR), introduced in 1976, was functionally similar to today's DVRs, though much less sophisticated.[377] Still, the Betamax VTR was capable of recording broadcast television programs for consumers to view at later times.

At issue in *Sony v. Universal City Studios* was whether Sony engaged in secondary and vicarious copyright infringement by selling a video tape recorder (VTR) that permitted customers to record copyrighted content. Motion picture studios were dismayed at Sony's home recording device because it permitted consumers to make personal copies of broadcast television programs, including copyrighted material. Content providers sued Sony, the technology distributor, rather than the individuals using the device for home recording. Backing the content providers, the Court of Appeals for the Ninth Circuit ruled in favor of Universal City Studios and Disney World Productions.

Sony appealed the unfavorable Ninth Circuit Court of Appeals ruling to the Supreme Court. Respondents, Universal City Studios and other movie studios, sought to obtain royalties from Sony for lost revenue. The Court sided with Sony and held that such remedies were not within the scope of the 1976 Copyright Act.

- Interpretation of the 1976 Copyright Act

To determine the scope of the Act, the Sony Court looked to patent law to form a contributory copyright infringement doctrine. However, the main focus of the decision was the interpretation of the fair use exemptions of the 1976

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374 Robert T. Numbers II, To Promote Profit in Science and the Useful Arts: The Broadcast Flag, FCC Jurisdiction, and Copyright Implications, 80 Notre Dame L. Rev. 439, 458 (2004).

375 464 U.S. 417 (1984).

376 See Michael J. Madison, A Pattern-Oriented Approach to Fair Use, 45 Wm. & Mary L. Rev. 1525, 1571, 1602 (2004).

377 See Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 422-23 (1984).

Copyright Act as they applied to users of the Betamax.[378] The Court noted that anyone "who makes a fair use of the work is not an infringer of the copyright with respect to such use." Citing legislative history, the Court noted that there existed no "rigid, bright-line approach to fair use."

The Court rejected the Court of Appeals's requirement that fair uses be productive uses and instead adopted the District Court's "equitable rule of reason" analysis to answer the question of whether consumers violated copyright law when engaging in home recording of broadcast television. Guided by Congress, the Court analyzed the economic merits of Universal's arguments. However, the Court determined that Universal did not significantly suffer from consumers' engagement in home recording for personal use. The Court assumed non-commercial consumer recording to be a fair use unless proven otherwise.

- Time-Shifting in Sony

The Sony Court assumed that broadcast airwaves belong to the public. Justice John Paul Stevens delivered the opinion of the Court in Sony noting that customers using the Betamax VTR did so for "time-shifting" purposes, which allowed customers to watch a program after its scheduled broadcast. The Court also stated that time-shifting "enlarges the television viewing audience." Based on the foregoing arguments, the Court concluded that time-shifting was not objectionable to most affected copyright holders. Furthermore, Justice Stevens explained that neither Universal City Studios nor Walt Disney Productions proved that the action was harmful to its revenues.

With regard to consumer home recording habits, the Court held that "unauthorized uses of a copyrighted work are not necessarily infringing." A distinguishing factor that sets recording of broadcast television apart from other unauthorized duplication is that "time-shifting merely enables a viewer to see such a work which he had been invited to witness in its entirety free of charge." The Court held that, if anything, advertising viewership would increase because of increased audience size. However, this finding does not necessarily stand true today with the advent of commercial-skipping digital video recorders.[379]

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[378] See Sony, 464 U.S.

[379] Frank Ahrens, With Digital Video Recorders, Viewing Times, They Are A-Changin'; DVRs Manipulate Broadcast Schedules to Fit Audience's, Wash. Post, May 13, 2005, Financial, at H03.

The Court in Sony held that a technology "need merely be capable of substantial non-infringing uses" for its creators to escape copyright infringement liability.[380] The Court identified the four prongs of the fair use doctrine and interpreted its definition to include legal uses of the new technology. The Court remarked that it had historically been reluctant to expand copyright law because of Congress's constitutional capacity to do so. Nevertheless, it concluded that Congress had not specified legislative intent for the time-shifting technology. In a five-to-four decision, the Sony Court reversed the Ninth Circuit Court of Appeals ruling and sided with Sony.

The Sony Court placed the burden on the complainant to prove that consumer creation of noncommercial unauthorized copies of copyrighted works was harmful or could have an adverse affect on the market for the copyrighted work.[381] The market detriment argument is central to current content providers' arguments against unrestricted HDTV home recordings that allow for consumers to produce perfect copies of over-the-air programming.[382] The Sony doctrine is still the foundation for legally-protected fair use rights of consumers to make home recordings of analog broadcast television for time-shifting purposes.[383]

Consumer Fair Use Rights in a Digital World

In Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys.,[384] Today's consumers continue to enjoy Sony-protected "time-shifting" with digital video recorders such as TiVo. Additionally, the availability of portable media players and other consumer electronic devices have led consumers to engage in "time-shifting" in a new way through the process of "space-shifting."[385] "Space-shifting," defined as the process of transferring content from one medium to another, was upheld as a fair use by the Ninth Circuit Court of Appeals in the 1999 case RIAA v. Diamond Multimedia.[386]

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380 Sony, 464 U.S. at 442. The Opinion also stated that "unauthorized uses of a copyrighted work are not necessarily infringing." Id. at 447.

381 Sony, 464 U.S. at 451.

382 Steve Hirsch, Movie Piracy's Harm Felt Beyond Industry, Wash. Times, Sept. 30, 2006, available at http://washingtontimes.com/business/20060929-102719-8659r.htm.

383 Frank Chao, The FCC and Congress should Consider Consumer Rights When Making the Transition to DTV, 2003 Duke L. & Tech. Rev. 17 (2003).

384 180 F.3d 1072 (9th Cir. 1999).

385 Id.

386 Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys., 180 F.3d 1072, 1079 (9th Cir. 1999).

The controversy centered on a digital music player known as the Diamond Rio, which enabled users to transfer and store songs from audio CDs onto the Rio via a computer for portable playback. Analogizing Sony, the court described the ability of the Rio to transfer music from a computer to the portable hard drive-based unit, or "space-shift." The question before the court was whether the Rio's digital copying features violated the 1992 Audio Home Recording Act (AHRA), which forbids the importation or sale of any digital audio device that does not employ the Serial Copy Management System (SCMS).[387]

SCMS technology prevents digital audio devices from making more than one identical first generation copy of an audio recording.[388] The system was originally intended to prevent piracy **in** response to the advent of the Digital Audio Tape (DAT) format.[389] Like the Broadcast Flag of the DTV era, the SCMS was a government-sanctioned digital rights management system.[390] The RIAA claimed that the Rio breached the AHRA because it did not include SCMS technology.[391] Diamond argued that the Rio did not fall under the auspices of the AHRA because it was a hard drive-based data storage unit and not a digital recording device.

The Ninth Circuit was keen to the industry challenges that arose due to the popularity and portability of the MP3 file format. However, the court sided with Diamond and agreed that the device was more similar to a computer than a digital recording device. The court noted that Rio was in fact more restricting than SCMS because it did not allow any audio, not even a first generation copy, to be transferred to another audio device. Instead, the court noted that Rio was consistent with the legislative intent of AHRA because it promoted "personal use" and prevented piracy.[392]

Though not binding beyond the Ninth Circuit, Diamond paved the way for other electronics companies to manufacture MP3 players without fear of violating AHRA. The Diamond court's expansion of the Sony doctrine provided resistance to DRM controls over now-common fair use behavior. "Space-shifting" through CD-ripping and music downloads are part of the expanding

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387 Audio Home Recording Act, 17 U.S.C. [j0] 1002(a)(1).

388 Jan Maes & Marc Vercammen, Digital Audio and Compact Disc Technology 333 (2001); Ken C. Pohlmann, Principle of Digital Audio 220 (2005); Wikipedia, Serial Copy Management System, http://en.wikipedia.org/wiki/Serial_ copy_management_system (explaining SCMS and its history) (as of Dec. 10, 2006, 10:27 EST).

389 Wikipedia, Serial Copy Management System, supra note 98.

390 The SCMS was mandated by the AHRA in the same way that the Broadcast Flag began in Congress, became an FCC rule, and is once more a legislative proposal.

391 Diamond, 180 F.3d at 1075.

392 Diamond, 180 F.3d at 1079.

portable media industry.[393] Although it is possible to manufacture technologies that restrict consumer behavior, it is unlikely that a lawsuit would prevail against the manufacturer of a device with similar freedoms to the Rio. However, implementation of a policy like the Broadcast Flag could successfully erode the ability to "space-shift" both through code and by law.

In A&M Records v. Napster,[394] In 2000, RIAA went on the legal offensive again and sued the startup peer-to-peer (P2P) company Napster for copyright infringement. Napster offered an Internet file-sharing service that allowed users to exchange digital music files, much of them copyright protected, in the MP3 format over the company's network. In a multifaceted defense, one of Napster's arguments was that its users engaged in fair use "sampling" and "space-shifting" when they downloaded copyright-protected files.[395] Similar to the Sony analysis, the court, turned to the four prongs of fair use:
(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.[396]

The Ninth Circuit did not extend the rule of Sony to Napster's users because they were not engaging in personal fair use. The court found Napster's users violated all four prongs of fair use. Analyzing the character of use, the court wrote that Napster's users were retrieving songs for free, which they would have otherwise paid for, and Napster planned to profit in future revenue as a result, thus rendering the file transfers commercial use.[397] Weighing in prong two, nature of the use, the court found that the files being transferred were creative in nature. Thus, the transferred files were protected by copyright law so the users' behavior was not protected under the fair use doctrine. For prong three, the court held that because Napster users exchanged songs in their entirety, the behavior was not protected as sampling or any other non-substantial use of copyright works. In analyzing the fourth and final fair use

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393 Reuters, Survey: iTunes, Others to Pick up Slack in Music Sales, Mar. 27, 2005.
394 239 F.3d 1004 (9th Cir. 2001).
395 "[W]here users access a sound recording through the Napster system that they already own in audio CD format." A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1014 (9th Cir. 2001), aff'g in part and vacating in part, 114 F. Supp. 2d 896 (N.D. Cal. 2000).
396 Id.
397 Napster, 239 F.3d at 1015.

prong, the court concluded that Napster and its users were not protected because the infringing behavior adversely affected CD sales and had direct commercial impact on copyright holders' ability to earn money.[398]

Napster was held liable for vicarious and contributory copyright infringement, which were the same charges that Sony evaded. Napster structured its P2P network so the company maintained a file index on a centralized server.[399] Due to this, the court held that, unlike Sony, Napster had "actual, specific knowledge of direct infringement" and thus rendered "Sony's holding of limited assistance to Napster."[400] While "bound to follow Sony," the court did not extend Sony to protect the file-swapping company or its users. The Napster court limited the Diamond court's extension of Sony to the "space-shifting" context and it dissuaded the same infringing behavior the Broadcast Flag is aimed to prevent.[401] In *RealNetworks v. Streambox*,[402] the U.S. District Court for the Western District of Washington further explored the "space-shifting" rights first articulated in Diamond[403] and limited in Napster.[404] In this case, a software program captured and recorded "streaming" video from the Internet that could not otherwise be saved to one's hard drive. RealNetworks developed software that enabled users to view streaming video over the Internet. Streambox made software capable of recording both unprotected and copy-protected streaming video encoded in RealNetworks's format.[405] The district court granted a preliminary injunction against Streambox to prevent the manufacture and sale of three software applications.

The case involved RealNetworks, Inc., which offers software to computer users to view video and audio content transmitted over the Internet in the form of digital data packets from remote web servers to their home personal computers.[406] RealNetworks software processes and decodes the information as the content-provider receives the video. "Streaming" occurs where a content-provider sends audio or video content from one computer to a consumer

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398 Id.
399 Napster, 239 F.3d at 1011.
400 Id.
401 Napster, 239 F.3d at 1020.
402 Ibid.
403 Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys., 180 F.3d 1072, 1075 (9th Cir. 1999).
404 Napster, 239 F.3d at 1014.
405 Streambox, 2000 U.S. Dist. LEXIS 1889, at *10-11.
406 Id. at *3.

computer for real-time playback.[407] When streamed, the entire media file never completely downloads onto the end user's computer. Instead, portions of the file are buffered for continuous playback.[408] The software, offered by RealNetworks, allows content-providers to stream video to consumers' computers in much the same way broadcasters currently deliver content to home television sets. Yet, the streaming content-provider can restrict the ability of the consumer to download and store the content on their computer or even prevent use of the fast forward function. This makes the technology strikingly similar to DTV broadcasts under the Broadcast Flag regime.

Of the three Streambox software offerings, the most important was the Streambox VCR, which worked like a standard VCR by capturing video that could not otherwise be saved. Similar to Broadcast Flag restrictions, online video providers could protect their video by streaming it from a RealServer that prevented users from capturing the content. The Streambox VCR allowed users to bypass the restrictions and download streaming video. The court drew a clear distinction between video that is exclusively streamed and video that is downloaded, saved, and ultimately controlled by the end user. The court did not rule on the legality of downloading unrestricted video, but ruled on the issues surrounding video offerings that copyright holders did not want to be downloaded.

The court applied Sony to the Streambox VCR model, but found the cases distinguishable on the grounds that in Sony "substantial numbers of copyright holders who broadcast their works either had authorized or would not object to having their works 'time-shifted' by private viewers." With Streambox, however, copyright holders specifically placed video content onto a RealServer, which, similar to the Broadcast Flag or restrictions currently imposed by some cable and satellite providers, controlled content that could be viewed and recorded by a consumer.[409] Thus, the court held that Streambox users likely were notexercising a fair use and that Streambox likely could be found liable for copy protection circumvention. The court drew another distinction between Streambox and Sony because "the Sony decision did not involve interpretation of the DMCA." The court granted a preliminary injunction to enjoin the distribution of two software programs, including the Streambox VCR, noting

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407 See, e.g., Lisa Rysinger, Exploring Digital Video 206 (2005); Hyperdictionary, Streaming: Dictionary Entry and Meaning, http:// www.hyperdictionary.com/dictionary/streaming (last visited Nov. 7, 2006).

408 Streambox, 2000 U.S. Dist. LEXIS 1889, at *3-4.

409 Streambox, 2000 U.S. Dist. LEXIS 1889, at *11-12.

that Streambox likely violated sections 1201 and 1202 of the DMCA.[410] Thus, the U.S. District Court for the Western District of Washington no longer interpreted Sony to be the only standard by which to determine legitimate uses of digital technologies.[411]

Paramount Pictures Corp. v. RePlayTV,[412] In 2002, the RePlayTV 4000 Personal Video Recorder (PVR) became noteworthy, as well as controversial, because of its touted commercial-skipping and digital video redistribution capabilities.[413] Twenty-eight companies filed a lawsuit against RePlayTV's parent company, SONICblue, Inc., in response to the perceived threat.[414] Five consumers who owned the 4000 series PVR sought declaratory relief under the Declaratory Judgment Act to determine whether use of their device to skip commercials and redistribute video constituted protected fair uses.[415] Under *Newmark v. Turner Broadcasting Network*, the consumer case was consolidated with SONICblue.[416] SONICblue filed for Chapter 11 bankruptcy in the midst of the legal confrontation.[417] Subsequently, RePlayTV chose not to include the controversial commercial-skipping and redistribution features in their newer video devices.[418] Thus, under the consolidated case of Paramount v. RePlayTV, the U.S. District Court for the Central District of California held that it did not possess authority to grant declaratory relief to the five consumers, nor could it rule on whether the no longer manufactured RePlayTV device was a fair use because a conflict no longer existed.[419]

In MGM Studios, Inc. v. Grokster, Ltd.,[420] The 2005 MGM v. Grokster showdown revisited some of the secondary liability and copyright infringement inducement issues posed in Sony. Grokster did not, however, focus on consumer fair use behavior, and stopped short of providing a digital update to Sony's "time-shifting" interpretation. Similar to Sony, the question presented in Grokster was "under what circumstances the distributor of a product

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410 Id. at *15-18.
411 Nimmer on Copyright (1999 Supp.), [j0] 12A.18 [B]).
412 298 F. Supp. 2d 921 (U.S. Dist. C.D. Cal. 2004)
413 Geoffrey Morrison, SONICblue ReplayTV RTV4000 PVR, Home Theater, June 2002, available at http://www.hometheatermag.com/pvr/123/.
414 Newmark v. Turner Broad. Network, 226 F. Supp. 2d 1215 (C.D. Cal. 2002).
415 See Paramount Pictures Corp. v. ReplayTV, 298 F. Supp. 2d 921 (C.D. Cal. 2004).
416 Newmark v. Turner Broad. Network, 226 F. Supp. 2d 1215, 1223 (C.D. Cal. 2002).
417 Katie Dean, Bankruptcy Blues for PVR Maker, Wired News, Mar. 24, 2003, http://www.wired.com/news/digiwood/0,1412,58160,00.html.
418 Paramount, 298 F. Supp. 2d at 923.
419 Id. at 927.
420 125 S. Ct. 2764 (2005).

capable of both lawful and unlawful use is liable for acts of copyright infringement by third parties using the product."[421] Grokster was a P2P network software creator and distributor. It manufactured the "Kazaa" P2P client software that allowed Internet users to search for and swap files directly with each other. These files included copyright-protected software and video and audio media. Unlike Napster, which hosted a centralized server to catalog the names of shared files,[422] Kazaa did not. However, widespread proliferation of P2P file sharing of motion pictures led MGM Studios to sue Grokster for contributory copyright infringement in 2003. Prior to reaching the Supreme Court, the U.S. Court of Appeals for the Ninth Circuit granted summary judgment in favor of Grokster basing its decision on the technology's structural similarity to the Sony Betamax VTR. At issue before the Supreme Court was whether Grokster could be held liable for the infringing actions of those using its software.

Grokster merely created the software, but it did not host or index the movies and music traded with its application. Because the P2P network was entirely decentralized, Grokster argued it could not be held liable for the infringing actions of its users.[423] Despite Grokster's argument, however, the Court noted that Grokster profited from advertisements promoted on the company's peer-to-peer network.[424] Thus, the availability of pirated movies, music, and other digital files induced larger audiences and yielded higher revenue for the company. Though brief, the Court addressed individual behavior stating that there existed "no finding of any fair use and little beyond anecdotal evidence of noninfringing uses."[425]

In the Grokster decision, the Supreme Court also ruled upon summary judgment for another P2P network creator, Streamcast. The Court found evidence of vicarious copyright infringement in the company's marketing of the software as a Napster alternative.[426] Hollywood levied the advertisement charge against Sony for its marketing of the Betamax VTR, but because the Court held personal "time-shifting" of broadcast television legal, it did not hold

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421 Metro-Goldwyn-Meyer Studios, Inc. v. Grokster, Ltd., 125 S. Ct. 2764, 2770 (2005).
422 A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1011 (9th Cir. 2001), aff'g in part and vacating in part, 114 F. Supp. 2d 896 (N.D. Cal. 2000).
423 Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 380 F.3d 1154, 1159 (9th Cir. 2004), remanded by Grokster, 125 S. Ct. at 2764.
424 Grokster, 125 S. Ct. at 2774.
425 Id. at 2785.
426 Id. at 2773.

Sony liable for infringement.[427] In Napster, file swapping of copyrighted materials was infringing,[428] and thus marketing a product as analogous to one already deemed to be in violation of copyright law made Grokster's motives the same.[429]

The case was remanded to the U.S. Court of Appeals for the Ninth Circuit, which remanded the case back to the District Court for the Central District of California[430].As a result of the ruling, the Court granted summary judgment to MGM so the movie studio could press forward with a lawsuit to sue Grokster.[431] The Court made no mention of "time-shifting," "space-shifting," or Sony consumer fair use rights.[432]

The Indian Copyright Act under Section 52 carves out fair dealing from copyright infringement as affirmative defences, which places the onus of proving the defences onto the user once the copyright owner establishes *prima facie* infringement by substantial copying of expression. However, the fair dealing cases in India do not always establish *prirna facie* infringement before considering the application of fair dealing.[433]

The first issue in these cases, following the text of the Copyright Act, is the definition of fair dealing. As the Act does not define fair dealing, the Indian courts have heavily referred to the English authority of *Huhhard* v *Vosper* which contained the oft-quoted definition of fair dealing by Lord Denning:

'It is impossible to define what is 'fair dealing.' It must be a question of degree. You must consider first the number and extent of the quotations and extracts Then you must consider the use made of them. Next, you must consider the proportions. Other considerations may come to mind also. But, after all is said and done, it must be a matter of impression.[434]

Also, the enumerated purposes under Section 52 have been typically interpreted as exhaustive, inflexible and certain, since any use not falling

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427 Id. at 2777.
428 Id. at 2772.
429 Grokster, 125 S. Ct. at 2680-81.
430 Id. at 2786-87; Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 419 F.3d 1005, 1007 (9th Cir. 2005).
431 Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 454 F. Supp. 2d 966, 971 (C.D. Cal. Sept. 27, 2006).
432 See id.
433 Civic Chandran v Ammini Amma, 1996 PTC 16670.
434 (1972) I All ER 1023 p. 1027.

strictly within an enumerated ground is considered an infringement[435] The courts have time and again reiterated that it is impossible to develop a 'rule of thumb' for cases of fair dealing as each case depends upon in its own facts and circumstances.[436]

As the courts in India have analysed the doctrine of fair dealing, in which they drew primarily from UK and US approaches, they endorsed certain factors that may be more or less relevant in fair dealing cases and which are not provided by the Indian copyright statute. The Courts have traditionally articulated and applied the following three factors in deciding the cases:[437]

The Amount and Substantiality of the Dealing

In *RG Anand v Delux Films and Ors,* the Indian Supreme Court while recognizing the idea- expression dichotomy held that there can be no copyright in an idea, subject -matter, themes, plots or historical or legendary facts and violation of the copyright in such cases IS confined to the form, manner and arrangement and expression of the idea by the author of the copyrighted work. The Court further held that where the same idea is being developed in a different manner, it is manifest that the source being common, similarities are bound to occur and therefore in such a case the courts should determine whether or not the similarities are on fundamental or substantial aspects of the mode of expression adopted in the copyrighted work.[438] In other words, in order to be actionable the copy must be a substantial and material reproduction of expression and not merely of an idea. Therefore, the question of fair dealing defense does not arise in case a copying is made of an idea as that would not, at all, constitute a copyright infringement.

In Blackwood case, which involved the reproduction of the work in the form of guides, the court rightfully held that the alleged infringer's intention is an important but not a decisive factor in determining whether the work in question was copied so substantially that the copying would amount to

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435 Blachvood and Sons Lrd and Othrs v AN Parasuraman and Ors, AIR 1959 Mad 410 Para 84 and Civic Chandmn .1996 PTC 16670.

436 ESPN Sial'S Sports v Global Broadcast NelVs Lid (/nd Ors. 2008(36) PTC 492 (Del) Para 34

437 Civic Chandran, 1996 PTC 16670. it may be noted that these factors correspond with the fair use factors which find statutory recognition under section 107 of the US Copyright Code, 17 USC § 107 as limitations on exclusive rights: Fair use.

438 [1979J I SCR 218 Para 52. The expression-idea dichotomy has also been approved in Academv oIGeneral Edu, Manipal and AnI' v B Malini Mallya, AIR 2009 se 1982 Para 19 and Eastern Book Companv and Ors v DB Modak and AnI'. AIR 2008 SC 809 at Para 38.

negative 'fairness'.[439] The Court took a peculiar stand in SK DUTT v Law Book Co and Ors, where the dispute was based on the use of certain a quotations from a work. The Court interpreted the fact of acknowledgement by the authors of the plaintiffs material to mean that had the authors made any other use of the plaintiffs book in compiling their own book, they would have acknowledged it; thus, the copying was held not to be a substantial taking.[440]

In *Rupendra Kashyap v Jiwan Publishing House,*[441] The words 'research or private study' were replaced by the words 'private use including research' by the Copyright (Amendment) Act, 1994 (Act 38 of 1994). What is contemplated by this amendment is a defence to the person conducting research or private study who while doing so, if dealing fairly with a literary work, may not incur wrath of the copyright having been infringed. But, if a publisher publishes a book for commercial exploitation and in doing so infringes a Copyright, the defence under Section 52(1)(a)(i) would not be available to such a publisher though the book. published by him may be used or be meant for use in research or private study.

According to the Indian courts, while a review may summarize the original work and present it for perusal to a third person so that such person may get an Idea about the work; a criticism may discuss the merits and demerits of the work and a guide may seek to enable 'students of the original work to better understand it from the point of view of examinations but, on the other hand verbatim copying cannot be provided any shield under the copyright regime.[442] A commentary has been held to be an expression of opinion or a set of explanatory notes on a text.[443]

In Chancellur Masters, the Court also held that the purpose and manner of use by the defendants of the questions found in the plaintiffs textbooks were not only different but, additionally, the defendants' works can be said to be 'transformative', amounting to 'review' under Section 52(l)(a)(ii) of the Act.[444] Here, the term 'review' was interpreted in a contextual background. The plaintiff's claim to copyright was premised on the work being a 'literary' one.

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439 AIR 1959 Mad 410 Para 86.
440 Am 1954 All 570 Para 45.
441 1996 (38) DRJ 81 Para 21.
442 Ramesh Chaudhary and Ors v Ali Mohd, AIR 1965 J&K 101.
443 Syndicate 01 the Press of the Unil'ersitv o(Cambridge on behalf 01 the Chancellor. Masters and Scholars of the Universitv 01 Cambridge and AnI' v B D Bhandari and AnI', 2005(31)PTC58(Del) Para 7.
444 2008 (38) PTC 385 (Del) Para 37.

The review or commentary, of a part of such mathematical work too was seen in the background of this claim. In the context of a mathematical work, a review was interpreted to be a re-examination or a treatise on the subject.

The purpose of dealing (and its commercial nature) is the most pronounced factor in India and it tops the hierarchy of factors. However, as mentioned before, the Indian courts have viewed the purposes enumerated in the act as exhaustive. For instance, in *Supercassette industries v Nintlas Corner House (P) Ltd*, where the plaintiff alleged copyright infringement on the ground that few audio clippings of songs in which they owned copyright were played on the television in an enclosed room of the defendant's hotel, the Court, while rejecting the defence of fair dealing in terms of Section 52(l)(k) held that the two categories 'hotels' and 'similar commercial establishment' gives a clue to Parliamentary intention to exclude the operation of such categories of establishments from the benefit of what are obviously deemed not infringements and that such provisions should receive a restricted interpretation, having regard to the nature of the expressions used.

In *E M Forster and Anr v A N Parasuram*, which involved alleged violation of plaintiffs copyright by reproduction of his book in a guide, that the Court explicitly divided its decision between the determination of infringement (that copying must be substantial enough to render an infringement), and the determination of fair dealing (that the copying must not be too .substantial) and refused to deal with the issue of fair dealing until infringement was found.[445] As mentioned before, this structured approach in analysing the issue of substantiality is' rare among Indian cases of fair dealing.

In *Harper & Row v Nation Enterprises*, the US Supreme Court applied much emphasis on the implication of the defendant's use on the potential market of the copyrighted work[446] The Court held this fourth factor as the single most important factor while determining fair use. However, as mentioned earlier, this factor is little used in Indian cases on fair dealing.

The US and the Indian legislation purport to maximize the promotion of creativity and the dissemination of information at the same time. Fair dealing and fair use both appear as defences to the otherwise closed monopoly entrenched in the legislation. But the real differences between India and its US

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445 AIR]964Mad331 Para 14.

446 471 US 539 (1985).This factor constitutes the tourth factor under Section 107 of the US Copyright Statute, 17 use § 107.

counterparts can be traced ultimately in the policy preoccupations of their respective courts. The provision for fair dealing in the Indian Act is brief and does not define the meaning or the application of the defence. The provision for fair use in the American Act, on the other hand, is more elaborate, culminated from extensive judicial reflection. The American Act is flexible and open for further advancement and is so intended by its legislators. Indian legislators, desiring certainty, have chosen the conservative approach and the Indian judicial jurisprudence is reflective of this approach.

Circumvention of Digital Rights Management System

Section 1201 of Title 17 of the United States , "circumvention of a technological measure" means to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner.

The court of appeals specifically examined the question of **whether circumvention of CSS was permitted where done to aid in a fair use of motion pictures on DVD video disks.** Interpreting Section 1201(c)(1), the court concluded that the DMCA targets the circumvention of digital protections through its anti-trafficking provisions, but does not concern itself with the use of the content after circumvention has occurred. It rejected the notion that Congress intended to permit "fair use" circumvention. Finally, the court disagreed with defendants' position that the DMCA was unconstitutional insofar as it eliminated the ability to make fair use of copyrighted works protected by access control; the court found that the fair use doctrine did not guarantee that anyone would have access to copyrighted material.

RealNetworks, Inc. v. Streambox, Inc.:[447] An earlier decision involved a suit brought by RealNetworks under Section 1201(a) and Section 1201(b). RealNetworks had developed a content delivery system that permits rights holders to encode their works in a digital form, and then communicate them, using the RealServer, via a secure method to consumers. Consumers must use a RealPlayer to access the works. Together, the RealServer and RealPlayer allow for streaming, but not copying, of works using both an authentication sequence and a copy switch (which allows the rights holder to determine whether copying is authorized or not). Streambox had developed a product that substitutes for the RealPlayer and tricks the RealServer into thinking that

[447] 2000 U.S. Dist. LEXIS 1889 (W.D. Wash. 2000).

proper authentication had occurred; the product does not respond to the copy switch, so that consumers can record streamed content.

The court concluded that the authentication was a technological measure that effectively controls access, within the meaning of Section 1201(a). The copy switch, when used with the authentication, was a Section 1201(b) technological measure because it enabled a rights holder to control consumer copying. Accordingly, the court granted the injunction against the distribution of the product, finding that it was primarily designed to circumvent both access control and copy control technological measures and had no other commercially significant purposes. The parties reached a settlement in September 2000.

Sony Computer Entertainment America, Inc. v. GameMasters, Inc.:[448] An early decision, rendered shortly after enactment of the DMCA, found that a product sold by the defendant violated Section 1201(a)(2)(A). Sony's PlayStations are designed so that they authenticate video games; each video game has a region code that must match the geographic location in the game console before the game can be played. The defendant's product plugged into a Sony PlayStation console and enabled a consumer to play imported or non-territorial video games. The court enjoined the product because it found that its primary function was to circumvent the region coding authentication function.

United States of America v. Elcom, Ltd.:[449] Dmitry Sklyarov, a Russian programmer, was indicted for violating the DMCA's anti-trafficking provisions. As an employee of the Russian company Elcom, he created software that decrypted the Adobe eBook security software, which both allowed users to read eBooks in multiple formats and allowed them to copy eBooks. Elcom moved to dismiss the indictment, challenging the DMCA on various constitutional grounds, including that Section 1201(b) was unconstitutionally vague, that the section restricted the content of its speech and that it curtailed third parties' rights to engage in fair use of copyrighted material. In May 2002, the district rejected each of these claims and denied Elcom's motion. Echoing the decision in *Corley*, the court concluded that even if the DMCA directly regulated constitutionally protected expression, it did not affect the public's right to use either public domain or copyrighted works because it affects only the ability to access and use particular copies of those works.

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448 87 F. Supp. 2d 976 (N.D. Cal. 1999).
449 203 F. Supp. 2d 1111 (N.D. Cal. 2002).

Various other cases are pending with respect to the interpretation and application of the DMCA. In one case, a software manufacturer is seeking a declaratory judgment that software that enables the copying of DVD video disks does not violate the anti-circumvention provisions of the DMCA.[450] One of the most interesting developments in the United States of America is that the DMCA is now being interpreted broadly to prohibit circumvention of non-DRM technologies that manufacturers use in various industrial applications, with the effect that competitors and their products are prevented from having access to a computer code that a manufacturer may use for purposes of authenticating that only its products are being used by a consumer.[451]

Given the relatively recent adoption of the Copyright Directive and that it has not yet been transposed by most of the Member States into their national laws, it is not surprising that there is not yet significant case law applying the anti-circumvention provisions. Cases have interpreted existing national laws, however, to prohibit certain types of circumvention devices.

Sony Computer Entertainment v. Owen:[452] In the United Kingdom, for example, Sony Computer Entertainment brought suit against various defendants, who imported "modification chips" that could be used to circumvent copy protection and region-control technologies on PlayStation 2 discs. The facts raised were substantially identical to those at issue in the earlier *GameMasters* decision in the United States of America.

The English court relied on a copyright-based cause of action set out in Section 296 of the Copyright, Designs and Patents Act 1988. Section 296 applies where copies of a work are issued in an electronic form that is "copy protected" and gives rights to the distributor of the copies–as if he were the copyright owner in an action for infringement–against any person who sells a device that is "specifically designed or adapted to circumvent" copy protection, knowing that the device will be used to make infringing copies.453 "Copy protected" is defined to include "any means intended to prevent or restrict copying of the work." The court found for Sony because the copying that was

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450 321 Studios v. Metro-Goldwyn-Mayer Studios, Inc., No. C-02-1955 (N.D. Cal., filed April 23, 2002).

451 See, e.g., Lexmark International, Inc. v. Static Control, Components, Inc., 253 F. Supp. 2d 943 (E.D. Ky. 2003) (order granting preliminary injunction) (access to printer engine program involves authentication sequence between printer and toner cartridge).

452 [2002] EWHC 45 (CH).

453 Copyright, Designs and Patents Act 1988 (c. 48), s 296(2).

to be prevented was the unauthorized loading of the game into the computer and because the codes on the discs fell within the definition of copy protection. The defendants violated Section 296 because their chips were specifically designed to circumvent Sony's copy protection technology.

In India, New sections were proposed to be inserted into the Copyright Act 1957, to protection of rights management information, India's Copyright (Amendment) Bill 2010[454] suggesting that "Any person who circumvents an effective technological measure applied for the purpose of protecting any of the rights conferred by this Act, with the intention of infringing such rights, shall be punishable with imprisonment which may extend to two years and shall also be liable to fine." What was being allowed? Breaking DRM was not prohibited as long as it was encryption research using a lawfully obtained encrypted copy; or conducting any lawful investigation; or testing the security of a computer system or network, surveillance or identification of a user or for "national security".

The Indian Copyright Law has not been amended to implement the anti circumvention provisions under the WCT and WPPT. Therefore, there are no provisions that prohibit circumvention of digital rights management systems in India.

[454] (Ref: Clause 36: Section 65 A and Section 65 B).

CHAPTER VI
CONCLUSION AND SUGGESTION

The reasons for the rampant digital piracy:

1. Current laws are lagging behind and need to be revised and adapted for the development of modern communication technology and copyright industry. The connotation and extension of the right to communicate through information network need to be adjusted. Provisions regarding the right to reproduction need refinement. Reprinting between websites and between website and tradition media needs authorization, which does not meet
2. Copyright awareness and society responsibility awareness, especially that of the whole industry needs to be strengthened. Lack of credit system. Arbitrary interpretation of law. Abuse of safe harbor. Disregard of liability.
3. The channel for copyright authorization is not smooth, and the procedures of authorization are not standardized. The legitimate interest of copyright owners can not get basic protection or effective maintenance, especially the economic rights. These cause frequent occurrence of copyright disputes and become important factors that hinder the development of publishing industry.
4. Right holders' consciousness of authorization and rights safeguarding is weak. The cost for right safeguarding is high in digital environment. Many authors are not able to safeguard their rights
5. There's considerable space for copyright collective management societies to develop. They can contribute more in meeting the users' need for massive authorization, promoting related industries and safeguarding legitimate interests. The government should support their development. More understanding and support from the public is needed.
6. Copyright administrative enforcement should be strengthened.
7. The ability of copyright creation, operating, managing and maintaining should be improved.
8. Lack of cross-border talent.

Copyright Protection of Databases

1. There is no express legislation in India dealing with database protection. Although the Personal Data Protection Bill was introduced in Parliament in 2006, it is yet to see the light of the day. The bill seems to be based on the general framework of the European Union Data Privacy Directive, 1996. It follows a comprehensive model with the bill aiming to govern the collection, processing and distribution of personal data.
2. Data protection is aimed at protecting the privacy of information pertaining to individuals; while database protection has an entirely different function, namely, protect creativity and investment in the compilation, verification and presentation of databases.
3. The Copyright Act, 1957 protects works under literary, dramatic, musical, artistic and cinematographic categories. The term 'literary work' includes computer databases as well. Therefore, copying a computer database, or copying and distributing a database amounts to infringement of copyright for which civil and criminal remedies are available
4. The Information Technology Act, 2000 was recently amended to meet challenges in cyber crime. It has introduced two important provisions that have a strong bearing on the legal regime for data protection.
5. These are Sections 43A58 and 72A.59 But the provisions pertaining to data security and confidentiality are still inadequate. The proposed amendments widen the liability for breach of data protection and negligence in handling sensitive personal information.
6. the purpose of a new database law should be to support commerce by offering a lead time to database producers for investing time, energy and capital;
7. a new database law should offer sui generis rights to non-original databases and copyright to original databases;
8. a new database law should offer a mandatory system of registration of database rights under a governmental authority which will oversee the commercial exploitation of database rights;
9. The governmental authority under a new database law should ensure that the quality and quantity of the public domain shall not be affected
10. The fair use exception should be the same as is available under copyright law (Section 52 of Indian Copyright Act);
11. a new database law should offer protection only to those databases which are created solely for commercial purposes;

12. private databases, non electronic databases, government databases and scientific and educational databases should be excluded;
13. There should be compulsory licensing for sole-source databases and lastly; (ix) the new legislation should offer protection for a short and limited period to gain a commercial head-start over competitors.
14. The importance of information and its protection so as to encourage more people to contribute the information reservoir cannot be overemphasized.

Copyright Protection of computer programs

1. It is proposed that 'computer programmes' and works of a like nature such as computer databases, compilations, tables etc. should be included within the scope of section 17(b) of the Copyright Act in order to confer the rights of a first owner upon the person on whose instance the computer programme was created for valuable consideration. This should be so unless there is an agreement to the contrary between the person at whose instance the work is created and the independent contractor.
2. It is further proposed that a specific provision be included within the scope of section 17 of the Copyright Act, stating that the ownership of the copyright in literary works created by an independent contractor shall vest with the independent contractor and not the person at whose instance it has been created for valuable consideration, unless a written assignment agreement to the contrary.
3. Copyright legislations in several developed jurisdictions expressly differentiate provisions for the treatment of 'commissioned work', 'works made for hire', works created by an employee and works created by an independent contractor. Certain legislations also provide that the commissioning party would be the 'first owner' of the copyright in a computer programme.
4. The definitions in §101 of the Copyright Act of 1976 of the United States of America (as amended from time to time) detail the concept of 'work made for hire', and clearly makes a distinction between work prepared by an employee within the scope of his employment and work prepared under commission by an independent contractor. Accordingly, ownership of copyright in work made for hire vests with the employer of the work or, in specific circumstances, the commissioner of the work. However, for work commissioned to an independent contractor, the commissioning agreement between the parties should explicitly state that the work is

made for hire, in order for the commissioner to be considered as the first owner of the copyright for such work

5. Amendment to section 17 (b) of the Copyright Act to include works in the nature of 'computer programmes' within the scope of the section.
6. Incorporation of a subclause to section 17 of the Copyright Act to specifically provide the requirement of a written assignment agreement for the vesting of copyright ownership in commissioned works created by independent contractors in favour of the person whose instance the work is created for valuable consideration.

Jurisdiction in Cyberspace

1. Until better, more predictable laws regarding jurisdiction in cyberspace are enacted (if ever), business owners face a conundrum. On the one hand, if you do not conduct business on the Internet, you risk being left behind by your competitors. On the other hand, using the Internet for business may empower a court in a distant place to acquire jurisdiction over you. You also risk violating laws that you could not easily know even exist.
2. Based on the cases decided to date, if you take some or all of the following steps you might avoid a court's jurisdictional power at least in certain instances:
3. The jurisdictional issues, particularly those relating to copyrights in cyberspace, are not easy to handle. The legal system of each nation reacts differently to these violations, At international level various treaties and reciprocal arrangements have been adopted to deal with these violations of copyright. These will definitely help in providing strong and effective copyright protection to their owners. The ultimate success of these laws and arrangements would , however, depend on the pro-active role played by by the judiciary of the respective nation. if the judiciary recognizing the need of the hour ,takes copyright violations seriously ,then the chances of their future violations became normal., fortunately ,The Indian Judiciary has recognized this fact very well and is protecting the interest of the copyright owners in the most apposite manner. which is clearly reflected in the judgments given by it from time to time.

Fair use

1. The researcher suggest that the current fair dealing provision needs to

be amended to contain more grounds and permit for a flexible transformative clause which balances rights-holders concerns

2. There is an urgent need to update the fair dealing provision to keep in pace with Indian court decisions and international developments in favour of flexible fair use principles. This is particularly important to Internet and technology groups, whose very existence is owed to the innovation and creativity that such flexible legal doctrines permit. Indian court decisions have been in favour of a flexible fair use principle and several comparative developments on this front across various national jurisdictions have favoured the same, within the flexibility permitted by the Berne Convention's Three Step Test. Economic data and policy studies have shown the immense value that such flexibility in copyright law provides to the general public and industry; in the United States alone the economic contribution of industries benefiting from flexible copyright law principles such as fair use has been estimated to be worth $281 Billion as per the CCIA 2010 Study. India, with its crucial needs with respect to access to knowledge and growing innovation sector, deeply requires further promotion of flexibility in copyright law.
3. Amendment of Section 52(1)(a) of the Copyright Act to expressly add parody and satire to the list of illustrative permitted uses, and to add another clause allowing for other uses, including transformative uses, that do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the rights holder.

Circumvention of digital rights management system

1. Digital Rights Management symbolizes a set of tools and techniques that are used to manage and protect copyrights and IPRs of the owners of digital-content creators. It is used to restrict the duplication of digital content and to implement access rules based on a system that ensures only valid, authenticated users can use the content. DRM can be implemented in different ways for different kinds of content and scenarios. Example In your daily activities, you may have seen DRM in action in a PDF document where you are not allowed to print or select the text for copying, while your colleague in the next cubicle can do so. This is an instance where different users have been given different rights

to the file. Though a simplistic example, this is an appropriate implementation of DRM.[455]

2. Need of Digital Rights Management**:** The advent of digital media such as the Internet can make it easier to copy and distribute digital works. Potentially, these advances could greatly reduce copyright owners' costs of distributing copyright works. However, some copyright owners are reluctant to disseminate digital works because they are afraid that their copyright works will be immediately and widely infringed. This is where DRM comes in. DRM promises copyright owners a high degree of control over how works are accessed and used, even after the works are disseminated to users. Thus, copyright owners are interested in DRM because it will help them reduce online copyright infringement. [456]

3. The present Indian copyright Act 1957 is not geared to effectively protect works in the digital environment. Although some amendments have been proposed in Copyright (Amendment) Bill 2010, these are extremely rudimentary in nature, Even the few provisions in the Information Technology Act like s.65 (tampering with source code) and s.66 (hacking) are not copyright-oriented and end up providing a very narrow form of protection.
4. Anti-circumvention laws are particularly important to make digital networks safe for dissemination and exploitation of copyrighted materials.[457] The growth of the mobile entertainment industry in India that now transmits large amounts of digital content including games and music is just one of the several examples that exemplify the need for such laws in India.[458]
5. At the same time legislators must keep in mind that the object of anti-circumvention law was never to confer a new property right. It only seeks to "simply provide property owners with new ways to secure their property"[459]. Several authors have argued that anti-circumvention legislations instead have altered the contours of copyright law and

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[455] By Geetaj Channana and Siddharth Sharma, Digital Right Management at PCQuest Online Computer Magzine Latest Computer Technology News, Update on 8th May 2004.

[456] Puspanjali Jena & Dipak Kumar Khuntia, Is Digital Rights Management a Means to An End?, 7th International CALIBER 2009.

[457] Nimmer on Copyright (1999), para.12A-12.

[458] Sameer Pandit, 'Evolving an Indian anti-circumvention law: lessons from the United States and Japan' E.I.P.R. 2008, 30(6), 244-250.

[459] Chamberlain Group Inc v Skylink Technologies Inc 72 U.S.P.Q. 2d 1225 (2004).

disturbed the delicate balance between protecting the rights of authors and promoting the advancement and flow of information[460]

6. The researcher propose that section 65A and section 65B should be deleted from The Indian Copyright (Amendment) Act, 2012 in entirety, as the imposition of criminal and monetary liability could adversely affect consumers and entities engaged in creating copies of any copyright material into a format specially designed for persons suffering from any disability. At the very least, the clauses pertaining the criminal penalties should be deleted from these sections, and they should be amended to only place civil liability.
7. At the outset, while the WIPO Copyright Treaty and the WIPO Performances and Phonogram Treaty provide for the implementation of DRM in copyright law, it may be noted that India is not a signatory to either of these treaties and it does not have an international obligation to import or implement a DRM regime under its national laws.
8. DRM technology has been and remains detrimental to the overall growth of legitimate online businesses and more generally to the development of the online content market primarily because the imposition of DRM provides for restricted access to material legitimately purchased by consumers online, due to which consumers are more likely to prefer purchasing material without such DRM restrictions.
9. DRM has had the unintended consequence of furthering piracy by forcing consumers to seek out content without use restrictions, even if such content is not genuine, and further DRM technology has been and remains harmful to overall development of the online content market.
10. With the continued growth and development of the technology market in India, consumers will soon be able to access their content at all times and from a variety of devices which use differing formats. This fact essentially questions the need for DRM technology as a means to protect and enforce the interests of a copyright owner.
    - Deletion of section 65A from The Indian Copyright (Amendment) Act, 2012
    - Deletion of section 65B from The Indian Copyright (Amendment) Act, 2012
    - In the alternative: delete any mention of criminal penalties from sections 65A and 65B, and amend the sections to only provide for civil liability

[460] See Hammond et al., "Exploring Emerging Issues" (2002) 8 Texas Wesleyan Law Review 593, 593.

Plagiarism:

- The act of taking someone else's ideas and passing them off as your own defines the concept of "**plagiarism**". As it is shown by the growing educational concerns, plagiarism has now become an integral part of our digital lives as technology, with the billions of information it gives us access to, led to the exacerbation of this phenomenon.

- **1.Anti-Plagiarism**
  Anti-Plagiarism is a software designed to effectively detect and thereby prevent plagiarism. It is a versatile tool to deal with World Wide Web copy-pasting information from the assignment of authorship. The goal of this program is to help reduce the impact of plagiarism on education and educational institutions. At present, it distributes free software to detect plagiarism.

- **2.DupliChecker**
  DupliChecker is a tool 100% free to use. Just copy-paste, or upload your essay, thesis, website content or articles, and click 'search', and you'll get the analysis reports within seconds.

- **3.PaperRater**
  Paper Rater offers three tools: Grammar Checking, Plagiarism Detection and Writing Suggestions. It is a free resource that is developed and maintained by linguistics professionals and graduate students. It is absolutely free to use and it allows you to check for plagiarized parts in your students' essays.

- **4.Plagiarisma.net**
  Plagiarisma has a search box as well as a software download available for Windows. Users can also search for entire URLs and files in HTML, DOC, DOCX, RTF, TXT, ODT and PDF formats.

- **5.PlagiarismChecker**
  PlagiarismChecker.com makes it simple for educators to check whether a student's paper has been copied from the Internet. Users can also use the "Author" option to check if others have

plagiarized their work online. It is very easy to use as it does not require any download or installation.

- **6.Plagium**
  Plagium is a free plagiarism detection tool. It's very easy to use. All you have to do is paste in the original portion of text (max 250 characters) and hit "search. It is available in six languages and an Alert feature is also available.

- **7.PlagTracker**
  Plagtracker is another online plagiarism detection service that checks whether similar text content appears elsewhere on the web. It starts scanning all internet pages and more than 20 million academic works for any plagiarized copy. After scanning, you will receive a report with details about your work.

- **8.Viper**
  Viper is a fast plagiarism detection tools with the ability to scan your document through more than 10 billion resources, such as academic essays and other online sources, offering side-by-side comparisons for plagiarism. It's free and you can download it very easily. Just keep in mind that it requires a download. Just note that Viper is available to Microsoft Windows users only.

- **9.SeeSources**
  SeeSources is an online, automatic and free plagiarism checker. Choose MS Word in the formats (.doc/ .docx) or HTML in the formats (.htm) or text (.txt) or text document (max. 300kB, 1000 words). With "Start Analysis" the source search begins. You will be updated about the progress continuously, search takes about 1 minute per document.

- **10.PlagiarismDetector**
  Plagiarism Detector is a software especially designed keeping the growing content requirement over the internet in mind. Equally useful for teachers, students and website owners. It scans the documents and detects plagiarism and provides an instant report. Your content should not be in a specific format. You simply need to

copy/paste your content in the provided window and press search button. This is it!

- **11. PlagScan**
  PlagScan renders an easy and accurate alternative to check plagiarism and gather reports. Something that further enriches the user experience is its constant and excellent customer support services. Embellished with various lavish features, it also offers the option to customize its features as per one's requirements and ease of use. You can check the trial version before you jump to subscribing this.
  This is a highly recommended plagiarism detection tool for teachers, professors, and academic professionals.

- **12.Whitesmoke: The Best plagiarism checker tool for teachers**
  Whitesmoke is a very useful online grammar and language checker tool. The only reason it is here is it also has a very robust plagiarism checker feature. This software for detection of copied content sniffs away any duplicate content that could harm your site's ranking or online reputation. It is also a close competitor and a great alternative for grammarly plagiarism checker.

- **13. Article Checker:**
  Free from the compulsions of registration or subscription, it is a great pleasure to use the Article Checker with great ease. It does not even require uploading the file before checking. You can simply copy and paste the text and get it checked in seconds. It is one of the most convenient plagiarism checker tools to detect the duplication. One drawback that discourages some users is its dissatisfying results at times.

- **14. Small SEO Tools:**
  This site is unique in its own way. It is a platform where one can get several tools with highly lavish features. Besides providing a plagiarism detection tool, it also offers a host of other useful tools such the Article Rewriter, Keyword Position, Online Ping Website Tool, Backlink Checker, Backlink Maker, Link Tracker, Google PageRank Checker, Domain authority checker,Word Count Checker, Spell Checker tool, and many more. Although its

plagiarism checker is quite a basic type, the people love it as it is totally free of cost. Once you copy-text then paste in the given space and click the 'Check for Plagiarism' button, it would check the text in seconds. You can see the copied text in red.

- **15. Dustball**
  Dustball is a very popular copied content checker. It has no gimmicks and does what it needs to – checking for plagiarized content. The free version is effective for detecting any traces of unoriginal content but they have a paid version as well. The premium plagiarism checker version is also worth trying.

- **16. Copyscape**
  Detecting the redundant contents on your blog or website would be a matter of seconds with Copyscape. You can simply enter the URL of the site you desire to check or use the inbuilt Siteliner, and the Copyscape would bring forth how much of your content has similarity with the other websites or how much of your content has been copied. Removing the redundant content thus becomes easier, and you can also use the banners to scare away the content thieves. Siteliner can scan all your pages of your website to check for any copied trace or violation of content ownership of your website.

- **17.Search engine reports**
  This is one of online plagiarism detection software or tool as we can say, which checks for your copied traces of your content across multiple search engines. It checks for plagiarism and copied content across yahoo and Bing too. The logic behind it is that, it divides the text submitted by you into smaller bunches and checks for any similar content or review plagiarism of essay already published across the web.

- **18. Grammarly**
  Besides detecting the plagiarism issues of the texts, Grammarly also proofreads the entire text and offers the option to correct more than 205 types of grammatical errors. This tool can check plagiarism against more than 8 billion web pages in just a few seconds and instantly provides you the report. In the field of

plagiarism detection, it is considered to be one among the top plagiarism detection tools. It is also known as one of the best automated proofreaders and corrects the errors on an instant basis. If you are a professional content writer, it can be very helpful to get your text proofread and thereby eliminate the grammatical as well as the spelling errors. Also, you can help you a lot in enhancing your vocabulary.

Grammarly is by far the best plagiarism checker software along with grammar checker features.

- **Detect Plagiarism Online**

- **19.TurnItIn**

  Four UC Berkeley graduate students designed a peer review application to use for their classes — thus, TurnItIn was born. Eventually, that prototype developed into one of the most recognizable names in plagiarism detection.

  TurnItIn, which processed over 60 million academic papers in 2011, is accessible for a fee per educator. Free quotes are available on the website.

  Students can use TurnItIn's WriteCheck service to maintain proper citations and to access various writing tools. Teachers can ask students to submit their papers through the service as a first measure.

- **20. EVE2: Essay Verification Engine**

  The EVE plagiarism detection system is one of the older services on this list, having performed almost 150 million scans since its creation in 2000. It runs users $29.99 for unlimited use and includes a 10-day money-back guarantee.

- Avoiding plagiarism is important. It is important to properly concede to the contributions and information made by other people. It shows respect for their work, most importantly, you are giving credit where credit is due. You are not deceiving the person who reads it to falsely believe that the work is yours.

  From the point of view of what we have discussed about plagiarism here, there is a definite fact that plagiarism is found at the premier in academics. It is an increasing lure amongst students and an invariable complication for the Professors in dealing with the issue.

The academic community definitely values the acknowledgment of other people's contributions to knowledge. And therefore, the punishment for someone who gets caught for plagiarism could be severe.

- "The principal mark of genius is not perfection but originality, which marks the beginning of new frontiers."

Suggestions:

1. The Rights holders should take enough precaution to Protect copyright works, In case violations come to their notice, they should file complaints with the police. they should help the police in conducting raids and producing evidence during the trial by the court
2. Copyright societies should launch an extensive campaign through print and electronic media highlighting the adversities associated with the piracy. Lectures, seminars, workshops etc could be organized in schools, Colleges, universities and other places to create a consciousness among people against the evils of piracy
3. The law enforcement authority like police needs to be imparted proper training in copyright fields
4. A dedicated institute may be established as a nodal agency to deal with matters of copyright and other constituents of Intellectual Property Right ,particularly relating to education and training
5. The institution should offer regular courses on IPR and organize relevant timing programmes for all concerned with copyright
6. Copyright Office should publicize various activities like registration of Copyright works by authors, associations and general public through websites, blog, social networking sites.
7. The Software Copyright holders should adopt a corporate

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