purchase over 400000 Indian and international albums including the Warner Music repertoire from Sony DADC, digital downloads are currently not an option.

CHAPTER III

INFRINGEMENT OF COPYRIGHT IN SOUND RECORDING BY TECHNOLOGY: A STUDY OF THE EMERGING CHALLENGES

THE FRAME

Invention of movable type mechanical printing technology, credited to German printer Johannes Guttenberg in 1440, is considered to be a milestone in the development of copyright law. Before invention of printing press, there was little practical need for legal protection of authors. It is asserted that there is a symbiotic relationship between technology and copyright law. Technological advancement was the prime reason copyright law came into existence. However, with development of technology, newer modes of dissemination of copyrighted material came into existence. They facilitated easy copying and further distribution of the protected work. In turn, through this wider dissemination of works, the copyright owners started to have better reach to the consumers in the market. The way consumers can purchase and experience music is undergoing sea change. However, the flipside of the same technological advancement helped the counterfeiters and the pirates to make unauthorised copies of the protected materials and sell the same in the market at a reduced rate. This resulted in revenue loss to the concerned right holders. Emergence of internet has made the situation even worse. Now, it becomes absolutely impossible to trace the

individual violators of the copyright law. Technology, which was considered to be the ‘best friend’ of copyright has turned to be its ‘worst enemy’.

With the advance of technology, the modes of music dissemination has kept on shifting from time to time. Moreover, with the help of MP3 technology, digital music has brought a revolution in the music industry. However, the sales of music records started to drop with the rise of Napster and other peer-to-peer networks. This unauthorised dissemination of unlicensed music files worldwide has deprived the copyright holder from the licensed sales and has made infringement of copyrighted works very easy. The several lawsuits against the P2P networks and the claims for compensation for the loss rise from the substantial fall in sales from piracy. The consumers at the same time tend to pirate rather than buying a legal and licensed copy of the music. Technology is a two-edged sword. However the unauthorised duplication of protected works using the file sharing networks has resulted into largescale violation of copyright law, leading to economic losses to the film music industry.

THE FOCUS

This chapter is based on the very idea that technological advancement has augmented violation of copyright law and that has brought losses to the film music industry relating to sound recording. Considering this proposition, this chapter will study the relationship between technological growth and the consequent violation of copyright law in the sound recording. The chapter will narrow down its scope to understand the primary and secondary liability of the internet users in respect of copyright infringement. It will study the judicial precedents related to the liabilities of the online file sharing services for facilitating copyright infringement. Overall that the chapter will focus on how technological advancement has resulted in easy copying and distribution of copyrighted material and subsequently aided the counterfeiters and pirated in infringing the provisions of copyright law. This in turn has negatively impacted the concerned industries.

THE OBJECTIVE

The chapter firstly aims at studying the transformation brought to the music industry by way of emergence of digital music. The other objectives of this chapter include understanding the liability of the copyright infringement of both the internet users and service providers in the P2P and other

types of file sharing services. The statutory requirement for the imposition of the liability for copyright infringement and the concerned judicial precedents will be analysed elaborately. This chapter also intends to comprehend the behavioural attitude and various predisposition of users towards online sharing if music. Moreover, it attempts to analyse the implications of technological protection measures towards better protection of copyright both in online and offline medium. The central objective of the chapter is to identify the causal relationship between technology and copyright law, especially in respect of facilitation of copyright infringement in the film music industry.

The origin of copyright law lies in technology and copyright law always has a symbiotic relationship with technology. The emergence of printing press led to the enactment of legislation which granted copyright protection to the publishers. Whenever new means of copying or communicating copyrighted works are developed, the relationship between existing copyright laws and the use as well as dissemination of the copyrighted work by the latest technology always go through a constant flux. Technological progress have always influenced the structure of copyright law and has raised issues regarding the scope of the law. This gives rise to the question that "is a person who stores copyrighted music files on her computer in publicly accessible folders liable for infringing upon the copyright owner's exclusive right to distribute?"[179] The existing technologies have determined the functioning of the recording industry.[180] Technology has changed the delivery of music, the device through which the consumer consume music and also the consequent promotion of musical work. The technology related to production of music has evolved over a period of time. It began with sheet music followed by piano rolls, phonograph records, analogue tapes, compact discs and now MP3. Post 1990, the changes that have occurred to the business model of the music industry is entirely of a new dimension. This period has seen the advent of different new set of technologies: digitisation, data compression and the Internet.[181]

III.1. Technological development and copyright law

[179] Ben Depoorter, *Technology and Uncertainty: The Shaping Effect on Copyright Law*, 157 University of Pennysylvania Law Review, 1831, 1838-39 (2009).
[180] Joelle Farchy and Heritiana Ranaivoson, *DRMS: New Strategic Stake for Contents Industries: The Case of the Online Music Market*, 2 Review of Economic Research on copyright Issues, 53, 53-54 (2005).
[181] Ulrich Dolata, *The Music Industry and the Internet*, Discussion Paper, University of Stuttgart (2011).

In respect of copyright law, high rate of innovation and an inherently unpredictable outcome are the two chief characters of technological advancement. "Unpredictable and rapid innovation, fails copyright law to adopt with new technological advancements."[182] Ben Depoorter in the article, "Technology and Uncertainty: The Shaping Effect on Copyright Law" has identified certain factors which explains the response of copyright law to a new technological development.[183] First, time consuming law making process, including different procedural safeguards. Secondly, it becomes challenging for the lawmakers to foresee the form of technological advancement, because of unpredictable character of technological innovation. Thirdly, it becomes necessary to set open-ended standards in copyright law due to uncertain character of technological change. Finally, uncertain result on the future consequences of a new technology is one of the significant factors in this regard. Once the use of the latest technology becomes clear, then only the implications of the novel uses of copyrighted content becomes evident in the minds of the policy and law makers as well as the content owners.[184] Few decades ago, the copyright issue occupied the notice of no more than a few individuals in a world of media built around printing presses, celluloid film, record vinyl and analogue broadcasts. Copyright issues moved to centre stage in the policy arena with the advent of digital technology and the capacity of the Internet to move audio, video, text and numeric data from point to point in a short amount of time.[185] As digital technology developed further, cinema fans started to access movies at any hour, music fans began to download tunes from an historic catalogue, e-book purchasers replaced visits to libraries and bookstores with convenient downloads. Basically, introduction of personal computer, a machine that worked digitally rather than analogue media, changed the entire phenomenon.

If we think back to the world of 1980, then by now, in many respects it was an unimaginable world. There were no mobile phones, no text messages, and no emails. There was only the occasional music video on free-to air television, no MP3s, and no DVDs. CDs were still in the lab, soon to escape. Cable television was rare, there was no internet in every nook and corner except few elite places, the idea of a home computer was almost mystical, the average VCR weighed about ten

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[182] Ben Depoorter, *Technology and Uncertainty: The Shaping Effect on Copyright Law*, 157 University of Pennysylvania Law Review, 1831, 1838-39 (2009).
[183] Ibid.
[184] Ibid.
[185] MICHAEL A. EINHORN, MEDIA, TECHNOLOGY AND COPYRIGHT, (1st ed. 2005).

kilos and most important thing music was analogue and music sharing had not become such abundant.[186] An important consequence of the seismic shifts in the landscape of the music industry was the development of Compact Disk (CD). The Compact Disc, which recorded music digitally, was introduced about the same time as the personal computer. A decade later software publishers realised they could use CDs as a delivery medium for their applications. Instead of 10 or 20 floppy disks, a single CD could be used to store an entire program.

"One of the biggest inventions of the 20th century, Internet, spread its tentacles far and wide spanning the continents and helping humans reach out to teach other in a matter of seconds." Internet has enabled access to all the latest technologies. Now information dissemination has been digitalised. While this scenario has its own drawbacks. [187] Rapid technological progress has posed new concerns as far as law of copyright is concerned. The digitisation of creative content poses a more serious challenge to copyright law than did earlier episodes of technological advance. A digital music file can be disseminated easily worldwide over the Internet. This consequently causes a negative impact on the content owner in the form of revenue loss, which could have otherwise be derived from licensed sales.[188] Internet helps the content owners by ensuring a bigger market for their works; at the same time the other side of the coin makes the intellectual property susceptible to unauthorised use and dissemination. As a result, the copyright owner loses effective control over their protected work. One of the important feature of the digital goods is that it have comparatively higher initial production costs and very low reproduction costs, which is almost zero. They have characteristics of a public good. It implies that sharing the work with others does not amount to reduction a consumer's utility for the product. These feature of copyright protected work has resulted into illegal distribution of the protected content worldwide.[189]

Better internet connectivity and digital compression technologies have substantially raised online sharing of digitised material. Subsequently it raised concerns of intellectual property rights

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[186] CHARLES FAIRCHILD, POP IDOLS AND PIRATES: MECHANISMS OF CONSUMPTION AND THE GLOBAL CIRCULATION OF POPULAR MUSIC, 1 (1st ed. 2008).

[187] Priyambada Mishra and Angsuman Dutta, *Striking a Balance Between Liability of Internet Service Providers and Protection of Copyright over the Internet: A Need of the Hour*, 14 Journal of Intellectual Property Rights, 321, 321-22 (2009).

[188] The Congress of the United States, *Copyright Issues in Digital Media*, (Dec. 2014, 6 PM) see http://www.cbo.gov/doc.cfm?index=5738&type=1.

[189] Sudip Bhattacharjee, Ram D. Gopal and G. Lawrence Sanders, *Digital Music and Online Sharing: Software Piracy 2.0?* 46 Communications of the ACM, 108, 108-09 (2003).

violation and lost sales.[190] Especially, file sharing technologies, have augmented the dissemination of digital resources.[191] The conflict of interest between the music recording industry and the users of illegal sharing of music over the Internet has become a serious concern for the copyright holders.[192] Among the different file sharing technologies, Peer-to-Peer service has infringed the copyright of digital content to a larger extent. The major studies have attributed file sharing services to be the major cause for the recent decline in the size of the music industry.[193]

III.2. MP3, internet and transformation of the music industry

Approximately during the end of the 1990s, the technology oriented transformation of the music industry, to a greater extent, was modulated by two technological developments. This transformation established the ground, which led to loss of control over the content, owned by the music industry. Around in 1983, compact discs entered the market. CD recorders and writable CDs were introduced in the market in the second half of the 1990s made it possible to copy digital media from physical recording devices without any loss of quality. No restrictions existed on the use and dissemination of these copies. Afterwards, data-compression software in open format MP3s facilitated file sharing of music online. It also helped in the converting music data onto CDs. However, the content owners in the music industry did not anticipate these two technological advancements. The possible future potential of the combination between MP3 technology and the Internet were perceived lately.

III.2.i. MP3: Origin of music file sharing activity

Among many other novel technologies, MP3 compression software is one of the most significant while discussing the development of copyright law. Out of different content industries, dissemination of data in digital has affected the music industry most.[194] Increasing use of MP3

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[190] Id., p. 107.
[191] Rong-An Shang, Yu-Chen Chen, Pin-Cheng Chen, *Ethical decisions about Music Files in the P2P Environment*, 80 Journal of Business Ethics 349, 349-50 (2008).
[192] David Buch, *The Double Punch of Law and Technology: Fighting Music Piracy or Remaking Copyright in a Digital Age?* 6 Business and Politics, 22 (2004).
[193] Steven Lysonski and Srinivas Durvasula, *Digital Piracy of MP3s: Consumer and Ethical Predispositions*, 25 Journal of Consumer Marketing, 1 (2008).
[194] Maria Anestopoulo, *Challenging Intellectual Property Law in the Internet: An Overview of the Legal Implications of the MP3 Technology*, 10 Information and Communication Technology Law, 320, 321-22 (2001).

technology is one of the most remarkable development that the music industry has ever seen. The use of MP3 movement started not with the industry itself, but with a huge audience of music lovers on the Internet.[195] However, the introduction of the cassette or the CD in the music industry did not happen in this fashion. The music enthusiast's access to music has been enabled by the MP3 technology. According to the most recent annual statistics available from Google, the most popular search engine as of today, "MP3" was the 10th most popular search term queried among the billions of searches in 2004 (Google, 2004).[196] MP3 technology has brought revolution in digital music platform by making music. MP3 player has restructured the music business industry in the following ways: (1) restructuring music as an online product, which facilitates better collection or archiving of music; and (2) extending the musical work from private to public zones, making music pervasive in everyday life.[197]

III.2.i.a. Music as a Digital Good

Digital products are described as "any form of information that has some meaning and does not need a specific physical exchange media to be carried from the producer to the consumer." Most of the intellectual products, such as, music, software, videos, books, maps, news etc. are potential candidates for digital products. All these contents that can be transformed into digital format and disseminated over the internet from the developer to the user. One the products reach the user, the digital products can be transferred to other physical means of support. For instance, music can be burned in CDs or uploaded to digital audio players. Two standards have been found when the business model comprises of digital goods. Digital products have features which makes the product immune from destruction. The other trait is 'transmutability'. This trait helps the consumers to make easy changes on the products and lastly reproducibility. Digital format of music enables easy and convenient copying or reproduction. Consequently, it reduces the marginal cost to almost

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[195] Raman Mittal, P2P Networks: Online Piracy of Music, Films and Computer Software, Journal of Intellectual Property Rights, Vol. 9, September 2004, pp. 440-461 at p. 440.

[196] SAMEER HINDUJA, MUSIC PIRACY AND CRIME THEORY, 3 (1st ed. 2006).

[197] David Beer, *The Iconic Interface and the Veneer of Simplicity: MP3 players and the reconfiguration of music collecting and reproduction practices in the digital age*, 11 Information, Communication and Society, 71, 73-74 (2008).

zero.[198] Moreover, MP3 technology has enabled music as a potential candidate for online and digital goods and has brought revolution in digital music phenomenon.

III.2.i.b. "Moving Pictures Expert Group Audio Layer-3" or "MP3"

The full form of MP3 is MPEG-1 Layer Audio 3. It is a technology and format by which a sound sequence is compressed into a very small file. After compressing, while playing the song the original level of sound quality is maintained. The process of compression includes systematic removal of sound waves outside the human audible range so that no significant change in the sound quality is observed. MP3 is an encoding technology, which compresses a digital music file by a ratio of approximately 12:1 and in this way reduces the original size of the file. In Germany, at the Fraunhofer Institute Integrierte Schaltugen, MP3 was developed in 1987. The project was named as EUREKA (EU417). In the University of Erlangen, Professor Dieter Seitzer assisted in development of the project. Subsequently, this was known as ISO-MPEG Audio Layer-3 standard. MPEG stands for Moving Pictures Expert Group. It was subcommittee which developed the MP3.[199] The concept of digital distribution has been enhanced by MP3 technology. Through this technology the computers are connected to the internet through cable rather than modem, increasing the speed at which files can be transferred.[200] The compression technique is one of the convenient method of music dissemination over the Internet for two reasons. Firstly, low cost of compression, and secondly, the conversion of a music file to MP3 format is made without compromising the quality of original sound recording.[201] Therefore, it can be asserted that MP3 reduces the amount of digital information required to store music by encoding the data more efficiently and lopping off bits that your ears would not really miss. This entire process is referred to as compression.[202]

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[198] Americo Nobre G. F. Amorim and Jairo S. Dornelas, *P2P Users: Important Dimensions for Changing to Legal Online Music Stores*, Project E-Society: Building Bricks 228, 229-30 (2006).
[199] Raman Mittal, *P2P Networks: Online Piracy of Music, Films and Computer Software*, 9 Journal of Intellectual Property Rights, 440, 441-42 (2004).
[200] Peter J. Alexander, *Peer-to-Peer File Sharing: The Case of the Music Recording Industry*, 20 Review of Industrial Organisation, 151, 152-53 (2002).
[201] Maria Anestopoulo, *Challenging Intellectual Property Law in the Internet: An Overview of the Legal Implications of the MP3 Technology*, 10 Information and Communication Technology Law, 320, 321-22 (2001).
[202] David Beer, *The Iconic Interface and the Veneer of Simplicity: MP3 players and the reconfiguration of music collecting and reproduction practices in the digital age*, 11 Information, Communication and Society, 71, 73-74 (2008).

The emergence of MP3 technology led to the creation of many Internet sites and they allowed the users for to download music without charging any price for the same. High-speed Internet connections, particularly on many university campuses made the MP3 technology the most convenient method of being involved the era of digital music. Consequently there was exponential demand for MP3 music files on the Internet. With this development, the music industry experienced massive circulation, distribution and downloading of digital music in the MP3 format by the consumers around the world.

III.2.ii. Music file sharing via P2P network

"The information and communication technologies (ICT) and micro-electronics, including the emergence of a digital technological paradigm, has changed the economic status of creative expressions, such as music."[203] On the one hand the internet has facilitated transfer of music files and it has benefitted the music copyright industries.[204] However, on the other side of the coin, internet and the introduction of high speed or broadband access for domestic consumers together with the widespread availability of hardware for the making or storage of digital copies of sound recordings have made it possible for the individual consumers not only to make unauthorised copies with ease but also to distribute them in unimaginable quantities at negligible cost. The so-called 'file-sharing' or 'peer-to-peer' networks made it possible for millions of individuals to exchange copies of sound recordings.[205]

III.2.ii.a. Fundamentals of P2P Networks:

The term '**Peer-to-peer'** (**P2P**) refers to a computer network, where each performs the role of a server for the other computers in the network. This network permits shared access to digital files without requiring a central server.[206] In P2P network, the connected computers in the network through software transmit audio, video, data or anything in digital format to other connected

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[203] Birgitte Andersen and Marion Frenz, *Don't blame the P2P file-sharers: the impact of free music downloads on the purchase of music CDs in Canada*, 20 J. Evol. Econ. 715, 716-17 (2010).
[204] Bob Clark, Illegal downloads: sharing out online liability: sharing files, sharing risks, Journal of Intellectual Property Law and Practice, 2007, Vol. 2, No.6, p. 402
[205] KEVIN GARNETT, GILLIAN DAVIES AND GWILYM HARBOTTLE, COPINGER AND SKONE JAMES ON COPYRIGHT, 688 (15th ed. 2005).
[206] *Peer-to-peer* (Dec. 14, 2014, 7 PM) http://en.wikipedia.org/wiki/Peer-to-peer.

computers. Napster and Gnutella are the premier examples of this type of P2P software.[207] Sharing of unlicensed music files over the P2P network has been regarded as one of the chief reason in rising piracy over the Internet. P2P networks permits anonymous file sharers to share unauthorised music files, infringing the copyright over the same. Consequently, this has caused significant pecuniary loss in revenue to the entertainment industry.[208]

In the essay, 'A Bipolar Copyright System for the Digital Network Environment', Alexander Peukert has attempted to identify the implications of these P2P networks in the context of the media and entertainment industry: "Peer-to-peer networks provide architecture for stable, cheap and global sharing of any digitised information, be it music, movies, software, writings or other data. The end-to-end or peer-to-peer architecture makes it possible for thousands of terabytes to rush through P2P networks every month without anybody having to invest in and provide for a centralised server……. It terrifies copyright owners to definitely lose control over their works, which for the user of these networks actually seem to be 'free as the air to common use."[209]

III.2.ii.b. Premier file sharing programs and applications:

Downloading and sharing of files through peer to peer file sharing networks & programs has grown to tremendous level. The leading Peer-to-peer file sharing programs and applications are described hereunder:

- ***Napster:***

Shawn Fanning, a 19-year-old freshman at Boston's North-Eastern University in 1999 developed a software application that married file-sharing and Internet searches with instant messaging, and thus solved the problem of finding MP3s on the Internet. He named his program Napster (his college nickname).[210] The idea that Fanning had was to create a music community site where fans of bands or singers could go, chat and share music with each other. The file sharing aspect of

[207] Raman Mittal, *P2P Networks: Online Piracy of Music, Films and Computer Software*, 9 Journal of Intellectual Property Rights, 440, 441-42 (2004).
[208] Rajeev Prasad, *Piracy over Peer-to-Peer Based on Personal Network*, 37 Wireless Personal Communication, 221, 221-22 (2006).
[209] ALAIN STORWEL, PEER-TO-PEER FILE SHARING AND SECONDARY LIABILITY IN COPYRIGHT LAW, 25 (1st ed. 2009).
[210] JOHN GANTZ AND JACK B. ROCHESTER, PIRATES OF THE DIGITAL MILLENNIUM: HOW THE INTELLECTUAL PROPERTY WARS DAMAGE OUR PERSONAL FREEDOMS, OUR JOBS AND THE WORLD ECONOMY, 174 (1st ed. 2005).

Napster did not seem to hold primacy in Fanning's original design, rather than his focus was on creating a music community, but as a part of his design he included the ability for users to directly swap MP3 files with each other. In so doing, he created the first fully functional peer-to-peer protocol, the Napster protocol.

Napster is a software program which allows its users to locate and share MP3 files. It is now being regarded as the company that precipitated the digital technology revolution. Napster technology incorporates a centralised or server based Peer-to-peer network. Servers stores data and applications that personal computer can access. There is a central list of information that is accessed by all users of the system. With Napster, individual people started to store files that they wanted to share MP3 music files on their hard disks and shared them directly with other people. In Napster, MP3 files are distributed differently. Instead of storing the song files on a central computer, the songs were stored on user's machines. When a song is to be downloaded using Napster, it is downloaded from another person's machine and that person could be the next-door neighbour or someone halfway around the world.

To explain the contribution of the Napster protocol we need to examine the distinction between Peer-to-Peer file sharing and traditional server-client file systems. Fanning described the difference between client server networks and the Napster network by using an analogy of attending a party. In the client-server party each guest turns up empty handed to the party and all the food and drink is supplied by the host. To get a drink you must ask the host to supply it and you can only have what the host has supplied. Your host may be efficient but he has to serve everybody and you must have to wait in a queue. At a Napster party all the guests bring their own food and drink. There is still a host but all he does is greets you at the door and takes a note of what you have brought. Then anytime anyone wants a drink they can ask the host who has brought a particular product. The host can check his list and put them in touch with the right person and they can exchange drinks directly with each other.[211]

- **Gnutella:**

[211] ANDREW MURRAY, INFORMATION TECHNOLOGY LAW, 237 (1st ed. 2010).

After the downfall of Napster, Gnutella emerged as a major P2P service. This network had no central server maintaining 'direct file listings' of all the music files. Gnutella contained couple of clients including: BearShare, Cnucleus, LimeWire, Morpheus, WinMX, XoloX. The P2P services that came into existence after Napster P2P services did not contain any central server, which gave access to direct file listings of all these music files and this made enforcement very tough. In Gnutella, the users did not rely on any other server for sharing of the content. This was not the case with Napster and posed a serious challenge against the legal system.

There are certain similarities between the operation of Gnutella and Napster. Firstly, in both the cases the sharers put the files on their hard disks and make them available to everyone else for downloading in P2P fashion and secondly users run the pertinent software to connect to the respective network. However, to have access the Gnutella network different client applications are required. On the other hand, Napster had one piece of client software that users used to connect their computers to the Napster network.

- **Kazaa:**

It is one of the latest versions in the P2P technology. It was originally established in the Netherlands. Kazaa network is built on a technology called the first-track technology. By using Kazaa the downloading runs much faster and is highly reliable. Kazaa allows the user to even pause downloads and resume them later on.

- **BitTorrent:**

BitTorrent is a new peer-to-peer protocol designed by programmer Bram Cohen to facilitate the exchange of files between users.[212] Instead of facilitating links between two networked nodes as traditional P2P services, such as Napster and later, Kazaa and Morpheus have done. Different chunks of the same file can be distributed by multiple nodes. After 20 million downloads, BitTorrent now accounts for more than one-third of all internet traffic.[213] Besides the above mentioned popular programmes, there are certain other P2P based networking programmes which

[212] SAMEER HINDUJA, MUSIC PIRACY AND CRIME THEORY 21 (1st ed. 2006).
[213] Paul Ganley, *The Internet, Creativity and Copyright Incentives*, 10 Journal of Intellectual Property Rights, 188, 192-93 (2005).

offer free sharing of digital music files and they are - Soulseek, Ares Galaxy, KCeasy, eMule, iMesh, Shareaza, Piolet, Overnet, etc.[214]

III.3. MP3 usage and copyright infringement

Initially the use of MP3 was encouraged by a website, MP3.com. Any user was able to upload a song. The songs which were available on MP3.com were mostly public domain songs. The other songs found on the website were those, uploaded by upcoming artists in search of exposure. The remaining available songs were the ones released by record companies trying to build interest in a CD. MP3 emerged as a dominant instrument in respect of dissemination of music over the internet.

Several MP3 sites, both legal and illegal, are existing on the internet. One of the earlier search engines to locating MP3 files is Lycos. Most of these files can be downloaded free of charge. All the MP3 distributors can be divided into two categories: legal and pirated. For instance, 'GoodNoise' is a legal internet record company which do not infringe copyright. The pirated sites pose greater concern to the major record labels, as they are responsible for dissemination of unlicensed recordings of copyrighted material in MP3 file format.[215] A CD Ripper encodes a music CD and converts it into an MP3 file. This encoding or 'ripping' will not come under the purview of copyright infringement, when the use of such music procured in this manner is exempted under the provisions of the Copyright Act, 1957. When without the copyright holder's permission, the MP3 files are uploaded to the internet and the copyrighted protected work is communicated to the public, the legality of such activities are challenged under copyright law.

III.3.i. Liability of file sharing services:

File sharing is the most litigated area in respect of determination of liability for online copyright infringement. Every digital file is reduced into a tangible form, either on a hard drive, CD and hence qualify for being protected under copyright law. Moreover, the transmission of a file from one person to another amounts to reproduction or distribution for the purpose of copyright law.

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[214] *Top 20 best peer-to-peer file sharing programs application software*, (Oct. 14, 2014, 10 AM) http://www.blogsdna.com/923/top-20-best-peer-2-peer-p2p-file-sharing-programs-applications-software.htm.

[215] Mark Carey and David Wall, *MP3: The Beat Bytes Back*, 15 International Review of Law, Computers & Technology, 35, 36-37 (2001).

"P2P networks are harbingers of copyright violations costing the music, industries millions of dollars in lost revenue, through illegal sharing of content."[216]

In IFPI's Digital Music Report 2008, it was estimated that online music sales have increased from zero to an estimated US $2.9 billion. This record also indicated "tens of billions of illegal files were swapped in 2007 and the ratio of unlicensed tracks downloaded to legal tracks sold is about 20 to 1." In 2007 Italy's "Luigi Einaudi Foundation" reported that 30% of peer-to-peer users bought fewer CDs and DVDs, while 6% said they bought more CDs. In the same year in Australia it was reported that 57% of P2P downloaders rarely or never purchase the music they download. All this data suggest straight substitution of legitimate sales. Around 80% of ISP traffic still comprises distribution of copyright-infringing files. Expansion of broadband, particularly in developing markets like China, Southeast Asia and Latin America, is driving an increase in unauthorised file sharing on P2P networks.[217]

III.3.i.a. Copyright Infringement Liability of Internet Users in the P2P System - Direct Infringement

Increasing use of internet and other online services has posed the question regarding how traditional copyright rules will adapt to the rising online activities. Copies are now stored, transmitted and used electronically – sometimes even temporarily. Article 9 of the Berne Convention, which talks about the reproduction right, is applicable to the use of works in digital form. Law of copyright includes the very act of 'making available' copyrighted material for access on the Internet.[218] It is found internet user share copyrighted material on the Internet over file-sharing services without authorisation. Judiciary across the globe have issued judgements against music 'file-sharers'.

In Polydor Ltd. v. Brown,[219] it was observed that "connecting a computer to the Internet which is running P2P software in which music files are placed in a shared directory falls within this infringing act." This is regarded as a primary act of copyright infringement. Whether the person

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[216] Ankur Gupta, *Conscience Based Routing in P2P Networks: Preventing Copyright Violations and Social Malaise*, (Dec. 15, 2014, 5 PM) http://www.springerlink.com/index/H8M0V7H136N41251.pdf.
[217] ALAIN STORWEL, PEER-TO-PEER FILE SHARING AND SECONDARY LIABILITY IN COPYRIGHT LAW, 44 (1st ed. 2009).
[218] WIPO Copyright Treaty, 1996 § Art. 8; WIPO Performance and Phonogram Treaty, 1996 § 10.
[219] [2005] EWHC 3191 (Ch).

intended to infringe the copyright in not relevant in this regard. In a P2P network users can access or download information through their P2P shared directory. Thus, over the Internet, each P2P users are considered as the direct infringer of copyright.[220] The direct liability of the users under the Indian Copyright Act, 1957 arises from a conjoint reading of Section 14 of the Act provides meaning of Sec. 51 (a) (i) of the Act.

III.3.i.b. The P2P tool maker: "contributory" and "vicarious" infringement - Indirect infringement

In P2P network, the developer of the network does not involve directly in the copying and dissemination of the files being shared. Sometimes, the liability under copyright law extends beyond the liability of direct infringer. For instance, if an owner rents his or her space to a vendor with the knowledge that the vendor sells counterfeit CDs, the owner will be held liable for copyright infringement along with the vendor. This indirect, or "secondary," liability is divided into two categories: contributory and vicarious.

The liability for contributory infringement liability is derived from law of torts. The liability is based on the principle that the person who aids or contributes to the infringement of another person, bears a secondary liability. The rationale behind imposing contributory copyright is to assist the owners of copyrighted content to identify and sue the root cause of numerous infringements,' instead of tracing the 'multitude of individuals' for infringements.[221] Under Indian Copyright Act, 1957, P2P file sharing service can be held to be liable for secondary liability under Section 51(a) (ii) of the Copyright Act, 1957. Sec. 51(a)(ii) provides that a person who permits any place to be used for communication of work to the public for profit and where such communication constitutes an infringement of copyright in the work, shall be liable for copyright infringement. To impose contributory infringement liability, two definite elements are required to be present. They are as follows:

(a) Knowledge or Intent on the Part of Infringer:

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[220] Jianhong Zhou, *Exploration and Analysis of Copyright Infringement Liability in P2P System*, (Nov. 6, 2013, 7 PM) http://www.springerlink.com/index/P03U16X87T386KV0.pdf.

[221] J M Moye, *How Sony survived: peer-to-peer software, Grokster and contributory copyright liability in the twenty-first century*, 84 North Carolina Law Review, 646 (2006).

In order to constitute contributory infringement, it is necessary to establish 'specific' knowledge or the intent of the infringer. The secondary infringer should 'know or have reason to know' of direct infringement to bear secondary liability. Not general knowledge, but actual and constructive knowledge is required to be proved.

(b) Material Contribution:

The third party should have materially contributed to the primary infringement. It is required to be established that whether an integral service was provided by the defendant to the infringer, which assisted the infringer to infringe the copyright. Moreover, it is also examined whether the defendant merely acted as a 'passive conduit' enabling the infringing activity.

Gershwin Publishing Corp. v. Columbia Artists Management Inc.[222] is one of the earliest authority in the context of secondary infringement. In this case it was required to be determined when musicians played copyright-protected work at the promoter's concerts without taking the necessary public performance license, whether the concert promoter should bear liability for contributory infringement. Since Columbia Artists Management Inc. had the knowledge that copyright protected works were being communicated to the public at the Port Washington concert and the local association or the performing artists did not procure a copyright license, The Court of Appeals held that Columbia Artists Management Inc. should be liable for contributory infringement.

Another important authority in this context is the famous 'Sony Betmax' case. In ***Sony Corporation of America v. Universal City Studio Inc.***[223] it was argued that the Sony Betamax VCR was a device which could be used to infringe copyright in their content and that Sony by knowing what use their customer would make of the device were secondarily liable for any primary infringement carried out by their customers, This secondary infringement claim was made under the US copyright principles of vicarious and contributory infringement. It was alleged that VCR consumers had recorded and exhibited on commercially sponsored television the copyrighted works of Universal City Studio Inc. and therefore the respondents' copyright. This case was

[222] 443 F 2d. 1159.
[223] 464 U.S. 417 (1984).

dismissed by the District Court. However, the Ninth Circuit reversed the decision held the plaintiff to be liable for contributory infringement.

The US Supreme Court on appeal reversed the Ninth Circuit Decision and denied all charges of contributory infringement against Sony. The Supreme Court ruled that Sony were not liable for contributory infringement. It was reasoned that Betamax VCR had a protected fair use, to be used for the purpose of 'time shifting'. Time shifting is described as the practice of the "average member of the [using] a VCR principally to record a program he cannot view as it is being televised and then to watch it once a later time". The court held that "if a product is capable of other non-infringing and 'substantially lawful' uses, the producer could not be held liable." Ultimately it was held that the Betamax VCR had substantially non-infringing use and for this reason Sony was not liable of contributory infringement under the copyright law.

In India, there are less precedents in respect of contributory infringement under the domain of copyright law.[224] Under Indian Copyright Act, 1957 there is no specific provision regarding contributory infringement. However, it is contended that section 51 (a) (ii) of the Indian Copyright Act, 1957 establishes the liability of contributory copyright infringement [225] it provides that "if any person without a license permits for any place to be used for communication of the work to the public will be held liable."

III.3.ii. The law suits in context

III.3.ii.a. The "Rio" MP3 Player case

The Recording Industry Association of America sued Diamond Multimedia systems ("Diamond") under the American Home Recording Act in 1988. It was alleged that the portable MP3 player manufactured and distributed by Diamond (the "Rio") was a 'digital audio recording device' and it violated the statutory requirements of Serial Copyright Management System (SCMS). The AHRA prohibits the "manufacture or distribution of any digital audio recording device that does not conform to the SCMS. However, the Act does not prohibit digital copying of copyrighted audio recordings. The U.S. Court of Appeals for Ninth Circuit held that considering the nature and

[224] Sneha Jha and Samar Jha, *An Analysis of the Theory of Contributory Infringement*, 11 Journal of Intellectual Property Rights, 318, 323-24 (2006).
[225] Ibid.

workings of the Rio, it was not a "digital audio recording device" for the purpose of the statute. Particularly, the court gave referred the case of Sony Corp. v. Universal City Studios, where it was held that "time shifting" of copyrighted television programmes using video cassette recorders constituted fair use of copyright works.

III.3.ii.b. The MP3.com case

Probably, the first case to examine the liability of file sharing technologies was ***UMG Recordings v. MP3.com***.[226] MP3.com offered an exciting new service. They were digitising all music available on CD in the US with a view to offer to offer service known as MyMp3.com. This would allow subscribers to listen to an MP3 version of music they owned from any computer anywhere in the world. It worked by storing MP3 copies of the music on a web server which could be accessed by the subscriber across a network connection.[227] This website permitted users to listen to MP3 music from their own private collections and on any computer connected to the Internet.

With the increasing use of this website, the music industry started to assert that the economic and market-related interests of the industry were getting affected negatively. The plaintiffs contended that the defendant company's services, the 'Instant Listening Service' and 'Beam-it' were liable for copyright infringement. It was argued that MP3.com, by way of 'Instant Listening Service' made the consumers buy thousands of commercial CDs. Then they converted them to MP3 format; copied the track of these CDs and stored them in the computer servers operating the MP3.com site. These activities were alleged to have infringed the copyright in the respective content.

Being the exclusive owners of copyright over the sound recordings, the plaintiffs argued that MP3.com were never authorised to reproduce the protected work. It was contended that conversion of the CDs into MP3 formats and the subsequent storing of the sound recordings infringed the copyright by way of unauthorised copying. The plaintiffs asked for remedy in the form of declaration that MP3.com's actions wilfully infringes the plaintiff's copyright and also requested for injunctive relief.

[226] 92 F Supp 2d. 349 (SDNY 2000).
[227] ANDREW MURRAY, INFORMATION TECHNOLOGY LAW, 234 (1st ed. 2010).

The defendants contended that by way of this innovative technology, users were able to listen to the music they already owned. Therefore, they are merely enforcing their fair use claims. The court ruled in favour of the plaintiff. The defendant's 'fair use' defence was denied. The court emphasised that: "The complex marvels of cyberspatial communication may create difficult legal issues but not in this case. Defendant's infringement of plaintiff's copyright is clear".

The court found that what MP3.com was doing was transforming the copyright protected music files which were encoded on CDs in CD-DA (Compact Disc, Digital Audio) format into MP3 format in a process known as 'ripping'. They were then retransmitting the 'ripped' MP3 file to their subscribers. As MP3.com was committing the infringement for a commercial purpose they could not be defended by the 'space shifting' exception.

III.3.ii.c. The Napster case

In ***A & M Records, Inc. v. Napster Inc.***[228] the plaintiffs brought a copyright infringement action against a P2P network company, Napster. The plaintiff alleged that Napster was liable for contributory infringement. By way of MusicShare software, Napster permitted the users to upload and download songs from the P2P network. The technical support, including the indexing and searching of MP3 files, was given by Napster. This 'MusicShare' assisted the users to store MP3 music files computer hard drives. Further it helped in search for MP3 music files stored on other users' computers and also share the exact copies of the contents of other users' MP3 files from one computer to another. The plaintiffs, being the copyright owners initiated the legal proceeding in the Northern district of California on the ground of contributory and vicarious infringement. The defendant, Napster resorted to Sony doctrine and claimed exemption from secondary liability as the software and network were capable of substantial non-infringing uses. Preliminary injunction was granted in favour of the plaintiff. It was shown that around 87% of the material available on Napster was copyrighted and that the plaintiffs owned the copyrights on about 70% of this material.[229]

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[228] 239 F. 3d 1004 (9th Cir. 2001).

[229] R M Myrick, *Peer-to-peer and substantial non-infringing use: Giving the term 'substantial' some meaning*, 12 Journal of Intellectual Property Law, 546 (2005).

When the judgement was appealed to the Ninth Circuit Court, the court concurred with the District Court. The Court determined Napster's contributory liability on the basis of two elements of contributory infringement: (1) knowledge of a direct infringement and (2) a material contribution to that infringement. As the Napster server recorded all files available for distribution in real time and as many of these files contained material that was clearly being offered in breach of copyright Napster could have knowledge of the infringing activity to its subscribers. The court though was careful to tread a fine line. They did not want to outlaw P2P systems just because they could be used for copyright infringement. Judge Beezer commented that "if a computer system operator learns of specific infringing material available on his system and fails to purge such material from the system, the operator knows of and contributes to direct infringement. Conversely, absent any specific information which identifies infringing activity, a computer system operator cannot be held liable for contributory infringement merely because the structure of the system allows for exchange of copyrighted material." As the Napster software and server hardware was essential to the swapping of copyright protected files the court therefore had little difficulty in finding the second arm of the test also proven. Napster was found liable for copyright infringement.

The court then turned to the question of vicarious infringement. Vicarious infringement requires the application of a three part test: (1) there has been a direct infringement (2) the vicarious infringer is in a position to control the actions of the direct infringer and (3) the vicarious infringer benefits financially from the infringement. The first element of the test had already been established so the court focused on the remaining questions. Napster argued they did not benefit financially; they did not charge subscribers for either the software or access to the service, in fact Napster argued that they made no money at all through the availability of infringing files Napster would not have grown at the phenomenal rate at which it grew. This court felt was a direct financial benefit.

Thus the court came to the conclusion that, Napster had constructive knowledge of the infringement and they had the required means to prevent infringement by denying access. As far as the requirement of material contribution is concerned, the judges were of the opinion that Napster facilitating the users in accessing the music files by providing 'indexing central servers'. The court stated, "without the support services defendant provides, Napster users could not find

and download the music they want with the ease of which defendant boasts." Napster was held to be liable for contributory infringement and injunction was also granted.

Following protracted discussions to try and save Napster, including a reported deal to sell the company to German music publisher Bertelsmann for $85 million, Napster eventually went into liquidation. Its trademarks and brand name were bought at a bankruptcy auction by Roxio Inc. and they rebranded their pressplay music service 'Napster 2.0'. Today Napster operates as a leading legal download service specialising in music for mobile phones through its 'Napster To Go' service. Napster is now a subsidiary of US retail giant Best Buy.

III.3.ii.d. Post Napster - MGM Studios, Inc. v. Grokster Ltd.

It seemed the Court of Appeals had suggested the P2P technology Napster had used was not illegal by itself, but rather the problem was the Napster server which allowed Napster a high degree of oversight and control. If a P2P system could be designed which did not use a central index server it seemed its implementation would not infringe US copyright law.

Two such systems were quickly developed. One was to design a centralised P2P network which operates more like the Internet. This does away with the need to have a central server. Instead when one logs in to network a connection is made to the nearest active user, or node, on the network. As this node already has onward connections any requests may be forwarded throughout the network without the need for a central server. Decentralised P2P systems have some advantages but also some strong advantages. As they are completely centralised there can be no claim of a controlling mind and they are difficult to disrupt. But they can be extremely slow and they carry a large amount of network traffic as requests are sent and replies. A better system, technically, is the semi-structured system allowed by the use of 'supernodes'. A semi-structured system combines the advantages of the centralised and decentralised systems. Instead of having a central server, semi-structured P2P systems use a number of users as temporary information hosts, or suprenodes.

Several P2P providers began offering either decentralised or semi-structured P2P services. Famous brand names to use one or other of these technologies included Kazaa, eMule, EDonkey, Gnutella, Grokster and Morpheus. Users quickly migrated to these new P2P systems, many of which had

been developed outside the US. It seemed that the music industry had won the battle but lost the war. Even worse for copyright holders while Napster had only allowed the sharing of MP3 audio files these new services allowed sharing of any type of file meaning Hollywood movie studios, television networks and software developers were now all affected. The copyright holders began afresh. In spring 2003, a number of entertainment industry plaintiffs raised an action Grokster Ltd and Streamcast Ltd suppliers of leading P2P technologies Grokster and Morpheus.

Grokster and Steamcast distributed free software that allowed computer users to share electronic files through P2P network. The users of the P2P network were involved in downloading copyrighted materials, such as, cinematographic films and songs through the network. The petitioners MGM complained that Grokster and StreamCast, were used to transfer copyright protected material. The District Court found Grokster not to be liable for contributory infringement of copyright. The US Court of Appeal of the Ninth Circuit upheld the decision since the elements determining contributory vicarious infringement were not met in this case. While coming to the conclusion, the Ninth Circuit Court relied on the Sony case.

The Court made a distinction in respect of the technology that was being used for sharing between Napster and Grokster. The Betamax defence was also referred to while maintaining that distribution of a commercial product capable of substantial non-infringing uses could not give rise to contributory liability for infringement unless the distributor had actual knowledge. While focusing on the centralised structure, the Court made a distinction betwen Grokster from Napster. The software distributed by Grokster and StreamCast did not make use of a centralised computer server for processing search requests or sharing file. On the other hand, Napster operated through a centralised indexing system Napster had the knowledge of the infringing material being downloaded. The main differences between Napster and Grokster P2P system, was in respect of distinct indexing modes. Therefore, the injunction was denied to the plaintiffs and Grokster were held not to be liable of contributory infringement by the Court of Appeals.

When the case was appealed the US Supreme Court held the P2P networks were liable for contributory infringement. The Supreme Court opined that the subordinate courts wrongly interpreted the decision of the Sony case and also said that the secondary liability theory was wrongly applied by the Court of Appeals. Through this judgment the Supreme Court tried to strike

a balance between the interests of content industries and technologists.[230] However, the scholars of IP also think that the court in this case undermined that the software had substantial non-infringing uses. Moreover, the court also did not state the conditions for the application of Sony test where an infringement-enabling software is involved.[231]

Peer-to-peer litigation has not been restricted only to the United States of America. Major cases have taken place and indeed are still taking place, in the Netherlands, Australia, Denmark, Italy and Sweden. Technology has also moved on with most people now using BitTorent technology to fuel their demand for illicit copies of copyright protected content. One of the most interesting international actions was raised in the Netherlands.

III.3.ii.e. The 'Kazaa' case

Arguably the best known P2P system to arise out of the ashes of Napster was Kazaa. It was designed by the Scandinavian design team of Niklas Zennstrom, Janus Firiis and Priit Kasealu who would go on to develop Skype and Joost and was distributed by their Dutch registered company Consumer Empowerment. In September 2000 Consumer Empowerment had written had written to Buma/Stemra[232] seeking a licence for the use of music by the users of the Kaaza software. Consumer Empowerment believed such a licence would protect them from Napster style litigation. Over the course of following year though the negotiations broke down and eventually Consumer Empowerment raised an action in an attempt to compel Buma/Stemra to continue negotiations. Buma/Stemra entered a counter-claim that Kazaa be compelled to take steps to prevent the distribution of works.

In November 2001, a suit was filed by Buma/Stemra against Kazaa to restrain the dissemination of Kazaa's file-sharing software. This software enabled the users to search and download files from other KaZaA users. District courts ruled favouring Buma/Stemra. The Court of Appeals reversed that decision. Then Buma/Stemra appealed to the Supreme Court. The Court of Appeals reasoned that "the illegal acts and not carried out by KaZaA, but by the users of KaZaA's software

[230] R G Chen, *Rewinding Sony: An inducement theory of secondary liability*, 27 European Intellectual Property Review, 428 (2005).
[231] Robert M Hirning, *Contributory and vicarious copyright infringement in computer software harming one form of intellectual property by protecting another*, 6 Chicago-Kent Journal of Intellectual Property, 10 (2006).
[232] The Dutch licensing and collecting society for performers and composers.

and providing the means for publication or reproduction of a work is not an act of publication or reproduction per se."[233] The court observed that KaZaA would not prevent the search and exchange of files – if anything it would become more difficult to trace this illegal activity, therefore it would be unfair to impute the liability on KaZaA. Moreover, KaZaa did not have centralised indexing. Therefore it was concluded that they did not have specific knowledge of the files exchanged and copied. This was not the case with Napster.

III.3.ii.f. Universal Music Australia Pvt. Ltd. v. Sharman License Holding Ltd.[234]

In this case the plaintiff, Australian record companies brought infringement proceedings against Kazaa. It was alleged that Kazaa promoted, facilitated and authorised unauthorised copying of music through its software in Australia. In identifying the infringing activity of the defendants, the court found that "there is no evidence regarding the identity of the particular Kazaa user or users who made available for sharing, or downloaded from another user, each of the defined recordings." The court observed that the defendants were liable for copyright infringement and ordered them to stop authorising infringement; to pay 90% of the plaintiff's costs and to come back to court for a damages hearing. The parties settled the litigation in July 2006. The defendants paid US$100 million in terms of damages to the record companies.[235] Witnesses for the applicants gave uncontested evidence of being able to download each of these sound recordings as blue files.

In Cooper v. Universal Music Australia Pty Ltd, the Federal Court of Australia found the proprietor of a website MP3s4free.net (Cooper), the website host (the ISP) and a director to be liable for authorising infringement by knowingly permitting others to place on his website hyperlinks to infringing material and encouraging website users to access infringing files via the links. In this case the website in issue provided 'deep links' to infringing files located at remote third parties' IP addresses. For this reason, the court found this activity as rendering 'ready access' to the files.

III.3.ii.g. The Pirate Bay case

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[233] P Akester, Copyright and the P2P Challenge, European Intellectual Property Law Review, 27(3) (2005) 110.
[234] [2005] FCA 1242.
[235] IFPI Press Release: KAZAA settles with record industry and goes legitimate (27 July 2006), http://www.ifpi.org/content/section_resources/piracy-report-current.html.

Any discussion on liability of P2P file sharing technologies would remain incomplete without deliberating the most recent and popular form of file sharing technology BitTorrent. BitTorrent works in a completely different manner to both centralised and decentralised P2P technologies. BitTorrent is an internet protocol, similar in function to File Transfer Protocol. To use the BitTorrent protocol you need a BitTorrent client, a specialised program which allows the transfer of files using the BitTorrent system. These BitTorrent clients are well known and include "BitTornado', 'µTorrent' and 'BitLord'.[236]

Once installed a BitTorrent client allows for the uploading and downloading of BitTorrent files. To obtain a file via BitTorrent the user has to first obtain a small file called a Torrent file. This contains metadata used by the BitTorrent client to obtain the location of the file. What makes BitTorrent both efficeient and attractive is its method of sharing files. Instead of the file sharing taking place between two users (a Peer-to-Peer transfer) it allows for an interaction between several users simultaneously (a Multi Peer transfer) by breaking large files down into smaller chunks and having different users transmit each chunk independently.

BitTorrent technology increases download speeds by using a random download pattern or attempting to download the hard-to-find pieces of the file first, thereby expanding their availability and increasing the net speed of the swarm.[237] As a result, a download from the swarm may start slowly and speed up as more of the rare pieces of the file arrive. As the pieces arrive, the BitTorrent client will use the metadata contained in the .torrent file to reconstruct the pieces of the file into its original form. The person who has the first full copy of the video file and each subsequent person who finishes the download but continues to upload are known as seeds, while users who do not have the full file are known as leeches.

The key to a fast download is to find a Torrent which tracks many seeders and fewer leechers. For the purposes of our analysis though the key part of the analogy is the operation of the guest book which is analogous to these small Torrent files which are essential to finding all the parts of your larger music, video or software file. This tends to be made available through BitTorrent indexes, sites which specialise in tracking and listing available Torrent files. The largest and best known

[236] ANDREW MURRAY, INFORMATION TECHNOLOGY LAW, 250 (1st ed. 2010).
[237] Michael A Carrier, *The Pirate Bay, Grokster and Google*, 15 Journal of Intellectual Property Rights, 7, 8-9 (2010).

index is the Swedish site, The Pirate Bay, which due both to its high profile and popularity as a Torrent index has had several confrontations with law enforcement authorities and copyright holders.

Originally started in 2003 by a Swedish anti-copyright organisation called Piratbyran, it has operated as a separate organisation since 2004. TPB operates as a torrent-indexing website and tracker that allows users who visits its website to upload and download .torrent files. It does not keep any parts of the files that users are transferring and does not host any copyrighted material. Instead it provides: (i) a means to organise, search and index .torrent files and (ii) a tracker for those wishing to use more traditional version of BitTorent protocol. On TPB's main page, users can search for .torrent files by keyword. This has the same functionality as search engines such as Google. The primary difference is that, unlike Google, TPB has historically maintained the .torrent files on its servers instead of pointing to a webpage that itself contains the .torent file. The advantage of maintaining the .torrent file on its servers is that the TPB can ensure that the .torrent file actually exists and can employ the most up-to-date information regarding the number of seeds and leeches in the swarm.

In January 2008, Swedish prosecutors sued The Pirate Bay (TPB) for 'complicity in breach of the Copyright Act" and 'preparation for breach of the Act.'[238] The first offense consisted of 'assisting copyright infringement' and 'assisting making available' copyrighted works. Later on the trial, the prosecutor dropped charges for 'assisting copyright infringement' based on the prosecution's use of tracker less torrents, which did not use TPB's tracker. On 17th April 2009, the District Court found the defendants to be liable for assisting in making copyrighted content available. The court explained that copyrighted works are made available when 'work is transferred to the general public' when it 'is made available to the public in a location other than that in which the general public can enjoy the work.'[239] TPB satisfied this condition since those 'downloading works 'can gain access to the work from a place and at time of his or her own choosing.'[240]

Once the court found that the principal offense was satisfied, it examined the 'acts of complicity', first examining the activity of TPB and then turning to the individual defendants. The court found

[238] VERDICT B 13301-06 (Stockholm District Court, Division 5, Unit 52 Apr 17, 2009)
[239] Ibid.
[240] Ibid.

that TPB: provided a website with 'advanced search features; provided a website with 'easy uploading and downloading facilities,' and put 'individual file sharers in touch with one another through the tracker linked to the site.'[241] Resultantly TPB 'facilitated and consequently, aided and abetted these offenses.'[242] Once the court determined that 'the operation carried on' by TPB 'constituted complicity in the breach of the Copyright Act,' it turned to the defendant's liability. The court clarified that under Swedish law, liability may attach to each person involved in the offense, when acting collectively, if the offense has been completed by several individuals acting together even if she has not herself satisfied each of the elements of the offense.[243]

The court concluded that the four defendants 'worked as a team, with the common purpose of expanding further both technical and business aspects of TPB.' The court also found that defendants had the requisite subjective intent for liability.[244] Even if the defendants did not know that the specific works listed had been made available via TPB, it was 'sufficient for them to have had the intent to bring about the existence of copyright protected material on the website.' On account of the massive scale of making available copyrighted works and advertising revenue generated from the website. TPB was a 'commercial project' that led to significant damage given the 'making available' of works on 'a popular website with many users.' The court imposed a sentence of one year in prison for each of the defendants and it imposed monetary damages, holding the four defendants jointly and severally liable for 30 million Swedish kronor (roughly $3.5 million).

- Analysis of the Liability in TPB case

The liability decided in the TPB case consisted of four primary elements.[245] The first addressed the principal offense. The remaining three described 'acts of complicity' by exploring general complicity as well as the defendants' objective and subjective liability.

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[241] Ibid.
[242] Ibid.
[243] Ibid.
[244] Ibid.
[245] Michael A Carrier, *The Pirate Bay, Grokster and Google*, 15 Journal of Intellectual Property Rights, 7, 10-11 (2010).

a. Principal offense: The principal offense of making copyrighted works available would apply expansively. TPB did not directly infringe copyrighted works. Nor did it itself make such works available for others to infringe. It enabled users in making copyrighted works available. Making it possible for someone downloading works to 'gain access to the work form a place and at a time of his or her own choosing' would apply to many distributors over the Internet. Another basis for liability could be TPB's search function which makes it easier for users to locate .torrent files.

b. General complicity: The court pointed to TPB's provision of a website with 'advanced search features' and 'easy uploading and downloading facilities' and it noted its role in putting 'individual file-sharers in touch with one another the tracker linked to the site.'[246] The court concluded that TPB 'facilitated and consequently, aided and abetted' infringement, the court did not clarify the necessary relationship between the activity and infringement.

c. Objective liability: The defendants closest to the challenged activity were Neji and Svartholm, who were 'principally responsible for technical operations and for the technical and functional development of the website.'[247] The court's analysis for the other two defendants reaches more broadly. It found Lundstorm liable based on his financial contributions and role in generating advertising revenue. Such punishment imposes a type of 'tertiary liability.'[248]

d. Subjective liability: The court found that the defendants 'had the intent to bring about the existence of copyright protected material on the website' by referring to 'the examination of the defendants, the letters from rights holders published on the website and the e-mail correspondence indicating that the operation involved pirate copying.' Despite this awareness the defendants 'elected to take no action to prevent the infringement of copyright.'[249]

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[246] VERDICT B 13301-06 (Stockholm District Court, Division 5, Unit 52 Apr 17, 2009)
[247] Ibid.
[248] Michael A Carrier, *The Pirate Bay, Grokster and Google*, 15 Journal of Intellectual Property Rights, 7, 12-13 (2010).
[249] Yen Alfred C, *Torts and the Construction of Inducement and Contributory Liability in Amazon and Visa*, 32 Columbia Journal of Law and Arts, 34 (2009).

This decision had an important effect all over the world regarding criminalisation of distribution of copyright works over P2P file sharing applications. Taiwan government passed a new law that criminalised the distribution of P2P file-sharing applications and that allowed Internet Service Providers to restrict internet access to subscribers who download copyrighted material three or more times.[250] The French Assembly passed a 'three strike' system.[251] Later that law was struck down by Constitutional Council[252] and the French Senate passed a revised version that gave judges authority to disconnect the internet service of those who infringe three times.[253] The Malaysian government ordered the BitTorrent tracker to shut down. Several BitTorrent trackers in Sweden were closed down after the TPB verdict.

III.3.ii.h. Indian Precedent: Super Cassettes Industries Ltd. v. MySpace Inc. and another

MySpace Inc. was operating a website, which enabled users in uploading and downloading different media content including audio and video clips. It was alleged that providing a search and indexing function to trace the required sound or video recordings resulted into widespread copyright infringement by disseminating the infringed copies without license over the internet. Primary as well as secondary infringement on the part of the defendant. It was contended that the defendant sanctioned the dissemination of copyright protected works of the plaintiff to the public without permission of the plaintiff. In order to establish secondary infringement the plaintiff referred. Under Section 51 (a) (ii) of the Act "permitting any space to be used for infringing communication to the public, with profit motive, amounts to secondary infringement unless the defendant was not aware, and had no reasonable ground for believing, that such communication to the public would amount to an infringement."

The High Court rejected the argument of primary infringement, raised by the plaintiff. The High Court held that for the purpose of determining primary infringement under Section 51 (a) (i), the 'authorisation' required something more than merely providing the means to communicate the work to the public or providing the place for such communication, as under Section 51 (a) (ii).

[250] Mark Hefflinger, Taiwan Passes 'Three-Strikes' P2P Law; Adds ISP Safe Harbor, DigitalMediaWire, 27 April 2009
[251] Leigh Phillips, France Passes 'Three Strikes' Piracy Law, Business week, May 14 2009.
[252] Court Curbs French Net Piracy Law, BBC News, June 10 2009.
[253] French Senate Passes Revamped Anti-Piracy Bill, CBC News, July 9 2009.

Focusing on the required level of involvement for a primary infringer on the ground of authorisation of infringement, the High Court stated that active participation, inducement or approval was a necessary ingredients to establish authorisation. However, the facts of the case did not indicate the existence of all the requirements mentioned above.

Similarly knowledge of the fact that certain acts were infringing in character was different from active participation in, or any inducement of, such acts. To establish authorisation, clear active participation or reasonable degree was required to be shown besides the existence of such knowledge. The Court clarified that merely providing the means for infringement would not establish control and therefore, any person providing such means could not be said to have approved such act. Applying this yardstick to the conduct of defendant, the High Court came to the conclusion that defendant's conduct did not prima facie satisfy 'authorisation' test, merely because search functionality was provided on website or users were permitted to register and upload their content.

On the issue of secondary infringement, the conflict was much more closely fought and the views of the Single Judge on this plea will have a lot of bearing on content-based file sharing websites. The arguments on the presence or absence of secondary infringement on the part of the defendant revolved entirely around the scope of and exceptions to Section 51 (a) (ii). The plaintiff contended that the defendant had reasonable belief that its conduct of running its website would result in communication of an infringing character. The plaintiff focused on the revenue model of the defendant, which depended largely on the revenue from advertisements displayed on the webpages. The plaintiff contended that there was a deeper involvement and knowledge on the part of the defendant as to infringing character of the data uploaded on its servers.

The defendants argued that their website hosts files which are infringing as well as non-infringing and it was problematic to make a distinction between the same. Similar argument was raised before the U.S. Supreme Court in 'Betamax' case.[254] The court referred the decision of Garware Plastics and Polyester Ltd. v. Telelink[255] In this case the Bombay High Court observed that in hotels both private and public viewings went on. Not all the cases are that of infringing use. However, the

[254] Sony Corp. v. Universal City Studios 464 U.S. 417 (1984).
[255] AIR 1989 Bom 331.

Court granted injunction against the defendants from infringing the plaintiff's works in respect of which the plaintiff was the owners and/or assignee of copyright. Ultimately, the Delhi High Court held that the defendant's unauthorised use of the copyright protected work infringed of the Copyright Act, 1957. The court reasoned that web space is a "place" in the terms required by the section 51 (a) (ii) of the Act and also monetary gains were present in the form of ad revenue.

III.4. Behavioural attitude and predispositions of users towards online sharing of music

Today the manner in which music is consumed in everyday life makes it evident how it has become integrated into our personal and social lives. At the same time, the technologies through which music is distributed, purchased, organised, shared, chosen, and interacted with has undergone a significant change.[256] With the development of peer-to peer network, huge quantity of music is shared and it can have a tendency to remove some of the social aspects of the music sharing seen with swapping tapes among friends.[257] Downloading music from the internet has become an easy, fast, and efficient means to procure music files. Unlicensed downloading of music through P2P computer networks is currently the one of the prominent download method. However, consumers can procure music online legally for a small fee.

III.4.i. Previous Studies – At a Glance

Illegal music sharing is a much faster growing issue than ever before. A survey of 92 students at a medium sized, public liberal arts university[258] inquired into how many students are engaging in this behaviour, how many students are engaging in this behaviour, how much they know about the surrounding laws and why they choose to download illegally. The results showed that 83% of students download digital files and 54% share their own files. Reasons for their behaviour include cost issues, laziness and convenience. Majority of the students knew little about the legal issues.

In another study,[259] a sample of university students were studied because according to Recording Industry Association of America, university students represent a large section of copyright

[256] Kenton O'Hara and Barry Brown, Consuming Music Together: Introduction and Overview, p. 3.
[257] Id. at p. 4
[258] Cameron Keith, *Student Attitudes and Behavior on File Sharing*, Salisury University, Maryland, USA (2008).
[259] Steven Lyonski, Srinivas Durvasula, *Digital Piracy of MP3: Consumer and Ethical Predispositions*, 25 Journal of Consumer Marketing, 1 (2008).

infringers. College students at several locations throughout the campus such as the university library, student union and various academic buildings were approached to obtain the sample. The fieldworkers visited these locations at various times in the day to reach a broad cross-section of the student population.

A June 2005 study commissioned by the RIAA found of those 18 to 54 in age, only 13% paid to download music in contrast to only 6% in June 2004. Business Week (2005) reported that 52% of College students believe it is okay to download and swap copyrighted files, even in workplace. Moreover, piracy in Asia is particularly acute given that 90% of music sales are for illegal recordings. One-third of the teenagers between the ages of eight and 18 continue to download pirated MP3 music.[260]

A sample of 196 participants (93 males and 103 females) from the University of Otago, Dnuedin, New Zealand was identified.[261] Such a university sample was selected for the study because downloading was considered to be prevalent among university students and students condone downloading. The Recording Industry Association of America (RIAA) also focuses on university campuses because they believe that downloading among university students samples is most detrimental to industry.

A study[262] tried to find out the relationship between teenagers' intention to illegally download music and their intention to buy a specific singer's CDs. As the target of the study was teenagers, idolatry was included as an important antecedent of buying and a moderator on the downloading-buying relationship from the perspective of the social identity theory.

Similarly, another study chosen consumers aged 15-19 as respondents.[263] There were three major reasons for this decision. First, these consumers are found to be most likely to conduct music piracy because of budget constraints and their strong computer knowledge. Second, this group of consumers is more likely to have an idol singer/band. Idolisation was considered to be one of the

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[260] Ibid.
[261] Kirsten Robertson, Lisa McNeill, James Green, Claire Roberts, *Illegal Downloading, Ethical Concerns, and Illegal Behavior*, 108 Journal of Business Ethics, 215, 217-18 (2011).
[262] Chia-chen Wang, Chin-ta Chen, Shu-chen Yang, Cheng-kiang Farn, *Pirate or Buy? The Moderating Effect of Idolatry*, 90 Journal of Business Ethics 81, 82-83 (2009).
[263] Jyh-Shen Chiou, Chien-yi Huang and Hsin-hui Lee, *The Antecedents of Music Piracy Attitudes and Intentions*, 57 Journal of Business Ethics 161, 162-63 (2005).

major antecedents in this study. Moreover, this group of consumers is one of the major targets of music producers in the market. In one more study[264] the sample was based on a student sample from a business college at a university in the Midwest, USA. Students were considered to be the target populations, since a high proportion of students have been shown to pirate.

As a part of studying consumer attitudes towards online music a survey was conducted during 2000-'01 over 200 respondents. Respondents were primarily enrolled as full time or part time students in colleges; ages ranged from 19 to 54 years, with 61% of males. The sample group was diverse in demographic, economic and social aspects and represents a significant component of the music industry customer segment. Respondents were asked to reveal their online music experiences and specify preferences for certain online music activities and Internet connection speeds.[265]

III.4.ii. Attitudes driving illegal download of digital Music

In 2006, the report published by International Federation of the Phonographic Industry estimated that ''95% of all music is downloaded without payment to artists or producers'' (2006). Downloading of unlicensed music files from the internet has a negative impact on society, the economy and the music industry. It results in closure of retail music stores, damage of artist careers and displacement of music sales.[266] In a survey done by the Hong Kong Institute of Asia-Pacific Studies on behalf of the Motion Picture Industry Association Limited, 17.2% of 1,502 respondents admitted that they have downloaded free movies from the internet. The rate was much higher (23.6% more) among younger age group of 15-24 than older age group of 45-64.8 In another survey done by the Intellectual Property Department of Hong Kong, among the sample of 1,214 respondents, most people (95.7%) saw the need to protect IP rights but there were still 10% of the respondents admitted that they have "illegally downloaded MP3/movies/games from unauthorized websites and shared them with other people."[267]. Among those admitted, over 40% of them were

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[264] Sulaiman Al-Rafee and Timothy Paul Cronan, *Digital Piracy: Factors that Influence Attitude Towards Behavior*, 63 Journal of Business Ethics 237, 239-40 (2006).
[265] Sudip Bhattacharjee, Ram D. Gopal and G. Lawrence Sanders, *Digital Music and Online Sharing: Software Piracy 2.0?* 46 Communications of the ACM, 108, 108-09 (2003).
[266] Kirsten Robertson, Lisa McNeill, James Green and Claire Roberts, *Illegal, Downloading, Ethical Concern, and Illegal Behaviour*, 108 Journal of Business Ethics, 215, 218-19 (2012)
[267] Annual Survey on Public Awareness of Protection of Intellectual Property Rights, Intellectual Property Right Department of Hong Kong, (2004).

under the age of 30. Although 10% may not sound very astounding, the figures only included those who admitted to have illegally downloaded the files and shared. So, the issue here arises that, if the act of downloading unauthorized MP3/movies from the internet is against the law and thus considered to be "illegal", why would so many people incline to take the risks?[268]

Different studies have indicated that intention of a consumer-user considerably affects the user's attitude towards downloading of illegal music files. If attitude can be changed, then intention may be influenced and subsequently behaviour may be influenced.[269] There are certain uncertainty regarding the major reasons which influence the ethical decisions of the users to share copyrighted files in the P2P environment. Unauthorized copying of music files is a problem of consumer ethics.[270]

The decision of a consumer to purchase or download illegal copy of music files presents certain incentives that induce certain ethical dilemmas that sway the ethical decision making processes of a consumers.[271] In this context, it becomes necessary to understand the effect of moral perceptions on the piracy behaviours. There are two categories of music piracy behaviour from the view point of a consumer.[272] The first one is known as unauthorised duplication/download (mostly from a website); while the second one is called pirated music product purchasing. As Internet facilitates data exchange since it enables nearly free distribution with much convenience, music copyrights holders find it difficult to fight multiple infringers, difficult to identify and locate who are personally engaging in relatively minor copyright infringement, creating a massive headache for the music industry.[273] The purchase of pirated music and the unauthorised duplication/download of music are distinguished in several aspects. Consumers had no idea that they were infringing anyone's copyright when they were infringing anyone's when they downloaded music from the Internet.

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[268] Shelly S.K. Cheung, Illegal Download Attitudes, Leisure Boredom, Sensation Seeking and Value of Honesty, School of Journalism and Communication, The Chinese University of Hong Kong, (2005).
[269] Sulaiman Al-Rafee and Timothy Paul Cronan, *Digital Piracy: Factors that Influence Attitude Towards Behavior*, 63 Journal of Business Ethics 237, 239-40 (2006).
[270] Rong-An Shang, Yu-Chen and Pin-Cheng Chen, *Ethical Decisions About Sharing Music Files in the P2P Environment*, 80 Journal of Business Ethics, 349, 349-50 (2008).
[271] Jyh-Shen Chiou, Chien-yi Huang and Hsin-hui Lee, *The Antecedents of Music Piracy Attitudes and Intentions*, 57 Journal of Business Ethics 161, 162-63 (2005).
[272] Ibid.
[273] Ibid.

Several studies have indicated that downloaders of unlicensed music files perceive that while pirating digital material there is very less probability of getting caught.[274] This results into lower deterrence in respect of restraining pirated digital content. The downloaders did not regard the issue of digital piracy itself as important.[275] The downloaders were found to be happy and excited when they get access to pirated digital media. Consequently if more people are informed about the threats of dealing with pirated content, that will assist in curbing that feeling of happiness and excitement. Moral judgment, distress and the sex (gender) of the individual were not found to be significant influencers of attitude toward digital piracy.[276]

No relation could be established between the user's ethical nature and his/her ethical beliefs about downloading.[277] The same person who believe themselves to have a strong ethical ideal and would also not steal a music CD from a store appear to be uncertain about downloading music. The studies also indicate that the indifferent attitude towards the ethical consequences of downloading music show that majority of students believe that it is acceptable to download music from the internet and there is no harm in downloading infringed material.[278] To certain extent students fear punishment, but since it is not happening around them, they are not that concerned about it. Overall, students are not aware of the legislation or the litigation in recent years, partly because the regulations that exist are not very well enforced. Students also have a tendency to believe that "it won't happen to them" so they are doing it.[279]

Increasing the price of a music CD has a strong effect of increasing its related online piracy.[280] Inclination to pirate music increases dramatically as internet bandwith improves, with similar trends for all music categories, implying that the consumers would pirate more music as the ease of piracy increases. It has been observed that income has negative effects regarding unknown songs, indicating that individuals with lower incomes are likely to pirate rather than purchase and

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[274] Salman Al-Rafee and Timothy Paul Cronan, *Digital Piracy: Factors that Influence Attitude Toward Behaviour*, 63 Journal of Business Ethics 237, 238-39 (2006).
[275] Ibid.
[276] Ibid.
[277] Robert F. Easley, *Ethical Issues in the Music Industry: Response to Innovation and Piracy*, 62 Journal of Business Ethics, 163, 165-66 (2005).
[278] Ibid.
[279] Cameron Keith, *Student Attitudes and Behavior on File Sharing*, Salisury University, Maryland, USA (2008).
[280] Sudip Bhattacharjee, Ram D. Gopal and G. Lawrence Sanders, *Digital Music and Online Sharing: Software Piracy 2.0?* 46 Communications of the ACM, 108, 109-10 (2003).

sample, based on current prices.[281] In respect of pricing, as more music becomes available online, users with fast connections would rather download and listen then buy. Moreover, a user's willingness to pay depends on perceived value of music.[282]

III.4.iii. Ethical contemplations involved in illegal music download

In order to eliminate the threat imposed by P2P file sharing, the music industry has implemented numerous initiatives. The softer approaches to deterrence includes building collaborations with internet service providers to trace and suspend downloaders, educating users and diversifying into music channels. The existing anti-piracy arguments and pecuniary penalties have not been much effective and users did not refrain themselves from downloading music illegally, knowing that it is not legal.[283] Illegal downloading of music continues to be a rampant activity especially among college students. This category of infringers have not been deterred by industry legal actions effectively. The rate of unauthorised downloading still continues to be high rate and there is a strong inclination towards the belief that it is not ethically wrong. Different studies have showed that ethical orientation of a consumer is positively connected with awareness of the social cost of downloading, consequences of downloading and ethical belief in downloading.[284] In many instances, it is observed that fear of consequences did not have much effect to reduce illegal downloads. Similarly appeals to ethics or guilt also did not have much impact on reducing illegal downloads. The use of punishment for downloaders may have a short-term effect but other (more positive) measures are required.

Generally the law is obeyed when people perceive that violating the law goes against their moral convictions. Accordingly it was found moral obligations anticipated the intention to infringe the copyright protected media content. The ethical profile of downloaders was found to be different

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[281] Ibid.
[282] Id. at p. 110.
[283] Kirsten Robertson, Lisa McNeill, James Green, Claire Roberts, *Illegal Downloading, Ethical Concerns, and Illegal Behavior*, 108 Journal of Business Ethics, 215, 219-20 (2011).
[284] Steven Lysonski and Srinivas Durvasaula, Digital Piracy of MP3s: Consumer and Ethical Predispositions, Journal of Consumer Marketing, (2008), Vol. 25, No. 3, p. 2.

than those who do not download. They have less ethical concern. Those who are less concerned with law depicted a positive attitude towards piracy. It was seen that in many cases downloaders are discouraged from illegal downloading by anti-piracy messages.[285]

The ethical contemplation of those who download illegal music is explained by different theories. Ethical decision-making theory Hunt and Vitell's has been applied to examine. According to Hunt and Vitell's ethical decision model "ethical judgment influences behaviour through behavioural intention."[286] Ethical judgment of a user influences behaviour, which is again connected to 'Theory of Reasoned Action'. According to the ***'Theory of Reasoned Action'***, (TRA) behaviour is connected to intention. It is assumed that individuals are rational human beings. Their intentions are influenced by their attitudes towards a behaviour (favourable or unfavourable) and their perceptions of subjective norms (what others' think they should do).

Theory of Planned Behaviour, (TPB) provides that the actual behaviour of an individual is affected by the intention to perform a certain action. This theory was developed from the theory of reasoned action. The theory of reasoned action proposes that excluding impulsive actions, an individual's actions are the result of intention. Intention comes from rational thinking. The attitude to the action of an individual and subjective norms are considered to be the main factors behind individual's intention. TPB has been engaged to illustrate dishonest behaviour in cheating in exams, lying and shoplifting. Moreover, ***deterrence theory*** attempts to explain the manner in which the fear of the consequences of illegal behaviour stimulates deterrence. As per this theory, if the results of an action are certain and severe then individuals are prevented from resorting to illegal behaviour. As certainty and severity of punishment increase, illegal behaviour should decrease. Through an extended model of TPB that incorporates deterrence and expected utility theory, it is found that attitudes, PCB and subjective norms were indeed significant in predicting the intention to illegally copy software. Furthermore punishment severity, certainty of punishment and software costs were directly related to attitudes towards pirating whereas punishment certainty was also related to behavioural control.

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[285] Kirsten Robertson, Lisa McNeill, James Green, Claire Roberts, *Illegal Downloading, Ethical Concerns, and Illegal Behavior*, 108 Journal of Business Ethics, 215, 217-18 (2011).
[286] Ibid.

There are several interesting findings regarding the beliefs about downloading. When it was asked, "If you download music illegally, artists do not get royalties which is their primary way to make a living", the majority of the those who download illegally do not have strong beliefs in respect of the fact that illegal downloading hurts the livelihood of artists. Therefore, spreading messages to students using a guilt appeal may not be effective always. When illegal downloads are done, it is found that the intentions to download are linked with perceptions that there is no social cost to downloading; there are social benefits to downloading; it is ethical to download; and there are legal consequences to downloading. However, ethical idealists believe that there is a social cost to downloading, that downloading is not ethical, and that there are negative consequences to downloading. Thus, increase in ethical idealism can lead to rising consciousness about downloading.

III.5. Technological shift in recording industry – Implications of P2P networks

The significant technological advancements have challenged many deep rooted interests.[287] By way of developing economic opportunities and changing social relationships technological progress has always posed threat on the pertinent institutions and stakeholders. The changes brought by the online medium is no exception. Now, manufacturers of goods and providers of services are finding new ways to contact the consumers directly. As a result, the contribution of middleman is reduced to a greater extent and the consumers are trying to establish relations with one another or to become producers in their own right.[288] The initiative taken by the recording companies and movie studios to prohibit the operations of P2P networks is an example of such reaction against technological change. The business model of the industry is defending is an example of oligopolistic market in which a handful of companies control the distribution of content. It is observed that in the market, anticompetitive practices and anti-consumer policies have resulted in overpricing of music CDs.[289]

287 Mark N. Cooper, *Time for the Recording Industry to Face the Music: The Political, Social and Economic Benefits of Peer-to-Peer Communication Networks*, 25 Stanford Law School Center for Internet and Society, 11 (2005).
288 Ibid.
289 Ibid.

File sharing technology entered the oligopolistic music market with an 'arbitrage' opportunity. From 2004, the rising sales of digital music challenged the music industry's claim.[290] Digital technologies have posed a threat on the hold of the recording companies in the market by decreasing the costs of manufacturing and distribution. In a digital delivery environment, consumers should never be forced to pay for songs they do not want in order to get the songs they do want. Without much success to restrain the sharing of unauthorised music files over P2P networks, in 2004 the record industry decided to adapt its business model. However, the music industry continued with its strategy of litigation at the same time.[291]

In order to grow commercially and also to be updated technologically the recording industry has to consider that P2P technology and its uses have developed beyond Napster.[292] Now, file sharing technology is no longer dependant on a connection to or assistance of a central server or registry. Software is available, running generally either on the "OpenNap" or Gnutella networks that allow users to connect directly with each other to exchange music files. A significant advantage of much of the alternative software and networks is that they are often provided free and as such no one company or persons control its distribution, or is able to assert any proprietary right over technology and its exploitation.[293] A collaborative effort between companies and consumers can bring several benefits and advantages to both the side.[294]

III. 6. Liability of internet service providers for third party online copyright infringement

The access providers contribute in the functioning of internet by way of making available various services. These includes dial-up account for the home user, permanent leased-line connection for commercial users and many others. These commercial access providers are referred to as Internet Service Providers (ISPs). ISPs facilitate connection to the Internet. It is enables passage of information to and from the computer.[295] ISP provides the user with services like World Wide

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[290] Ibid.
[291] Ibid.
[292] Mary W. S. Wong, *Rocking and Ripping on the World Wide web: The Collision between Digital Music and Copyright Law*, 13 Singapore Academy of Law and Journal, 323, 333-334 (2001).
[293] Ibid.
[294] Id. at p. 350
[295] ROPER BRENT D, USING COMPUTERS IN THE LAW OFFICE, 289 (1st ed. 2000).

Web, e-mail, newsgroup and other additional services. ISPs are also known as Online Service Providers (OSPs).

III.6.i. Definition of internet service providers

Digital Millennium Copyright Act, 1998 (DMCA) in United States of America has provided the definition of 'service provider'. Under Section 512 (k) (1) (a) it is defined as an "entity offering transmission, routing or providing of connections for digital online communications, between or among points specified by a user, of the material of user's choice, without modification to the content of material as sent or received" Section 512 (k) (1) (b) provides that a 'service provider' is a 'provider of online services or network access or the operator of facilities therefore'. This DMCA included the Online Copyright Infringement Liability Limitation Act. DMCA mentions the statutory requirements for holding ISPs liable for copyright infringement by their subscribers. It also lays down the limitation in respect of the liability of ISPs in specified cases.[296] In United Kingdoms a 'service provider' is defined as "any person providing an information society service." Information society service refers to "any service normally provided for remuneration, at a distance, by means of electronic equipment for the processing (including digital compression) and storage of data, and at the request of a recipient of a service."

In India, the liability of online service providers for copyright infringement has not been determined expressly. Information Technology Act, 2000 (IT Act) has defined ISP as a 'network service provider' referring it as an intermediary.[297] It defines 'intermediary' as 'any person who on behalf of another person receives, stores or transmits that message or provides any service with

[296] In Section 512(a) protection is given for the conduit function and it protects ISP for 'transmitting, routing or providing connections for, material through a system or network controlled or operated by or for the service provider.' Section 512 (b) limits liability of an ISP for caching and Section 512 (c) protects storage of material on the provider's system or network at the direction of the user and finally, ISPs who provide information location tools such as links or directories which are also protected, subject to certain circumstances, [Digital Millennium Copyright Act, 1988 § 512 (d)].

[297] CHRIS REED AND JOHN ANGEL, COMPUTER LAW – THE LAW AND REGULATION OF INFORMATION TECHNOLOGY, 240 (6th ed. 2007).

respect to that message'. This definition of 'intermediary' takes into consideration both professional as well non-professional intermediaries.

III.6.ii. Rationale for ISPs Liability

Online transmission is done by the interference of third parties, i.e., the service providers. Therefore it is contended that, a law cannot be violated over the internet without intentional or unintentional involvement of service providers, who enable the communication to take place.[298] Consequently, the liability of ISP for copyright infringement committed by third parties and the nature and scope of such liability is debated intensely. The content owners have supported the imposition of liability on ISPs since the right to receive compensation for the use and reproduction of their material vests with the copyright owner. The ISPs have opposed this argument and have asked for limitation on their liability.[299]

III.6.ii.a. Arguments for holding ISPs liable:

It becomes difficult to find the actual wrongdoer since the internet enables to retain the anonymity of the users. On the other hand the ISP is noticeable and often located in the same jurisdiction[300]. Thus, it becomes convenient to make them liable in terms of tracking the culprits. In addition to that the ISPs are considered to be easy targets for initiating a litigation than the originator of the offending information content.[301] The offender may not have "the bigger pocket" to pay heavy damages whereas it is economically more viable to make ISP liable since ISPs are expected to have adequate resources to pay compensation with its share of profits. ISPs remain in a better position for policing the internet and supervising the activities over the internet.[302] ISPs can close down the offending webpage to stop further infringement. Moreover, when the wrongdoer and the

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[298] RAMAN MITTAL AND S K VERMA, LIABILITY OF INTERNET PROVIDERS FOR COPYRIGHT INFRINGEMENT - LEGAL DIMENSIONS OF CYBERSPACE, 147 (1st ed. 2004).
[299] Thilini Kahandawaarachchi, *Liability of Internet Service Providers for third party online copyright infringement: A Study of the US and Indian Laws*, 12 Journal of Intellectual Property Rights, 553, 555-56 (2007).
[300] V K Unni, *Internet Service Provider's Liability for Copyright Infringement – How to clear the misty Indian Perspective*, 8 Richmond Journal of Law and Technology, 13, 15-16 (2001).
[301] Electronic Commerce (EC Directive) 2002, SI 2002/2013.
[302] Subhasis Saha & Sourav Keshri, *Challenges to copyrightable work in cyberspace*, 13 Journal of Intellectual Property Rights, 35, 36-37(2008).

right holder operate in multiple jurisdictions, it is convenient to assert the claim against ISP in the jurisdiction of the claimant or in a jurisdiction that has given favourable decisions in similar claims.

III.6.ii.b. Arguments for limiting the liability of ISP

To counter the arguments raised by the right holders to hold the ISPs liable, they have opined that they are being made the scapegoats of the situation without having any fault of their own. They have lobbied for limiting their liability.[303] ISPs have argued that they are only 'passive carriers' and 'mere conduits of information. Moreover, they also contended that they are merely messenger and not a publisher.[304] In Fonovisa v. Cherry Auctions,[305] the court held that providing with the 'site and facilities' for direct infringement is 'materially contributing' to the infringing conduct of another and will give rise to liability. In Sony Betamax case,[306] the court held that "merely providing the means to accomplish an infringing activity" was not adequate without constructive knowledge of the infringing activity. It is difficult to expect from ISPs that they will filter all the content passing through their systems considering the huge number of transactions that take place every day. Even after persistent monitoring, 100% precision cannot be achieved so as to prevent every single instance of copyright infringement. Furthermore, holding ISPs liable would hinder the growth of internet in such an emerging phase.[307]

III.6.iii. Legal framework regulating ISP liability in India

Presently, the law related to determination of ISP liability is uncertain in India. The issues concerning liability of ISPs regarding copyright infringement of third party content uploaded by its subscribers are not explicitly dealt with by the Indian Copyright Act of 1957. The present

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[303] Thilini Kahandawaarachchi, *Liability of Internet Service Providers for third party online copyright infringement: A Study of the US and Indian Laws*, Journal of Intellectual Property Rights, 2007, Vol. 12, Issue no. 6, pp. 553-561

[304] Priyambada Mishra and Angsuman Dutta, *Striking a Balance between Liability of Internet Service Providers and Protection of Copyright over the Internet: A Need of the Hour*, 14 Journal of Intellectual Property Rights, 321, 322-23 (2009).

[305] 847 F. Supp. 1492 (E.D. Cal. 1994).

[306] Sony v. Universal Studios 464 U.S. 417 (1984).

[307] Priyambada Mishra and Angsuman Dutta, *Striking a Balance between Liability of Internet Service Providers and Protection of Copyright over the Internet: A Need of the Hour*, 14 Journal of Intellectual Property Rights, 321, 323-24 (2009).

legislation on copyright was enacted without prior knowledge of the emergence of the internet. Even after the amendment of the Copyright Act in 1994 and 1999, there was no mention of ISP liability.

Section 51 (a) (ii) of the Copyright Act, 1957 provides that if any person allows the work to be exposed to the public with a view to making gains, without an express license given by the Registrar of Copyright, that amounts to copyright infringement. Moreover, liability is attracted only when anyone allows 'any place' to be used for copyright infringement. The liability of ISP arises when the computer servers and other devices storing infringed materials are located at their business place thereby qualifying an ISP under the expression 'any place' used in the provision. The gist of the ISP liability is whether the ISP is making any profit and thereby benefiting out of the infringement. In the usual course, the users always pay the ISP for providing services. In addition ISPs also earn from advertisements by tying them up with material infringed. The only exception to liability is to prove that they did not know that their activities were causing harm to the copyright owner.

Under Section 63 of the Copyright Act, any person who knowingly infringes or abets the infringement of copyright will be criminally liable. Whether an ISP can be said to have abetted the infringement of copyright is a question of fact. But granting a wilful permission to the users brings liability on ISPs under Section 63 of the Copyright Act. Aiding and abetting the infringement is to be strictly proved in the court of law, as it is a penal provision.

- **Safe Harbour Provision under Indian Laws & ISP Liability for Copyright Infringement**:

The provision for secondary liability for copyright infringement under the Copyright Act, 1957 coupled with the specific ISP liability provisions[308] present in the Information Technology Act, 2000, as amended in 2008, acted as the basis for 'safe harbour' for ISPs until the IT (Intermediary Guidelines) Rules 2011 ('2011 Guidelines') were enacted. Sec. 2 (w) of the IT Act defines

[308] Sections 79 and 81, Act No. 21 of 2000, as amended by the IT (Amendment) Act, 2008.

'intermediaries'.[309] The exemption under Section 79 of the IT Act, 2000 includes telecom service providers, internet service provider, search engines, online market places, cyber cafes, etc. At the same time by Section 81 of the IT Act confers an overriding effect over all other Acts in force, provided that it did not prevent anyone from enforcing their rights under the Copyright Act or Patents Act.

The 2011 Guidelines extends the safe harbour provisions to copyright infringement particularly and all other forms of IP rights infringement generally. However, the ISP is required to observe the notice and takedown procedures and due diligence, mentioned section 79 as provided in the guidelines. Moreover, under the 2011 Guidelines, the intermediaries are required to set certain rules and regulations for the users, including a prohibition on posting infringing material over the internet. Any person can request the intermediary to take such material down when they feel aggrieved by the alleged infringing material online. But, these guidelines do not provide for the creator of the content to respond to this complaint. They do not even provide for the intermediaries to inform the user who posted the content regarding the complaint. Further, the intermediaries which do not comply with a take-down notice lose the protection of the 'safe-harbour' so created. Thus the safe harbour protection available to intermediaries under Section 79 is dependent on their observing due diligence in accordance with Rule 3 of 2011 Guidelines.

In the Parliamentary Standing Committee's Recommendation it has been mentioned that, "The fact that both Sections 79 and 81 contain non obstante clauses has made it extremely difficult to interpret the two sections harmoniously, to pinpoint which provision supersedes the other and to understand what the law on the subject is" and it is because of this conflict over applicability of Section 79 to cases of copyright infringement, that there was a move to amend and introduce exceptions within the copyright law itself.

III.6.iv. Judicial interpretation on ISP liability in India:

[309] "Intermediary with respect to any particular electronic message means any person who on behalf of another person receives, stores or transmits that message or provides any service with respect to that message".

The conflicting position of law regarding ISP liability is illustrated by two cases filed by Super Cassettes ('SCIL') against Yahoo and MySpace. The decisions given by the Delhi High Court in these cases explain the judicial attitude in this regard.

III.6.iv.a. Super Cassettes Industries Limited v. Yahoo Inc. and another[310]

On 30 May 2008, the Delhi High Court issued a notice to Yahoo Inc. and its Indian subsidiary Yahoo web Services (India) Pvt. Ltd. on a suit filed by SCIL, owner of the largest Indian music label 'T-Series' for infringement of their copyright caused by unlicensed streaming of SCIL's copyright works on Yahoo's portal video.yahoo.com

III.6.iv.b. Super Cassettes Industries Ltd. v. MySpace Inc. & another[311]

The decision of the Delhi High Court in this case is an indicator to the direction that copyright litigation is likely to take in the coming years, in the context of content sharing and streaming sites. The plaintiff of this case, Super Cassettes Industries, is involved in the business of music distribution and film producing and claims to be the owner of several sound recordings, cinematograph films, songs etc. There are two defendants in this case; defendant no. 1 is MySpace Inc. which is based in the United States of America and it is stated to be a social networking and entertainment website. It is also said to offer a variety of applications for activities such as sharing; viewing music, images, cinematograph works etc. Defendant no. 2 is the owner of MySpace Inc, defendant no. 1, which is stated to be a division of News Corporation, Fox Interactive media which offers border free online network which caters to its customers by providing various tools.

In 2007 the plaintiff and the defendants entered into a non-disclosure agreement. The defendants sought to procure a license from the plaintiff to display the plaintiff's copyrighted material. However the discussion between the parties was not successful. It was found that the copyrighted material of plaintiff was still available on the website of the defendants without the consent from the plaintiff. The plaintiff sent legal notice to the defendants. While responding to the notice the defendants assumed that the copyrighted material of the plaintiff had been taken down from the

[310] CS (OS) No. 1124 of 2008, Delhi HC.
[311] MIPR 2011 (2) 303, 2011 (48) PTC 49 (Del)

internet. Afterwards the plaintiff found that the defendants had not removed the plaintiff's copyrighted material from its website, although it was assured that that the alleged content would not be available on their website. Since the assurance given by the defendants were not fulfilled, the plaintiff initiated the suit before the Delhi High Court and the plaintiff also sought interim relief before the same court.

The defendants claimed that being an intermediary under Section 2 (w) of the IT Act, they are protected under Section 79 of the IT Act. It was also contended that they were merely enabling the content sharing on their website. Moreover, they had no knowledge of such sharing until and unless it was brought to their notice by the concerned content owner. To establish that specific measures had been undertaken to restrain infringement and they did not directly encourage or assist in infringing activity, the defendants attempted to establish that they had developed different technology in this regard. They are (a) 'The Hash Block Filter'; (b) 'Take Down stay Down' and (c) 'Rights management tool'. These tool prevents uploading of all flagged content, owned by the copyright holder, if there is a match of more than 30 seconds.

While referring to Section 81 of the IT Act the plaintiff contended that Section 79, or any other provision of the IT Act, cannot aid a copyright infringer. The copyright infringement was committed before the sending of notice and there is no remedy for the owners and the safe harbour provisions under the provisions of DMCA. Therefore DMCA was held to be not applicable in this case. Moreover the notice and take down system did not address the concern of the copyright owners and the case must be resolved on the basis of Indian law.

The court upheld the contention of the plaintiff. Moreover, the Delhi High Court observed that "the combined effect of reading Section 81 and the proviso was that the provisions of the IT Act may override other laws for the time being in force but they could not restrict the rights of the owner under the Copyright Act and the Patents Act." Further, it was held that in this case the defendant's conduct would not come within the purview of the immunity provided under Section 79 of the IT Act. The rationale behind this conclusion was illustrated by the Delhi High Court. The court held that while the fulfilment of either one of the conditions under Sections 79 (2) (a) or 79 (2) (b) would suffice, the immunity under Section 79 (1) would not be available unless the due

diligence requirement under Section 79 (2) (c) was mandatorily satisfied along with the condition in Sections 79 (2) (a) or 79 (2) (b).

Section 79 (2) (a) of the IT Act, 2000 was held not to be attracted in this case since the defendant activities were not restricted to facilitating access to the communication system where the third party information was hosted, transmitted or stored. Since it was concluded that the defendant was altering the content uploaded on its website, it was determined that the conditions stipulated in Section 79 (2) (b). However, the condition of non-modification of the information contained in the transmission was held not to be satisfied. The Court also illustrated that due diligence was required at the time of the discharge of the duties by the intermediary and consequently Section 79 (2) (c) was not inapplicable in the present context. Thus if the defendant was informed about the rights of the plaintiff in certain works, the defendant had to perform the preliminary check in all the cinematograph works relating to Indian titles before communicating the works to the public rather than falling back on post infringement measures. When the defendant uploaded the copyrighted contents of the user on their server and then modified the same, the due diligence was not held to be satisfied. This implies that the defendant had the opportunity to maintain a check on the copyright protected works. However the defendant did not making any use of them. The reason for the same, may be, known to them only.

III.7. Technological protection measures under copyright law

As discussed above, intellectual property is complementary to technology.[312] It is an area of law that evolves with the development of technology to fulfil the social, political and economic needs. The emerging Information and Communication Technology along with the increasing use of computers have given rise to digital economy.[313] The new economy is changing the way the products are created, the nature of products themselves and how they are distributed and transacted. The accessibility of digital technology, with its various advantages especially quality, allowed more and more works to be converted into digital format and creation of newer works in digital format.[314] The more the works to be created in the digital format, the more became their

[312] P Ghatak, R C Tripathi and A K Chakravarti, *Digital Rights Management: An Integrated Secure Digital Content Distribution Technology*,9 Journal of Intellectual Property Right, 313, 314-15 (2004).
[313] Ibid.
[314] Arathi Ashok, *Technology Protection Measures and the Indian Copyright (Amendment) Act, 2012: A Comment*, 17 Journal of Intellectual Property Rights, 521, 522-23 (2012).

unauthorised use. The ease with which the authored works in digital form can be currently replicated poses a difficult problem for the law to handle.

This led to the creation of technological measures (TMs) which are capable of preventing these unauthorised uses either by preventing access to these works or by preventing access to these works or by preventing certain activities. These technologies are commonly known as access control technological measures[315] and copy control technological measures,[316] respectively.[317] But these technological measures employed by owners of the work, were not welcomed by consumers of goods and services in the digital market. This conflict of interest led to the creation of technology capable of circumventing the TMs applied by authors for the protection of their TMs applied by authors for the protection of their works which nevertheless resulted in the unauthorised use of the works. Consequently, authors lobbied to get protection for these technological measures that were being employed to protect copyrighted work.[318]

III.7.i. Digital Rights Management - Meaning

Digital Rights Management (DRM) is a technology that lets right holders safely distribute and sell their content online in a digital form. With DRM content owners can configure access and usage rules for their own content. Access rules may address the price of the content, the frequency and duration of access and whether the user is authorised to save, print or transfer the content of the users. This allows for new business models such as trial before purchase, promotional previews, rentals based on play counts or expiration dates, subscriptions and purchases of streaming or downloadable media.

There are two elements of every DRM, "Technological protection measures (further referred to as TPM) defines in the Art. 6(3) of the INFOSOC Directive as any technology, device or component that, in the normal course of its operation, is designed to prevent or restrict acts, in respect of works

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[315] Access control technological measures are of various types including: (1) control access at the outlet, e.g., 'regional codes'; (2) control access at user level; (3) control access of acquired copy of the work, e.g., content scrambling system (CSS); and (4) control over subsequent access, e.g., serial copy management system (SCMS)

[316] They are called 'copy control TMs' because the majority of such TMs are used to prevent unauthorised copying though some are used to prevent other activities like unauthorised printing, etc. Examples of such TMs include CSS, CD Cops, key2Audio, MediaMax CD-3, etc.

[317] Arathi Ashok, *Technology Protection Measures and the Indian Copyright (Amendment) Act, 2012: A Comment*, 17 Journal of Intellectual Property Rights, 521, 523-24 (2012).

[318] Ibid.

or other subject matter, which are not authorised by the right holder of any copyright or any right related to copyright as provided for by law. Right management information (further referred as "RMI") legally defined as information which identifies the work, or information about the terms and conditions of use of the work and any numbers or codes that represent such information when any of these items of information is attached to a copy of a work or appears in connection with the communication of a work to public.

Technological protection measures and Rights management information joined together fulfil the general definition of DRM, therefore DRM enjoy also the full protection of law. Almost every new DRM implementation has been compromised and hacked and thus another layer of protection, apart from the technological, was needed. For TPMs and RMIs to be effective, their source of power must be externally derived and this is where anti-circumvention laws come into play. Ant-circumvention laws make it illegal to tamper with, alter, or otherwise work around the technical (software or hardware) implementations of TPM or RMI.[319] Consequently the entertainment industry lobbied to put the force of law behind DRM and thus prohibit circumvention of TPM, removal of RMI and trading in circumvention tools.

III.7.ii. International Legal Framework

Like most of the technologies, DRM technologies are not fool-proof and many of the DRM applications have been subject to circumvention.[320] The World Intellectual Property Organisation (WIPO) bought forward two internet treaties in 1996, representing the concerns of the international community to this emerging digital challenge. They are the WIPO Copyright Treaty (WCT) and the WIPO Performers and Phonograms Treaty (WPPT). Article 11 of the WCT[321] and Article 18 of the WPPT obligate the contracting parties to take adequate legal measures and effective legal remedies against the circumvention of "effective" technological measures used by the right

[319] Swaraj Paul Barooah, *Disruptive (Technology) Law? Examining TPMs and Anti-Circumvention Laws in the Copyright (Amendment) Act, 2012*, 5 NUJS Law Review, 583, 586-87 (2012).
[320] Pamela Samuelson and Scotchmer Suzanne, *The Law of Economics of Reverse Eengineering*, 111 Yale Law Journal, 1631 (2002).
[321] "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."

holders. Similarly Art. 12 of the WCT[322] and Art. 19 of the WPPT obligate the contracting parties to take 'adequate and effective' legal remedies against unauthorised tampering of rights management information and certain dealings with works or copies of works with the knowledge that the electric rights management information in those works have been tampered without authority. While these provisions have provided sufficient scope for flexible transposition of the spirit of these treaties into national legislation of contracting states, the general trend witnessed, particularly from the chief supporters of the treaty like the United States and the European Union, has been to take an approach highly in favour of right holders and information industries.[323]

III.7.iii. Digital Rights Management under Indian Legal Framework

After the amendment in 1994, the Indian Copyright Act, 1957 incorporated certain provisions related to protection of anti-circumvention technology. 'Plate' is defined to include those devices that aid or intend to aid the reproduction of works.[324] The provision used the term 'other devices' after specifying certain other technologies that are used for reproducing existing works. In this context, the issue is whether the circumventing technology includes 'plates'.[325] For instance, De-CSS is a technology meant to circumvent a protective technology called content scrambling system (CSS) which constitutes a two part interlocking system between digital video disc (DVD) and the DVD player.[326] If both these systems are authorised and complementary certain acts like copying will take place. Evidently, the technology is intended to stop unauthorised reproduction. As per the definition of 'plates' all the devices included therein are the ones capable of producing copies relating to different media in which they apply. Logically, the same is the case in respect of use of

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[322] "(1) Contracting Parties shall provide adequate and effective legal remedies against any person knowingly performing any of the following acts knowing, or with respect to civil remedies having reasonable grounds to know, that it will induce, enable, facilitate or conceal an infringement of any right covered by this Treaty or the Berne Convention:
(i) to remove or alter any electronic rights management information without authority;
(ii) to distribute, import for distribution, broadcast or communicate to the public, without authority, works or copies of works knowing that electronic rights management information has been removed or altered without authority."
[323] Dan Burk L and Julie Cohen E, *Fair Use infrastructure for rights management systems*, 15 Harvard Journal of Law and Technology, 49 (2001).
[324] 'Plate' is defined under Section 2 (t) of the Indian Copyright Act, 1957
[325] Arathi Ashok, *Technology Protection Measures and the Indian Copyright (Amendment) Act, 2012: A Comment*, 17 Journal of Intellectual Property Rights, 521, 524-25 (2012).
[326] Id. at p. 521

De-CSS in relation to the work protected by CSS. Therefore, De-CSS can be concluded to come within the purview of definition of plate under Section 2 (t) of the Copyright Act.

Liability is attracted only when plates are made or kept in possession for the purpose of making infringing copies of the work.[327] The term 'infringing copy' as per section 2 (m) of the Act means a copy made through reproduction in contravention of the provisions thereof. Therefore, an infringing copy is a copy which is the consequence of a reproduction prohibited by the Copyright Act. Therefore a clear connection has been established between the violation of the reproduction right and infringement of copyright. As long as the possession or manufacture of plates will not invite any liability. Applying this to the digital context, although the technology will require reproduction, as long as such reproduction for creating infringing copies, liability will not be attracted.

The Indian Copyright Act, 1957 permitted the use of works by third parties so as to ensure that the third parties can meaningfully enjoy their personal and social life.[328] This enjoyment would be prejudicially affected by equating plates and circumventing technology. This is one of the reasons which led other countries to enact a separate set of principles to deal with circumvention technology. The lack of provisions related to 'plates' in the Indian Copyright Act in other jurisdictions, aims to accommodate the new technology meaningfully so that the owners of the work as well as the public can enjoy and attain benefits of the work in a beneficial manner.[329] Expanding the scope of existing law so as to accommodate the latest technology, which itself has not been standardised nor for that matter completely evolved, will create a situation of further uncertainties leading to social disruption. This realisation appears to have paved way for the enactment of a new provision dealing exclusively with technological measures and its circumvention.[330]

III.7.iii.a. Technological Protection Measures under the Copyright (Amendment) Act, 2012

[327] Id. at p. 522
[328] Id. at p. 524
[329] Ibid.
[330] Ibid.

One of the most important changes made by the recent Copyright (Amendment) Act, 2012 is the introduction of specific provisions for protecting the technological measures applied by the copyright holder. As is evident from the statement of objects and reasons in the Copyright (Amendment) Bill, 2012 as well as debates in the Parliament, the DRM provisions were introduced primarily with the objective of facilitating India's membership in the WIPO Copyright Treaty and the WIPO Performers and Phonograms Treaty.[331] According to Sec. 65 A (1) relating to protection of technological measures, if any person circumvents an effective technological measure used for the purpose of protecting any of the rights conferred under the Copyright Act, with the intention of infringing such rights, s/he shall be punished with imprisonment which may extend up to two years and shall also be fined.

A. Subject matter of the Provision: The provision attaches liability to every person who 'circumvents an effective technological measure'. However, it is to be noted that neither the term 'circumvention' nor the terms 'technological measure' or 'effective technological measures' have been defined in the Act. The insertion of the word 'effective' is initially confusing. The issue which deserves attention here is 'can a truly 'effective' technical measure be circumvented in the first place?'[332]

Strictly interpreted, the dictionary definition would mean that if a TPM can be circumvented, it is not an 'effective' measure. However, such a definition would be contradictory to the purpose of the legislation. Looking at the rest of the sentence, there is nothing else which helps in understanding the scope of the word 'effective'. In fact, the corresponding provisions in the WCT and the WIPO Performances and Phonograms Treaty ('WPPT') have also left these terms undefined so that their member countries could contextualize them according to their domestic needs. In US, § 1201(a) (3) of the Digital Millennium Copyright Act, 1988 ('DMCA'), defines technological measures that 'effectively' control access to a work, as measures that require application of information, process or treatment in ordinary course of operation, with authority of the copyright owner, to gain access to the work.

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[331] Arul George Scaria, *Does India Need Digital Rights Management Provisions or Better Digital Business Management Strategies*, 17 Journal of Intellectual property Rights, 463, 463-64 (2012).

[332] Swaraj Paul Barooah, *Disruptive (Technology) Law? Examining TPMs and Anti-Circumvention Laws in the Copyright (Amendment) Act, 2012*, 5 NUJS Law Review, 583, 588-89 (2012).

In the EU, European Directive 2001/29/EC of the European Parliament defines 'effective' technological measures as those that are protected by access control or protection processes such as encryption, scrambling, or other transformation of the work or other subject-matter or a copy control mechanism, which achieves the protection objective. The Indian legislation however has left it completely open with no guidance from the text other than specifying that it will only cover actual circumvention.

Looking at the provision again, it is seen that not all anti-circumvention measures, even when against 'effective' measures, are illegal. The circumvented TPMs also need to have been applied for the specific 'purpose of protecting' copyrights, and this circumvention needs to be done with the 'intention' of infringing upon these rights. This is important as it does not grant any legal sanction to technical measures that a company may include in its goods which simply provide the company with an extra measure of control over the goods after sale rather than protecting copyright. Furthermore, inserting the 'intention' requirement means that the accused must have both the knowledge and desire to infringe upon the copyright.[333]

B. Activities Covered and Actors targeted: The new Indian provision uses the term 'who circumvents' indicating that the activity covered is that of circumvention. The activity intended to be covered is the avoidance or bypassing of an effective technological measure. Moreover, the words in the provision imply that there must be an actual circumvention of an effective TM. This means that liability is imposed on the person who does the act of circumvention.[334] The act of circumvention attracts liability only when there is an 'intention of infringing rights'. The activity of a person is covered only if he does the act with the desire to make an infringing copy.[335] The only actor targeted is the person who actually circumvents an effective technological measure applied to protect the work. All preparatory activities are excluded and consequently all persons who make such preparation.

C. Rights Protected and Remedy Prescribed: Section 65A provides that it can be applied for the purposes of protecting any of the rights conferred by this Act". This provides that any technological

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[333] Ibid.
[334] Arathi Ashok, *Technology Protection Measures and the Indian Copyright (Amendment) Act, 2012: A Comment*, 17 Journal of Intellectual Property Rights, 521, 526-27 (2012).
[335] Ibid.

measure applied for the protection of any and all rights provided under this Act will be covered. The first category of rights protected under the Act is the economic right. Among the major rights guaranteed under the title of economic right, the right of communication of the work to the public that is most significant in the online digital context. The next set of rights guaranteed under the 1957 Act is moral rights. The protection of these rights implies that technological measures that are employed for safeguarding integrity of works also gets protection. Apart from these rights, the performers' rights and the broadcast reproduction rights also get protection. The only remedy provided under the proposed amendment is of a criminal nature. Any person against whom violation of this provision is proved shall be imprisoned for maximum two years and shall also be liable to pay a fine for which no limits have been fixed.[336] The reason for this may be that the type of works could be totally different and the amount of loss that could potentially be caused to the owner is also likely to vary in magnitude.[337]

D. Express Exceptions: Section 65A (2) of the Copyright Act explicitly mentions that the provision shall not prevent any person from doing anything referred to therein for a purpose 'not expressly prohibited by the Copyright 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.

This exception ensures the balance required to this provision.[338] By expressly denying the applicability of this provision to anything not expressly prohibited by the Indian Copyright Act, 1957, it ensures that all the restrictions and limitations to copyright law continue to operate when TPMs are used. This is further supported by the phrase in the main provision – that TPMs must be for the "purpose of protecting" rights conferred by the Copyright Act. Thus the provision makes it quite clear that TPMs can be protected by legal sanction only when they are for the purposes of protecting rights conferred by the Copyright Act. Therefore the provision makes it explicit that

[336] Copyright Act, 1957 § (1).
[337] Arathi Ashok, *Technology Protection Measures and the Indian Copyright (Amendment) Act, 2012: A Comment*, 17 Journal of Intellectual Property Rights, 521, 525-26 (2012).
[338] Swaraj Paul Barooah, *Disruptive (Technology) Law? Examining TPMs and Anti-Circumvention Laws in the Copyright (Amendment) Act, 2012*, 5 NUJS Law Review, 583, 589-90 (2012).

TPMs can be protected by legal sanction only when they are for the purposes of protecting rights conferred by the Copyright Act. To put this discussion onto context, it is required to understand that copyright is a delicate balance between creator's rights and public interests. This balance is achieved by ensuring exceptions and limitations to copyrights even when TPMs are in place.

This proviso is one of the few legislations worldwide that explicitly mentions third parties who help circumvention and seems to exempt them from liability provided they fulfil certain conditions. These conditions include maintaining records of who seeks such help and the reasons they are circumventing the TPM. At the same time, these conditions carry privacy concerns. It is significant to realise that the anonymity that the internet brings, builds great value for the information produced when one removes this cloak of anonymity. There are primarily two privacy related concerns with TPMs. Firstly, in order to associate (digital) content with a purchaser, companies often require some sort of registration or submission of personal information. This allows companies to keep track of their user base, but also forces users to disclose their identity, which they may not always want to. The lack of viable alternatives to anonymously purchase such goods often means that the user does not have a 'real' choice as to whether she wants to disclose her identity or not.

Secondly, companies often introduce tracking mechanisms to follow up with the information gathered from step one. Tracking allows them to gather more information over their target audience as well as keep some measure of control over the digital file, thus allowing them to maximise rents. In addition to this, users who want to circumvent TPMs for fair dealing purposes or other legitimate reasons need to supply their personal details and/or reasons in order to be able to circumvent the TPM. In other words, personal information is required to be given to private companies, for an individual to take legitimate action that is outside the purview of copyright law.

Section 65A (2) provides exception dealing with encryption research.[339] These sub-clause in the provision has provided welcome relief to programmers and computer engineers, as well as users

[339] "(2) Nothing in sub-section (1) shall prevent any person from,(b) doing anything necessary to conduct encryption research using a lawfully obtained encrypted copy; (d) doing anything necessary for the purpose of testing the security of a computer system or a computer network with the authorisation of its owner; or (e) operator"

who take an interest in discovering and fixing security issues within TPMs as it explicitly provides them with a safe harbour. When it is read together with the fair dealing exceptions of research (§ 52), this allows one to not only examine and look into these security issues, but also to disclose and publish their research findings. As TPMs are externally 'imposed' technical measures which aren't always disclosed to the consumer, it is possible that the consumer may be using software/technology which may render them vulnerable to security risks without their knowledge. If the TPMs are properly disclosed to the consumer, this security risk can be reduced. The addition of a potential security risk to the previously mentioned privacy and interoperability concerns, is undesirable to say the least. Furthermore, as they attach liability to those who circumvent TPMs, anti-circumvention laws pose threats to those who seek to display the existence of, or solutions to security breaches caused by DRMs, thus disallowing means to address these concerns.

Section 65A (2) allow doing anything necessary to circumvent technological measures intended for identification or surveillance of a user.[340] The legislative intent to prioritize privacy over copyrights is evident in this provision. As mentioned above, DRMs by their nature, tend to require identification and/or surveillance. When a software or hardware is linked to an authorization of some sort, then personal information of the user is required for the purpose of identification. However, it is possible to ensure that there are multiple layers of anonymity between the user and the authorization check, which allow a user to show that she is authorized without necessarily revealing details of her identity. As an example, all authorized persons can have a login key, which are coded a certain way when entered. This can be made more secure by, for instance, combining a login key with a machine specific serial number of an authorized machine in a way that, when combined, they cannot be correctly separated into their two component parts once again.

This ensures that companies must provide such multi layered levels of security, anonymity and protection, if they want to insert TPMs. This provision puts the onus on TPM makers to do so, if they wish to use §65A against circumventors. This current portion of the provision directly

[340] "(2) Nothing in sub-section (1) shall prevent any person from, - (f) doing anything necessary to circumvent technological measures intended for identification or surveillance of a user."

addresses the privacy concerns listed above, and to the extent of the privacy issues not created by the third party proviso mentioned above, this successfully addresses them.

E. Facilitating Circumvention: In respect of the liability of a person who facilitates the creation of technology to circumvent Section 65A has incorporated a novel feature. The Indian Copyright Act explicitly provides that a third party can help a person to circumvent a technological measure provided such circumvention is not to do any activity prohibited by the Act.[341] To facilitate such circumvention and to monitor the same, Section 65A obligates that a record has to be kept of the person seeking such circumvention and also the reason for it.[342] The provision is incorporated considering the fact that it is not within the capacity of every person to have the technical knowhow to circumvent a technological measure applied to a work so as to satisfy his personal legitimate needs. In most cases of circumvention, there is a requisite for a certain degree of professional expertise and the section ensures that this professional expertise is made available to the common man.

III.7.iii.b. Rights Management Information

Rights management information (RMI)[343] is an information that identifies content protected by copyright or related rights, the rights owners in such content and the terms and conditions of use associated with it.[344] RMI enables the authors to enforce their moral right of attribution. It is an important aspect of digital management of rights. RMI has formed the ground for new licensing systems and can certify the authenticity of works and phonograms and can be a powerful means against copyright infringements.[345] The information found on the copy, booklet or cover of a

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[341] Copyright Act, 1957 § 65A (2) (a): "Provided that any person facilitating circumvention by another person of a technological measure for such a person 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.

[342] Ibid.

[343] WPPT, 1996 § 19: 'Rights management information' means information which identifies the performer, the performance of the performer, the producer of the phonogram, the phonogram, the owner of any right in the performance or phonogram, or information about the terms and conditions of use of the performance or phonogram, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a fixed performance or a phonogram or appears in connection with the communication or making available of a fixed performance or a phonogram to the public.

[344] IFPI, The WIPO Treaties: Protection of Rights Management Information, March 2003.

[345] Ibid, Executive Summary.

copyrighted product helped rights owners track and prove such illegal activity in the analogue world. RMI fulfils this function in the electronic environment.[346]

RMI often takes the form of an electronic watermark placed in protected content. Watermarks can exist on their own simply as a rights owner's 'label'[347]. Watermarks may also interact with devices that receive or play content. Digital watermarking is a technique that enables information to be embedded within digital content. This information can work as the copyright holder's identity or license rules that apply to the content. Watermarking is the direct embedding of additional information into the original content.[348] Digital watermarks give consumers confidence in the authenticity of the source of a work or phonogram. The manipulation of RMI can lead consumers to draw wrong conclusions about permitted uses and thus can have an economic effect equivalent to common fraud. One of the main aims of protection of RMI is prohibition against manipulation of RMI. In this way RMI benefits consumers.

The WIPO Treaties protect all such RMI: information about works, phonograms and performances as well as the identification of authors, phonogram producers, performers or other right owners.[349] Most countries are finding that their copyright laws require some modernising to deal adequately with the legal protection of RMI. In India the Copyright (Amendment) Act 2012 has incorporated a specific provision relating to protection of RMI in the Copyright Act, 1957.[350] As per the newly inserted provision, Section 65B, manipulation of RMI will attract criminal

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[346] Ibid.
[347] Ibid.
[348] P Ghatak, R C Tripathi and A K Chakravarti, *Digital Rights Management: An Integrated Secure Digital Content Distribution Technology*, 9 Journal of Intellectual Property Right, 313, 330-331 (2004).
[349] WIPO Performance and Phonogram Treaty § Art. 19: "Contracting Parties shall provide adequate and effective legal remedies against any person knowingly performing any of the following acts knowing, or with respect to civil remedies having reasonable grounds to know, that it will induce, enable, facilitate or conceal an infringement of any right covered by this Treaty: (i) to remove or alter any electronic rights management information without authority; (ii) to distribute, import for distribution, broadcast, communicate or make available to the public, without authority, performances, copies of fixed performances or phonograms knowing that electronic rights management information has been removed or altered without authority."
[350] Copyright Act, 1957 § Section 65B. "Any person, who knowingly (i) removes or alters any rights management information without authority and (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."

liability and the same provision prescribes the criminal remedy in respect of unauthorised manipulation of RMI.[351]

III.8. Chapter conclusion

In this juncture it becomes important to understand the implications of the rulings of MP3.com and Napster on the MP3 technology. The outcome of the above mentioned decisions has serious bearing on the issue of the adequacy of existing legal framework to deal with the new challenges that the electronic environment poses.[352] The copyright protection attempts to maintain a balance between the rights of the authors and copyright holders over their work and the right to public access to information.[353] The increasing use of internet in the present society has disturbed this balance. It is evident in the way the unauthorised copying is facilitated. In many cases the idea of free access to information is overestimated. The government attempted to deal with the challenge posed by internet on law of copyright by way of institutional regulatory efforts.

The courts are enforcing the traditional copyright law to deal with the challenges faced by the recording industries because of the widespread use of MP3 technology. However, it is observed that the courts did not consider there are differences in respect of operation of copyright law in real space and cyber space.[354] Internet has changed the way in which people access and receive information. Copyright should protect information. However, the main concern lies in respect of the scope and extent of copyright protection in the electronic environment. The existing legal standards are not able to cope with technological developments, since the legislators were not able to anticipate such technological advances at the time of drafting of law.[355]

The scholars who advocate widespread free dissemination of information points have emphasised the importance of the P2P file sharing systems. They have emphasised that the decentralised P2P system enable the user control the information over the internet and it has the capability of altering

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[351] Ibid.
[352] Maria Anestopoulo, *Challenging Intellectual Property Law in the Internet: An Overview of the Legal Implications of the MP3 Technology*, 10 Information and Communication Technology Law, 320, 326-27 (2001).
[353] Ibid.
[354] Ibid.
[355] Liptak, A, *Is litigation the best way to tame new technology?* (Aug. 10, 2014, 2 PM) http://www.nytimes.com/library/tech/00/09/biztech/articles/02napster.html.

the architecture of the internet.[356] The music industry has emphasised that the purpose of the litigation is not to discard the use of MP3 technology, but to promote the operation of digital music over the internet. On the basis of the rights granted under the copyright law the recording industry, sought to regulate the use of the MP3 technology in the internet. The failure of creating and establishing an MP3 industry online justifies the reactions of the record industry towards MP3 technology.

The music industry is going through a transition. Over the internet the consumer-user perceive the music in MP3 format as a commodity, available free of charge. The recording industry is in a powerful position considering the most important asset, they own. At the same time demands of the consumer-users should be given due consideration, since the increasing importance MP3 technology indicates a rising demand for free music and overall there is a general inclination for demand of digital music. Moreover, the music industry has to take into consideration that many artists are positive for the distribution of music online.[357]

CHAPTER IV

CHALLENGES IN ENFORCEMENT OF COPYRIGHT LAW IN INDIA: A STATUS REPORT

THE FRAME

Mere guaranteeing of certain rights through statutory enactments does not lead to effective protection of the rights holders. Effective enforcement of the rights becomes sina qua non for the successful application of any legislation. It is contextual to maintain that enforcement of

[356] Sony Corp. v. Universal Studios, 464 U.S. (1984).
[357] Maria Anestopoulo, *Challenging Intellectual Property Law in the Internet: An Overview of the Legal Implications of the MP3 Technology*, 10 Information and Communication Technology Law, 320, 328-29 (2001).