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History of Music Piracy
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History of Music Piracy: From Cassette to BitTorrent

Many adults alive in the 1980s can probably remember the excitement of acquiring their first home audio tape deck. A whole new world had been opened up to consumers who were interested in music and all forms of audio recording. Now, for the first time individuals could reproduce albums, albeit at a slight sound quality loss, without having to buy an additional copy from a record company. Music lovers felt liberated, while the music industry was scared out of their minds. Some people in their copying did not violate copyright law; fair use does allow some forms of copying. However, many people took advantage of this new technology to either save themselves money (by not buying a legitimate official release), or to make themselves money (by selling copied albums). The music industry attempted to crack down by starting the “Home Taping is Killing Music” campaign, and from that point on, the recording industry and pirates have been engaged in an epic battle involving lawsuits, criminal prosecutions, and an arms-like technology race.

Today, the recording industry is even more concerned about music piracy than it was in the 1980s. Gone are tape decks and with them the analog world. Digital technology utilizing MP3s and peer-to-peer file sharing technology has created an even more nefarious problem for the recording industry. Digital music files, namely MP3s and later the iPOD revolutionized how music is now consumed. The relatively small amount of data that composes a MP3 coupled with the rapid development of hard drives that feature an ever increasing memory capacity, enabled home computer users to literally store their entire music collection on their computer. As an

extension to this, peer-to-peer file sharing software, beginning with Napster and now becoming most efficient with BitTorrent, has also allowed people to download an entire music collection, for free. The music industry is now most concerned with this downloading of music.

This paper will give a brief overview of the various technologies that helped to propel music piracy before delving into how music piracy relates to the copyright act, and how the U.S. judicial system and Congress have responded to music piracy. Finally, an examination of the actual effect of piracy on the music industry will be laid out, followed by a look at efforts by the music industry to curb music piracy. In summation, an evaluation of the successes and failures of the fight against music piracy will be presented with an emphasis on the best approach for a new way forward.

Technology

Technology has been the primary driver behind the advancement of music piracy. As technology becomes more sophisticated, piracy tends to increase. An understanding of the technology involved in music piracy is helpful for a more complete comprehension of the evolution of music piracy.

Reel-to-Reel Player

Modern music piracy started with the advent of reel-to-reel music players in the 1960s, which allowed individuals to copy music on one reel-to-reel music player to another reel-to-reel music player. However, this was not an ideal format for mass copying due to the bulky nature of the reel-to-reel players, and the large size of the actual reel-to-reel tape.

Cassette Tape

The introduction of the cassette tape in the 1970s alleviated much of the burdens that the reel-to-reel players posed.¹ The cassette tape had the re-recordable features of the reel-to-reel tape, but was significantly smaller and less expensive. With the introduction of the Walkman in the 1980s, cassette tape sales exploded and passed sales of the LP.² While there had always been pirated LP copies that consumers could buy from illicit businesses, the cassette tape introduced to the music industry a new dilemma. With a cassette deck an individual could do the pirating themselves. Pirating became as easy as having a friend over and asking them to bring the new U2 album. With the album in an individual's possession copying could be done relatively quickly and without much loss in sound quality. Certain limitations presented themselves, such as a loss in sound quality after repeated copies, but record companies were beginning to see a significant amount of people copying albums in their homes.

Compact Discs

Compact Discs (CDs) were developed in the early 1980s but did not reach their current height of popularity until the late 1980s and the early 1990s. However, it was not CDs as much as CD-Rs that caused another revolution in music piracy. CD-Rs are writable CDs, which enabled individuals to copy music and data from one CD or CD-R to another CD-R. Just as with tapes, the development of CD-Rs allowed individuals to pirate music in the comfort of their home. Copying CDs with CD-Rs was still a cumbersome process. It required possessing an actual CD, with the data one wanted, to be able to make a CD-R copy. The availability of music computer files was the next step in the progression of music piracy technology.

MP3

¹ Eric D. Daniel, C. Dennis Mee, Mark H. Clark. *Magnetic Recording: The First 100 Years*. The Institute of Electrical and Electronics Engineers. (1999).

² Paul du Gay, Stuart Hall, Linda Janes, Hugh Mackay, Keith Negus, *Doing Cultural Studies: The Story of the Sony Walkman*. Sage Publications Ltd. (1997).

The MP3 became the de facto computer file most synonymous with music piracy. Developed in the late 1980s, but not entering wide spread use to the late 1990s, the MP3s small size and faithful reproduction of sound, made the MP3 especially popular with college students and many others who began using peer-to-peer software in the late 1990s.³

Peer-to-Peer Software

In partnership with MP3s, peer-to-peer software was the final and most controversial technological advancement that aided music piracy. Peer-to-peer software, as made famous by Napster, essentially allowed many users on a network to search and download each other's files. Programs like Napster used a client-server structure, which designated some tasks to the Napster server (like searching), while other tasks (like downloading of a file) were conducted in a truly peer-to-peer manner. This enabled users to download music and other files at what seemed like a relatively quick speed at the time. However, downloaders were limited by what the uploader's upload speed was.

BitTorrent

The next progression in peer-to-peer software came in a peer-to-peer communications protocol for file sharing, called BitTorrent. The BitTorrent protocol enabled users to connect with many users at the same time, and therefore speed up download speeds that were before limited by a single user's upload speed. Now users saw their download speeds increase exponentially; entire albums could be downloaded in less than 5 minutes instead of the half hour to 45 minutes that a peer-to-peer network like Napster could require.

Digital Age

³ Jack Ewing, *How MP3 Was Born*, Business Week, March 5, 2007, http://www.businessweek.com/print/globalbiz/content/mar2007/gb20070305_707122.htm

The digital age lessened many of the deficiencies present in analog music copying. First off, there is no loss of quality in subsequent digital copies of an album. Second, CDRs can be burned in a faster time period than cassettes could be dubbed. Finally, it was no longer necessary to locate a friend who had a copy of the latest album; instead, peer-to-peer software enabled individuals to locate thousands of people within seconds who may have had the specific album or song they were seeking.

Copyright Act

The genesis of most music piracy lawsuits begins with the Copyright Act. The Copyright Act gives copyright owners a number of rights. Infringement of copyright occurs when an individual can show ownership of material and can demonstrate that the alleged infringer violated at least one exclusive right of copyright holders under 17 U.S.C. § 106.⁴ An owner of a copyright has the exclusive right to reproduction of the material.⁵ An owner of a copyright also has the exclusive right to distribution of the material.⁶

A common defense to copyright infringement is fair use.⁷ To determine if fair use of a copyrighted work is allowed, one must take into consideration: (1) the purpose and character of the use; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for the value of the copyrighted work.⁸ Fair use has not been a very successful defense in many musical works copyright infringement cases, as illustrated below.

⁴ 17 U.S.C. § 501(a).

⁵ 17 U.S.C. §106(1).

⁶ 17 U.S.C. §106(3).

⁷ 17 U.S.C. § 107

⁸ Id.

Cases

A series of seminal U.S. court cases have helped shaped where copyright law is today. An examination of the 1984 Sony case will begin this section to provide a context for cases that consist of a new technology that has infringing and non-infringing uses. Subsequently more modern cases that deal with peer-to-peer software and downloading will be discussed.

Sony Corp. v. Universal City Studios

Sony Corp., involved a new technology, a home video tape recorder called Betamax.⁹ The Betamax enabled individuals to record television broadcasts onto a video tape.¹⁰ Various copyright owners of broadcast television programs sued, claiming that Sony was liable for the copyright infringement committed by users who purchased Sony's Betamax and subsequently recorded copyrighted television programs with it.¹¹ The Court eventually found that Sony could not be held liable for contributory copyright infringement for the possible uses by its customers, because the units were sold for legitimate purposes and had substantial non-infringing uses.¹²

Although, Sony is not a music piracy case, Sony's holding is relevant to music piracy in so much as Sony deals with a technology that has the potential to be used for copyright infringing purposes. Sony provided a compelling legal argument for developers of peer-to-peer software, who found their software being used by many people for infringing uses. If the developers of such software can prove that the software is being distributed for legitimate purposes and that the software has substantial non-infringing uses, the developers of the software have a good chance under Sony, not to be held liable for contributory copyright infringement.

A&M Records v. Napster

⁹ Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417 (1984).

¹⁰ *Id.* at 420.

¹¹ *Id.* at 419.

¹² *Id.* at 456.

The first case concerning peer-to-peer software and its potential liability for contributory copyright infringement was A&M Records v. Napster.¹³ Napster was a company that created a peer-to-peer computer program, also called Napster, which allowed users of Napster to upload and download MP3s from each other.¹⁴ The plaintiffs, A&M Records, were a record company who claimed that Napster was a contributory and vicarious copyright infringer.¹⁵ The lower court preliminarily enjoined Napster "from engaging in, or facilitating others in copying, downloading, uploading, transmitting, or distributing plaintiffs' copyrighted musical compositions and sound recordings, protected by either federal or state law, without express permission of the rights owner."¹⁶

On appeal, Napster maintained that its users were not involved in copyright violation, but instead were exempt because their downloading qualified as fair use.¹⁷ The Ninth Circuit Court of Appeals ruled against Napster, holding that Napster infringed at least two of A&M Records' rights as copyright holders, "the rights of reproduction, § 106(1); and distribution, § 106(3)."¹⁸ The Court also distinguished A&M Records from Sony, noting that in Sony, the company Sony had little to no control over any infringing use conducted by purchasers of their Betamax video recorder.¹⁹ However, in A&M Records, Napster maintained control over its users and had the ability to restrict infringing behavior, but instead chose not to.²⁰

A&M Records was an important case in the music piracy field, as it was the first case that effectively shut down a peer-to-peer file sharing network. Before A&M Records, there was a question of whether or not a Napster like file sharing network could survive under a Sony

¹³ A&M Records v. Napster, Inc., 239 F.3d 1004, (2001).

¹⁴ A&M Records, 239 F.3d 1011, (2001).

¹⁵ Id.

¹⁶ Id.

¹⁷ Id. at 1014

¹⁸ Id.

¹⁹ Id. at 1020.

²⁰ Id. at 1027.

analysis. However, the court in A&M Records clearly distinguished a Napster-like file sharing network from Sony's Betamax video recorder. Napster still had substantial control over their file sharing network, and could have taken steps to curb illicit downloading on their network. A&M Records created a standard where, if the owner of a network has substantial control over the network and is made aware of illegal copyright violations being undertaken by a user on the network, the owner of the network must take affirmative steps to stop the copyright violations. A&M Records also eliminated the fair use argument from peer-to-peer file sharing networks' arsenals, holding that sampling and space-shifting were not a valid fair use.²¹

MGM v. Grokster

The next case regarding copyright liability for a peer-to-peer file sharing network was MGM Studios, Inc. v. Grokster, LTD.²² Once again, as in A&M Records, MGM Studios involved a peer-to-peer file sharing network being sued for inducing copyright infringement.²³ While Napster's software contained a client-server relationship, where certain tasks such as searching were run off of Napster's servers, Grokster decentralized their involvement, and instituted a pure peer-to-peer system, which limited their authority in policing the software for copyright violations.²⁴ Grokster hoped that their limited involvement would shield them from copyright liability.²⁵ However, the Court pointed out that Grokster's marketing and business plan clearly showed intent to promote copyright infringement amongst Grokster's users.²⁶ Ultimately, the Court held that Grokster, by distributing their software with the intent of encouraging its use to infringe copyrights, as revealed by "clear expression or other affirmative

²¹ A&M Records, 239 F.3d 1011, (2001).

²² MGM Studios Inc. v. Grokster, Ltd., 545 U.S. 913 (2005).

²³ Id. at 918.

²⁴ Id at 920.

²⁵ Id at 921.

²⁶ Id. at 924.

steps” used to cultivate infringement, was liable for the ensuing acts of infringement by third parties.²⁷

MGM Studios, was in many ways a reexamination of Sony. While the Court upheld the basic principle of Sony that new technology should not be barred if it is capable of substantial noninfringing uses, the Court ultimately ruled against Grokster. The attention that the Court gave to the marketing and promotional efforts by Grokster provides guidance to people or companies who wish to develop peer-to-peer software in the future. MGM Studios appears to leave open a window of legality for developers and distributors of peer-to-peer software that follow the decentralized design structure of Grokster, but can not market or promote the software for copyright infringing purposes. In fact the number of peer-to-peer networks that operate seemingly without much impediment from the record industry, seems to suggest that perhaps the recording industry has conceded that the developers or distributors of these networks are not liable for contributory copyright infringement. On the other hand, perhaps the record industry figured it would be too expensive and time consuming to legally pursue all of the peer-to-peer networks currently operating. What is known is that the recording industry has shifted its strategy to targeting individual downloaders rather than the networks that make the downloading possible.

Elektra v. Barker

In this recent case that has yet to be decided, Elektra Records alleged that Barker, a nursing student living in the Bronx, used an online peer-to-peer software program to download and make available copyrighted music compositions.²⁸ As a result, Elektra claimed that Barker was violating Elektra’s exclusive rights of reproduction and distribution under the Copyright

²⁷ Id at 920.

²⁸ Elektra v. Barker, Pl.’s Compl. ¶ 12 (April 18, 2005)
http://www.ilrweb.com/viewILRPDFfull.asp?filename=elektra_barker_complaint

Act.²⁹ Barker has moved to dismiss arguing that “making available” music is not sufficient to state a claim under the Copyright Act.³⁰ Barker’s argument is somewhat novel and the case has attracted a lot of attention. Various amicus curiae briefs have been filed and sometime soon, the question of whether or not “making available” music is sufficient to sustain a claim under the Copyright Act will be answered by a New York District Court judge.

Congress’s Response

Part of the recording industry’s efforts to curb music piracy has been to aggressively lobby Congress to pass legislation that would strengthen copyright protection, and generally further the recording industry’s interests. As evidenced by the Acts below, the recording industry has been successful in their lobbying efforts.

Audio Home Recording Act

The Audio Home Recording Act was enacted in 1992, in response to development of the Digital Audio Tape (DAT) recorder.³¹ The music industry was troubled by the capability of DAT recorders to make faithful copies that did not degrade significantly with subsequent copies.³² The Audio Home Recording Act required manufactures of the DAT recorders to do two important things: (1) install a Serial Copy Management mechanism in the DAT recorders which limits the number of copies that can be made from an original DAT, and (2) pay a percentage of royalties to the recording industry based on the number of DAT players and DAT media sold.³³

²⁹ Id.

³⁰ *Elektra v. Baker*, Def’s Compl. Pg. 5.

http://www.ilrweb.com/viewILRPDFfull.asp?filename=elektra_barker_replymemomotdis

³¹ *Audio Home Recording Act of 1992*, Pub. L. No. 102-563, 106 Stat. 4237.

³² Jocelyn Dabeau and William Fisher, *The DAT Controversy*, <http://www.law.harvard.edu/faculty/tfisher/music/DAT.html>

³³ *Audio Home Recording Act of 1992*, Pub. L. No. 102-563, 106 Stat. 4237.

The Audio Home Recording Act was most significant for its implementation of a Digital Rights Management (DRM) scheme. DRM refers to technology that is used, often by copyright owners, to control access and use of digital data or hardware. The Audio Home Recording Act was one of the first instances where the recording industry aggressively pursued a DRM approach to combat potential music piracy. DRM would later be used by the recording industry in a more infamous fashion, by installing DRM technology in music CDs.³⁴

No Electronic Theft Act

The No Electronic Theft Act (NET Act) was passed by Congress in 1997 and allowed for criminal prosecution of individuals who engage in copyright infringement, even if those individuals are not gaining any monetary profit or commercial benefit from the infringement.³⁵

The NET Act also increased statutory damages for copyright infringement by 50%.³⁶ The NET Act was promoted by the recording industry largely in response to the United States v.

LaMacchia, case.³⁷ In LaMacchia, the defendant was accused of distributing copyrighted

software over the Internet, but the case was ultimately dismissed because LaMacchia was

distributing the software for free, and under the Criminal Wire Fraud Act under which

LaMacchia was prosecuted, there must be some evidence of financial gain by the defendant.³⁸

The NET Act closed this loophole, and by doing so created liability for users on peer-to-peer

networks who were downloading and uploading copyrighted works.

Digital Millennium Copyright Act

³⁴ Robert McMillan, *Settlement Ends Sony Rootkit Case*, PC World, May 23, 2006.

<http://www.pcworld.com/article/id,125838-page,1-c,unresolvedtechstandards/article.html>

³⁵ Pub. L. No. 105-147, 111 Stat. 2678 (1997) (codified as amendments to 17 U.S.C. 101-803, and 18 U.S.C. 2319).

³⁶ *Id.*

³⁷ Meiring de Villiers, *Free Radicals In Cyberspace: Complex Liability Issues in Information Warfare*, 4 Nw. J. Tech. & Intell. Prop. 44, 2005.

³⁸ *Id.*

The Digital Millennium Copyright Act (DMCA): (1) criminalizes construction and distribution of technology, devices, or services that are used to circumvent DRM measures, (2) criminalizes the act of circumventing an access control, even when there is no infringement of copyright itself, and (3) increases the penalties for copyright infringement on the Internet.³⁹ The DMCA thus makes it illegal for individuals to circumvent or tell others how to circumvent various DRM measures that the recording industry has put in place. This has given in theory strong protection to various DRM mechanisms that the recording industry chooses to use.

Protecting Intellectual Rights against Theft and Expropriation Act

The Protecting Intellectual Rights against Theft and Expropriation Act (Pirate Act), is a bill currently pending in the U.S. Congress that seeks to give federal prosecutors the authority to file civil lawsuits against copyright infringers.⁴⁰ While the NET Act allowed federal prosecutors to bring criminal charges against copyright infringers, as of 2005 no criminal charges had been filed.⁴¹ It is the hope of the RIAA and the record industry that even though the Justice Department has yet to bring a criminal prosecution under the NET Act, the Justice Department would be more likely to bring civil claims under the Pirate Act due to the lower burden of proof required for a civil suit.⁴² If the Pirate Act passes it will be significant in so much as the government would be getting involved in bringing civil copyright lawsuits, which have in the past always been the responsibility of copyright owners.⁴³

Effect of Piracy on the Music Industry

³⁹ *The Digital Millennium Copyright Act of 1998*, Pub. L. No. 105-304, 112 Stat. 2860 (1998)

⁴⁰ S. 2237, 108th Cong. 2d Session (Mar. 25th, 2004).

⁴¹ Fara Tabatabai, *A Tale of Two Countries: Canada's Response to the Peer-To-Peer Crisis and What it Means for the United States*, 73 Fordham L. Rev. 2355 (2005).

⁴² *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 361 (1991).

⁴³ Fara Tabatabai, *A Tale of Two Countries: Canada's Response to the Peer-To-Peer Crisis and What it Means for the United States*, 73 Fordham L. Rev. 2356 (2005).

The actual effect of piracy on the music industry is a hotly disputed issue. The RIAA's data suggests that the retail value of shipments of recorded music in the U.S. slumped from around \$13.5 billion in 1999 to \$9.5 billion in 2006.⁴⁴ While retail sales have dropped, a market for digital downloads has emerged and steadily grown since 2004.⁴⁵ Digital sales approached \$2 billion in 2006.⁴⁶ Even taking into account digital sales, clearly something is amiss within the recording industry.

On the other hand, there are studies that support the notion that downloading has not had a negative impact on the music sales. A study published in the *Journal of Political Economy* found that that illegal music downloading has no noticeable effect on music sales.⁴⁷ The study tracked downloads on several OpenNAP peer-to-peer servers and then compared that data to record sales.⁴⁸ The study found that albums that saw significant sales also were heavily downloaded.⁴⁹ However, even though certain albums were downloaded heavily, the study still claimed that the downloading did not have to show any relationship to less album sales.⁵⁰ Instead, the authors claimed that any decline in music sales was more likely attributable to stores carrying less inventory and with the recording industry's figures based on units shipped rather than units sold, that that could skew statistics on music sales.⁵¹

Music Industry's Response to Music Piracy

⁴⁴RIAA, *2006 Year-End Shipment Statistics*, <http://www.riaa.com/news/newsletter/pdf/2006yrEndShipments.pdf>

⁴⁵ Id.

⁴⁶ Id.

⁴⁷ Felix Oberholzer and Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis*, *Journal of Political Economy*, 2007.

⁴⁸ Id.

⁴⁹ Id.

⁵⁰ Id.

⁵¹ Id.

The most notorious practice of the Recording Industry Association of America (RIAA) has been its recent strategy of suing end users.⁵² The RIAA has gone out of their way to target and sue casual downloaders, with one of its first suits naming a 12 year old girl as a party.⁵³ The goal of the RIAA is to limit the amount of music being trafficked over peer-to-peer servers. The RIAA has in many ways been successful, as there are less and less music files available on peer-to-peer servers.⁵⁴

The RIAA by filing these lawsuits is seeking to do more than just recoup money from infringers. Rather, it appears the RIAA has undertaken to try to change the psyche of the average downloader. At its core, the recording industry sells a CD with packaging that contains artwork and often liner notes. All of what the recording industry is offering can be downloaded online, burned, printed out, and packaged together by an individual for a fraction of the cost that that individual would pay for it in the store. This fact is creating a legitimization crisis for the recording industry. If there are no penalties, and if the individual downloader does not feel any guilt or remorse downloading music, it is very likely that that individual will continue to do so. Why would someone pay for something they could get for free? The recording industry, instead of trying to appeal to one's conscious, is trying to scare people away from downloading.

Conclusion

There is an old business adage that the "customer is always right." The recording industry has taken this old business advice, and turned it on its head, by actually suing many of

⁵² Peter K. Yu, *P2P and the Future of Private Copying*, 76 U. Colo. L. Rev. 654. (2005).

⁵³ Racquel C. Callender, *Harmonizing Interests on the Internet: Online Users and the Music Industry*, 48 How. L.J. 812, (2005).

⁵⁴ Bhattacharjee, S., Lertwachara, K, Gopal, R. and Marsden, J, *Impact of Legal Threats on Online Music Sharing Activity: An Analysis of Music Industry Legal Actions*, Journal of Law and Economics, (2006).

its customers. There is also another saying that “drastic times call for drastic measures.” From their actions, it appears that the recording industry is heeding the latter advice.

Indeed, the current recording industry’s business model is in jeopardy. When consumers can get a product for free, rather than pay for it, they often will. Peer-to-peer networks have given music consumers this seductive option. While the recording industry has been very successful in the court cases it has brought, and the legislation it has lobbied to get passed, downloading and piracy still continues. This presents a difficult strategic problem for the recording industry.

The recording industry’s current course of suing small time downloaders is a questionable strategy. While it certainly has had some short term success in limiting downloading, the long term ill will that this strategy has created amongst the recording industry’s consumer base could be far more damaging than the downloading ever was. Instead the recording industry would be wise to try to offer some value added content that can not easily be downloaded. Better packaging and other exclusives would provide a reason for music consumers to once again want to purchase the legitimate album. An appeal to the morals of the American people might also provide the recording industry some traction in encouraging music purchases.

Musicians and the recording industry do have many rights under the Copyright Act that are currently being violated by millions of people worldwide everyday. It is sensible that they should seek to enforce their rights. However, as history has shown, completely stopping music piracy is next to impossible. In the future, the recording industry will have to take a hard look at their business model and decide if aggressively pursuing individual downloaders is the best

strategy for their business. It is almost certain, though, that downloading and music piracy will likely continue no matter what the recording industry chooses to do.