EXHIBIT 1

ARISTA RECORDS LLC, et al. v. LIME GROUP LLC, et al.

EXPERT REPORT OF ARAM SINNREICH

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I. BACKGROUND AND QUALIFICATIONS.

A. Retention by Defense.

I have been retained by the defendants to contribute my expert opinion to the damages portion of the suit *Arista Records LLC, et al. v. Lime Group LLC, et al.* A copy of my *curriculum vitae* (CV) is attached as Exhibit 1 to this report.

As my CV shows, I am currently employed as Assistant Professor, Journalism & Media Studies, at Rutgers University's School of Communication & Information. I am also a founding partner of Radar Research, Inc., a consultancy and custom research firm founded in 2005 and focused on the intersection of culture, business, and technology. Prior to joining the Rutgers faculty in 2010, I was a Director at OMD Ignition Factory, a marketing innovation unit inside of a large media agency. Prior to that, I was employed from 2007-2009 as Visiting Assistant Professor at NYU Steinhardt, in the Department of Media, Culture and Communication. Prior to that, I was a doctoral fellow and lecturer at the Annenberg School for Communication at the University of Southern California, where I received my Ph.D. in 2007. During this time, I was also a freelance consultant for media and technology clients in need of research and strategic advice. Prior to that, I was employed at the Internet research firm Jupiter Research from 1997-2002, where I advanced from the rank of Research Associate to Senior Analyst, and was responsible for managing both the Music and the Policy areas of research. During this time, all of the plaintiffs in this case, and/or their parent companies, were Jupiter customers, purchasing my research reports and attending the conferences I organized and at which I presented. During this period, I also obtained a Masters degree from the Columbia University School of Journalism. Prior to this, I was employed in a variety of capacities, including litigation paralegal at the firm of Sinnreich, Wasserman, Grubin & Cahill, and as a classified ad sales representative at *The New York Press*. Prior to this, I was enrolled as an undergraduate at Wesleyan University, where I received my BA in 1994. During this time, I was both on the board of directors and on the air at my college radio station (WESU) for three years, and I served as an intern in the A&R department at major record label SBK in New York.

Throughout my career, music and digital technology have been the primary areas of my research and expertise. I have written a book about music and technology (*Mashed Up, University of Massachusetts Press*, 2010), as well as academic articles on music and technology in a variety of peer-reviewed journals, and journalistic articles on these subjects in publications including *The New York Times, Wired News, Truthdig*, and *Billboard.*[1] I have contributed expert testimony to other court cases, including *Universal Music Group v. Lindor*,

[1] A list of all publications I have authored in the previous ten years is attached as Exhibit 2 to this report.

RealNetworks v. MLB Advanced Media, *MGM v. Grokster*, and the class action suit against Sony BMG regarding its use of "rootkit" copy-control technologies on CDs. I have lectured about these subjects at dozens of universities from Yale Law School to the University of Tokyo, spoken on these subjects at scores of industry and academic conferences, and contributed expert opinion to hundreds of news articles and broadcasts. From time to time, I have offered my views on music-related topics on two blogs: Radar Waves, a now-defunct online publication of my consultancy, and Aram Squalls, a personal blog launched in 2004.[2] I have also taught classes at both undergraduate and graduate levels on subjects including "Music as Communication," "Musical Cultures and Industries," "Topics in Digital Media," and "Copyright, Commerce and Culture." And I have been a working musician for nearly 20 years, composing songs and playing with a variety of bands and artists at well-known venues across the country including the Brown Derby (Los Angeles), the Green Mill (Chicago), Dance Theater Workshop (NYC) and the Knitting Factory (NYC and Hollywood).

In summary, I have devoted my life to music, and my career to understanding its complex relationships with industry and technology.

B. Areas of Expertise.

My areas of expertise relevant to damages in this case include knowledge, understanding and quantitative and/or qualitative assessment of the following:

- Consumer behavior in the music industry, especially with respect to digital media.
- The history and structure of the music industry, especially from the 1980s to the present.
- The role of digital technologies in consumer culture.
- The role of digital technologies in changing the relationships between recording artists, industry and consumers.
- The availability of free music via the Internet, and the ways in which consumers access and use it.
- The structure of licensing and remuneration in the music industry, and emerging changes in those structures.
- The nature and mechanism of peer-to-peer file sharing, and the variety of platforms and providers that have emerged over the past 12 years.

2 These blogs can be accessed at http://blog.radarresearch.com/ and http://aramsinnreich.typepad.com/ respectively.

I have been retained by the defendants in this case specifically to offer an opinion on the extent to which LimeWire's infringement caused damage or provided benefits to the plaintiffs, the extent to which the plaintiffs' own conduct may have contributed to their own alleged losses, and the likely effects of an award of damages against LimeWire on the state of licensed and unlicensed digital music distribution. For my written and oral testimony, as well any additional tasks such as deposition, my firm, Radar Research, is being compensated at the rate of $300/hour.

C. Summary of Opinions.

As discussed at length below, my opinions in this matter can be grouped into three general categories:

i. Plaintiffs' Losses Cannot be Substantially Attributed to LimeWire.

In this section, I discuss the many economic and technological factors responsible for the decline in recorded music sales, especially in the CD format category, as well as the numerous alternative methods that exist for consumers to access music freely online. I also discuss the many ways in which file sharing technology helps labels and artists to promote and monetize their music.

ii. The Labels' Own Conduct Has Contributed to Their Losses, to the Extent That Such Losses Exist.

In this section I describe many of the technological, strategic and reputational errors the plaintiffs have committed in recent years that have contributed to any economic challenges they have faced during that time.

iii. Free Downloading Will Continue Regardless of Damages Assessed Against LimeWire.

In this section, I discuss my primary reasons for concluding that the judgment against LimeWire, no matter its size or severity, will have little or no effect on the availability of free music for online consumers. There are two primary reasons for concluding this. First, heavy financial damages incurred by previous digital music distributor defendants have had no evident effect on the overall availability of free music online. Second, the technology for enabling free peer-to-peer music exchanges is impervious to legal and economic challenges because it is open source, widely distributed, and self-replicating.[3]

[3] In addition to the specific facts and data sources cited herein, I have also considered on an ongoing basis the sources listed on Exhibit 3 to this report.

II. STRUCTURE AND HISTORY OF THE MUSIC INDUSTRY IN RECENT DECADES.

A. Technological Development.

i. Distribution Formats.

Music distribution formats have undergone several significant paradigm shifts in the past three decades. During the 1980s, the compact cassette surpassed the LP as the dominant form of commercial music distribution, due in part to its portability via the Sony Walkman, and in part to its home-taping capacity. In the early 1990s, however, the CD ascended to dominance, despite the fact that, at the time, it was neither a very portable nor a writeable format. This change, which was driven by aggressive industry promotion of its digital fidelity, did not stem home taping; to the contrary, integrated stereo units allowing music fans to copy CDs onto cassettes were a popular and relatively low-cost commodity throughout the decade, as were blank cassettes.

Around the turn of the 21st century, the MP3 became the dominant format for music listening, due to several factors, including: the massive proliferation of CD-ROM drives and "CD-ripping" software; online file sharing and other forms of MP3 distribution; and the availability of iPods and other portable MP3 players. In a sense, the portability and editability of the cassette had been merged with the digital ease-of-use represented by the CD (although at the cost of some fidelity). Not long after MP3's ascendancy, the music industry began to distribute commercial releases in digital formats online; however, unlike MP3, these releases were in formats that employed digital rights management (DRM) technology, which limited both the portability and the editability of the music by "locking" it within a software envelope. Not until 2007 did the major labels begin to release a significant volume of commercial music in DRM-free digital formats.[4]

During the late 1990s and 2000s, another distribution format emerged alongside MP3 downloads: namely, digital streaming. While the industry has employed a wide variety of technologies to achieve these ends (ranging from Windows Media to RealAudio to Flash to streaming MP3), the disparity in formats has been less problematic than it would be in a download context, because streaming files are not intended to be stored and transferred by listeners, and therefore hardware and storage media compatibility are not relevant to the same degree. According to audience measurement company Ando Media's most recent data, the top three Internet streaming companies (Pandora, Katz and CBS) collectively

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4 Eric Bangeman, "EMI decision to go DRM-free imminent," Ars Technica, http://arstechnica.com/old/content/2007/02/8803.ars, February 9, 2007.

accounted for over 250 million streams in the US alone in the month of June, 2010.[5]

ii. Distribution Platforms.

During the 1980s, there were essentially two distribution platforms for recorded music: retail and broadcasting. Retail was serviced by a handful of label-owned and affiliated distribution companies, and broadcasting was controlled by a handful of television and radio broadcasting networks. These outlets remained relatively unchanged during the format evolution from LP to cassette to CD.

One of the most important aspects of the development of MP3 and streaming as formats was the correlative development of the Internet as a distribution platform, both for commercial broadcasters and retailers and for millions of individual sellers and sharers of music. In the 1990s, online MP3 distribution mostly took place through individual files being posted on the web, in relatively small quantity; as late as 1999, the music industry's own estimates assessed the total number of songs available online at somewhere around half a million.[6]

Peer-to-peer file sharing, a non-web-based technology (for the most part), massively accelerated the growth of Internet music distribution, in terms of user base, volume and scope of content, and speed. The launches of P2P protocols and clients including Napster (1999), Gnutella, (2000) LimeWire (2000), eDonkey2000 (2000), Kazaa (2001), BitTorrent (2001) and Morpheus (2001) within a 3-year window effectively decentralized music distribution and introduced hundreds of millions of music fans to the MP3 format, as well as the concept and mechanics of peer distribution. Because many of the protocols, including Gnutella and BitTorrent (both used by LimeWire), are decentralized in structure and either freely licensed or open source, their use cannot be stopped by either technical or legal means, except through the policing and censoring of all Internet traffic at the ISP level.

In recent years, as mobile, automotive and accessory-based Internet penetration has grown to the hundreds of millions, a new distribution platform has emerged to capitalize on the "multi-screen" music fan: namely, cloud-based services. These services store music files, play lists or preferences on a server, and allow fans to listen to their collections from a variety of locations and devices. Two of the most prominent services,

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5 Ando Media, "Ando Media Releases June Internet Audio Top 20 Ranker," www.andomedia.com/ranker/Ranker_Jun2010.pdf, August 9, 2010.

6 Aram Sinnreich, "Copyright and Intellectual Property: Creating New Business Models With Digital Rights Management," Jupiter Research, 1999.

Lala.com and Simplify, were acquired last year by Apple and Google, respectively,[7] although neither company has yet fully committed to a cloud-based commercial music offering, presumably because of licensing challenges.

B. Legal Development.

In this section, I discuss the evolution of the legal environment for the distribution and monetization of music. I provide this overview not to opine as to what the law means, but rather to describe the business and regulatory environments surrounding the technological and economic development of the music industry during these years.

For the most part, copyright law and licensing structures have lagged behind technological and cultural innovation in music for the past few decades; guidelines on most subjects, ranging from sampling to torrent tracking, have been set by caselaw, rather than statute; and even these rulings can be contradictory and vague.

Of particular relevance to the case at hand are questions regarding the extent to which technology and service providers are either liable or immune to claims of copyright infringement based on the actions of their customers. The Sony Betamax case, decided by the US Supreme Court in 1984, provided a degree of protection to technologies with substantial non-infringing uses (as well as the creators of those technologies), even if the majority of usage was infringing. The Digital Millennium Copyright Act (DMCA), signed into law in 1998, provided similar statutory "safe harbors" for "online service providers" – a term that, by the Copyright Office definition, could potentially be applied to any online publishers or facilitators of third-party content,[8] and has been applied successfully to businesses ranging from Google to YouTube to Amazon.

The February 2001 ruling against Napster found that online service providers could be liable for contributory and vicarious copyright infringement, specifically due to Napster's centralized architecture and its consequent ability to have knowledge of, and control over, its users' behaviors. As I and many others argued at the time of the ruling, this left decentralized file sharing services (such as LimeWire) in a legal gray area at worst, or presented them as legally viable alternatives at best. Also, it was abundantly clear at the time that Napster's shutdown wouldn't diminish file sharing, but only increase consumer knowledge, interest and adoption of these decentralized services. As I told *Billboard* in 2000,

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7 Jason Kincaid, "Apple Has Acquired Lala," TechCrunch, http://techcrunch.com/2009/12/04/apple-acquires-lala/, December 4, 2009; Leena Rao, "Google Buys Simplify Media to Power Music Syncing For New iTunes Competitor," TechCrunch, http://techcrunch.com/2010/05/20/google-buys-simplify-media-to-power-music-syncing-for-new-itunes-competitor/, May 20, 2010.

8 U.S. Copyright Office, "Online Service Providers," http://www.copyright.gov/onlinesp/.

after a temporary injunction was granted against Napster, "There's no question that a significant portion of Napster's users will discover Gnutella [and other file-sharing services] as soon as Napster is shut down."[9]

This legal environment remained until the Supreme Court ruling against Grokster (a case in which I also served as an expert witness) in 2005. This ruling substantially reduced the amount of protection accorded to third-party service providers, and created new, lower standards, such as "inducement," for liability. Yet, for many in the digital music industry, this ruling raised more questions than it answered. As Fred von Lohmann of the Electronic Frontier Foundation argued at the time, the lack of statutory clarity, as well as the broad and vague applicability of this new precedent, has given rise to a "new era of legal uncertainty," in which technology innovators rarely know whether they're operating under legal protection until they're sued, and therefore experience chilling effects, or aversion to publicizing and commercializing their innovations.[10]

From a licensing standpoint, the situation remains equally vague. Although the DMCA created new statutory licenses for non-interactive online broadcasters (rates were set in arbitration almost a decade later), very few other new distribution formats and platforms have any set rates or even guidelines. This means that most innovative platforms require discretionary licensing from rightsholders, who may choose to withhold permission, or set rates exorbitantly high (as has been rumored about the Beatles' catalog, which was only licensed for sale in digital download format in late 2010). The net result has been confusion among innovators, who can't build adequate business models without budgetary parameters or guaranteed legal access to content, and significant lags in bringing new technologies to market in a legal context. In this vacuum, black market and "gray market" alternatives have thrived, as consumer habits have not moved in lockstep with copyright law.

C. Industry Development.

As the technological and legal landscape has changed over the past three decades, the music industry has changed as well. Nearly every aspect and sector of the industry, from its ownership structures to its business practices, has undergone significant reorganization. A few key elements of these changes are as follows:

i. Consolidation.

Six major labels controlled roughly 90 percent of US music sales in the early 1980s, representing a very concentrated industry.[11] In the years

9 Eileen Fitzpatrick, "Napster Ruling May Affect Other Sites," Billboard, August 5, 2000.

10 Electronic Frontier Foundation, "Supreme Court Ruling Will Chill Technology Innovation," http://www.eff.org/press/archives/2005/06/27-0, June 27, 2005.

11 Nigel Parker, Music Business: Infrastructure, Practice, and Law, 2004.

since then, the market has further consolidated with Universal's absorption of Polygram in 1998 and Sony joining business with BMG in 2004. Today, only four companies control over 76 percent of global music sales,[12] and roughly the same percentage in the U.S.[13] Persistent rumors threaten to reduce the number of major labels to three.[14] The music broadcasting industry is similarly consolidated. On television, the bulk of music-oriented channels, including VH1, MTV, BET, CMT and Palladium, are owned by a single company: Viacom. In radio, the Telecommunications Act of 1996 enabled a wave of mergers and acquisitions, allowing broadcasting giants like Clear Channel to balloon from a statutory maximum of 40 to over 1,200 radio stations (the company has since sold off some of its holdings, and now owns roughly 850 stations).[15] Retail has consolidated as well. As independent music retailers were crowded out and priced out of the market by megastores in the 1980s and 1990s, "big box" retailers like Wal-Mart and Best Buy came to dominate, with Wal-Mart controlling more than 22 percent of all U.S. music sales as recently as 2006.[16] Today, online retailers have stolen that crown, but the market is even more consolidated than ever, with three companies responsible for the majority of revenues; Apple's iTunes sells 28 percent of all music in the US, while Amazon and Wal-Mart each account for 12 percent.[17]

ii. Transformation of Broadcasting.

In addition to its move toward consolidation, the music broadcasting sector has undergone other significant changes recently. Most importantly, broadcasting is no longer limited to "traditional" electromagnetic transmission from towers to receivers. Over the past 15 years, terrestrial radio has been joined by subscription-based satellite radio (e.g. Sirius), with a business model analogous to cable and satellite television; digital audio broadcasting (DAB), a highly efficient, high-quality over-the-air technology employed primarily in Europe, Asia and Canada and analogous to traditional broadcasting in its business practices; and Web-based radio, which employs a variety of business models, ranging from

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12 Warner Music Group, Annual Report, 2010

13 "The Decade In Music: Top 10 Trends of the Last Ten Years," Billboard, December 19, 2009.

14 Glenn Peoples, "Business Matters: What Will Happen With EMI?," Billboard, November 12, 2010.

15 Clear Channel, "Clear Channel Radio Fact Sheet," http://www.clearchannel.com/Radio/PressRelease.aspx?PressReleaseID=1563&p=hidden.

16 Ed Christman, "The Billboard Q&A," Billboard, August 5, 2006.

17 NPD Group, "Amazon Ties Walmart as Second-Ranked U.S. Music Retailer, Behind Industry-Leader iTunes," http://www.npd.com/press/releases/press_100526.html, May 26, 2010.

subscription to ad-supported to noncommercial. Pursuant to the DMCA, these digital radio transmissions pay royalties to holders of the phonographic copyright (e.g. labels and artists), in addition to the publishing royalties paid by terrestrial broadcasters. This has required the development of a new licensing and royalty tracking infrastructure, and the establishment of SoundExchange, a clearinghouse for phonorecording royalties.

iii. Transformation of Retail.

Until the turn of the century, the majority of US music sales took place in brick-and-mortar music retailers, both independents and chain stores. Early in the last decade, around 2003, the majority of music sales shifted to general retailers, especially big-box stores like Wal-Mart and Best Buy, which became the top and second-biggest music vendors, respectively. At this point, CDs were becoming commoditized, due to a variety of factors I will describe in greater detail in Section III, and a significant portion of the remaining CD sales revenues were shifting to online merchants. As a result, dedicated brick-and-mortar music sellers suffered significantly, and several high-profile retail chains in the US, such as Tower, HMV, Sam Goody and Virgin Megastores, went bankrupt and/or ceased operations altogether. These closures coincided with the rise of online digital retailers, especially Apple's iTunes Store, further undermining the demand and availability of commercially released CDs. As a result of all these developments, music retail shifted away from album-based sales, and back toward the sale of singles (or, in the case of subscriptions, rentals of entire libraries). Today, singles make up a bigger portion of total sales than they have in decades, since the rise of the LP vinyl album.

iv. Transformation of Labels.

Due in large part to the changing technological and strategic environment, record labels have been forced to reinvent themselves over the past three decades, as well. Historically, labels' primary *raison d'etre* was artist development and distribution. Pioneering A&R executives would sort through demo tapes and popular concert venues, looking for a diamond in the rough. The label would then sign promising artists, finance their recordings, promote them aggressively, and use their market clout to ensure the availability of their music at retailers across the country and around the world.

Over the years, as production and distribution costs dropped, marketing clutter increased, and the broadcast and retail sectors consolidated, record labels (much like movie studios and video game publishers) have become subject to a "blockbuster economy." The greatest economic burden has shifted from the production of music to the production of demand for that music. The amount of money required to cut through marketing clutter and alert a critical mass of potential consumers to a new release has skyrocketed. This has led labels to invest a greater portion of resources in a smaller number of artists, ostensibly in an attempt to mitigate risk, by investing only in proven or likely successes. Aesthetically, this means that major label artists can't innovate to the extent that they did in the past. Economically, this means that major labels are less diversified in their holdings, and more subject to market volatility, and beholden to the success or failure of a given artist or release. This, in turn, makes them more risk-averse, in a self-perpetuating cycle.

This blockbuster economy was already in full swing when the Internet changed the landscape further. With the price of distribution approaching zero, digital retail shelves expanding exponentially to capitalize on the "long tail," and the format shift from albums back to singles, labels have been forced to reexamine their modus operandi yet again. Emerging strategies must accommodate an always-connected, multi-channel audience and a torrent of free content across these channels. Consequently, labels must now focus on (a) participating in every aspect of an artist's economic life beyond record sales, via "360 deals," and (b) leveraging the artist's brand and content in business-to-business channels, licensing to film, television, video games, electronics manufacturers, advertisers, and so forth. Thus, today's labels are decreasingly in the business of selling artists' records, and increasingly in the business of selling the artists themselves.

D. Product Development.

Throughout these many changes in the technological and industrial environment for music, consumers have never ceased demonstrating their enthusiasm for their favorite artists, by purchasing, tuning in, sharing and listening to music in ever-increasing volume. And, as consumer behaviors have changed with the times, so have the methods whereby their enthusiasm is fostered and capitalized by commercial organizations.

In the 1980s, there were four dominant product categories available to music fans: singles, albums, radio/television broadcasts, and home video. The advent of MP3 and Internet streaming in the 1990s added many new variations to these formats, including:

i. Play Lists. Play lists are user-selected lists of songs, often played in "shuffle" mode, or random order. The fact that Apple successfully markets the iPod Shuffle, an MP3 player devoted to this mode of listening, is testament to its prevalence. Play lists can consist of listeners' own, locally-stored MP3s, or be assembled online via subscription, cloud or streaming services. In some cases, as with the recent, major label-supported slotMusic format initiative, physical products are being adapted to suit play list-based purchasing as an alternative to singles and albums.

ii. Subscriptions. Currently offered by companies like Rhapsody and Spotify, these services charge a fixed fee per month (or offer an ad-supported, "lite" version) and offer consumers a library of millions of songs, accessible on-demand via computers, smartphones and other networked devices. Along with instant access to the library, these services frequently offer custom radio, social media connectivity, and play list maintenance as additional service elements.

iii. Custom Radio. Another important new category is custom radio, offered by companies like Pandora and Slacker. Using services like these, music fans can choose specific genres, artists, or other parameters to guide automated programming algorithms in developing a personalized radio experience. Because many of these services fall under the category of "non-interactive" according DMCA standards, they may use statutory licensing rates and run at a lower cost base. This generally means that advertising is the primary revenue source, supplemented by premium subscription fees for added quality and service options.

iv. Remote Storage. Beginning in the 1990s, companies like MP3.com began offering music fans the capacity to "store" their music collections in online servers, accessible from any location. Today's cloud-based music software continues in this vein. Based on their recent acquisitions of Lala.com and Simplify, Apple and Google are widely expected to roll out such services in the near future.

v. Beyond the Box Set. Even physical distribution formats have changed with the times. Increasingly, recorded music is being offered as an element in packages of more tangible goods, including flash drives, t-shirts, books, collectible vinyl, DVDs and posters. As I will discuss in greater detail in Section III, several artists have found financial success by combining their intangible, highly reproducible recordings with unique, limited edition and/or physical products.

In short, consumer psychology, and successful product formats, have moved away from the simple album/single binary that characterized earlier eras in the music industry. Today's music consumer expects -- and receives -- access to a large volume of music, accessible via any connected device, and anchored in their lives by the presence of artist-branded merchandise and artist-centered events.

III. OPINION: PLAINTIFFS' LOSSES CANNOT BE SUBSTANTIALLY ATTRIBUTED TO LIMEWIRE.

A. Multiple Factors in Music Sales Revenue Declines.

There is little question that record label revenues from the sale of recorded music have fallen over the past decade. However, file sharing in general, and LimeWire in particular, are neither the sole nor even a substantial cause of this decline. There are several other sources for free music online, and several contributory factors beyond the availability of free music.

i. Free Downloads Are Not Equivalent to Lost Sales.

The recording industry has always seen value in distributing music freely, for the purposes of promotion and marketing. These "free goods" are so prevalent that most major label recording contracts reduce artists' royalties by about 15 percent to account for the practice.[18] Additionally, the plaintiffs in this case have been repeatedly investigated over the past half century for "payola" – a practice in which labels don't just give away free music, but actually pay broadcasters and independent promoters millions of dollars to make sure it's heard by potential customers.[19]

In this light, the suggestion that every song freely downloaded by a consumer is equivalent to a lost sale of a 99-cent MP3, or of a $15 album, is absurd on the face of it.

A simple economic analysis supports this point. According to a 2009 publication of the International Federation of the Phonographic Industry (IFPI), which represents the recording industry worldwide, "95 per cent of music tracks are downloaded without payment to the artist or the music company that produced them."[20] The IFPI also reports that their member labels saw $4.2 billion in digital revenues in 2009, which translates to roughly $6.9 billion in retail value.[21] If this figure represents five percent of all downloaded music, this would suggest that the retail value of the other 95 percent, which was freely downloaded, was equal to $131 billion, or 263 percent of the total value of the global music retail market at its peak in 1999, adjusting for inflation.[22] Clearly, the music industry cannot be losing severalfold more each year than it made in its best year. Therefore,

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18 M. William Krasilovsky, et al., This Business of Music: The Definitive Guide to the Music Industry, 2007.

19 *Ibid.*

20 International Federation of the Phonographic Industry, Digital Music Report 2009, 2009.

21 International Federation of the Phonographic Industry, "IFPI Publishes Digital Music Report 2010," http://www.ifpi.org/content/section_resources/dmr2010.html, January 21, 2010.

22 Inflation for the 1999-2009 period was calculated at http://www.usinflationcalculator.com/.

even if file sharing were solely responsible for the losses reported by labels, each downloaded song would account for only a small fraction of its retail equivalent in lost revenues.

Major labels have acknowledged the validity of this fact themselves. As EMI owner Maltby Capital Limited wrote in its 2008 Annual Review: "The impact of piracy is complex and some have argued that pirated tracks consumed cannot be proven to equate directly to lost sales (people who cannot afford to buy CDs may pirate them) and that pirating may sometimes promote consumption by helping to create a reputation for music."[23]

The courts have acknowledged this fact as well. As U.S. District Judge James P. Jones wrote in his 2008 opinion on United States v. Dove, "Those who download movies and music for free would not necessarily purchase those movies and music at the full purchase price . . . . [A]lthough it is true that someone who copies a digital version of a sound recording has little incentive to purchase the recording through legitimate means, it does not necessarily follow that the downloader would have made a legitimate purchase if the recording had not been available for free."[24]

ii. Music Sales Decline Predates and Post-dates LimeWire Growth.

Although global music sales reached a recent peak in 1999, growth rates had already slowed significantly by that point. According to an analysis of IFPI data by the Organisation for Economic Co-operation and Development (OECD), global music sales plateaued abruptly in 1996, following over two decades of aggressive growth. Beginning in 2000, this trend continued into negative territory, with a consistently shrinking world market over the subsequent decade (although many individual markets, including the U.S., have grown during some of those years).[25]

Clearly, this trend predates online file sharing, which only reached mainstream impact in late 1999 following the launch of Napster. And it unquestionably predates any market impact of LimeWire, which was released in 2000 and only became widely distributed in 2001.

The continuing drop in music sales revenues post-dates peer-to-peer file sharing, as well; as early as 2006, according to P2P measurement firm BigChampagne, music file sharing growth began to taper off and

23 Maltby Capital Ltd., Annual Review (for the year ended March 31, 2008).

24 United States v. Dove, 585 F. Supp. 2d 865 (W.D. Va. 2008).

25 OECD, 2005.

plateau.[26] This lack of growth has continued in the years since then. According to a 2010 interview with BigChampagne CEO Eric Garland, "the rate of growth has slowed to the point that it is virtually flat in the area of music. P2P is looking pretty mature these days as a music market."[27] Yet the downward trend in music sales continues unabated. According to the IFPI, global music sales have dropped more steeply than ever in the years since P2P use leveled off, falling more than 7 percent in each of the past three years.[28]

iii. Many Different Factors Have Contributed to Declining Music Sales Revenues In the Past Decade.

Whether peer-to-peer file sharing has or has not contributed to the diminution of music sales revenues since the market peak in 1999 (a question I will address in greater detail below), several other contributory factors have had a significant negative impact on the market. These factors include:

a. *Changing Consumer Psychology and Market Expectations.*

As EMI owner Terra Firma Capital acknowledged in its 2008 Annual Review, during the previous few years "EMI's revenue had been declining due to the structural shift in the consumer music market and to a slow response, both by the industry and the company, to the move towards digital consumption and falling retail space for music. This shift has been particularly detrimental to the consumer-facing Recorded Music business."[29]

This "structural shift . . . towards digital consumption" in the consumer music market, as Terra Firma suggests, is one of the primary factors undermining recorded music sales over the past decade. Digital music provided music fans with an unprecedented degree of choice over their consumption habits, control over their music listening experiences, volume of content to choose from, and portability in their music-listening venues. Whereas LPs, cassettes and CDs required consumers to carry around a bulky plastic object in order to

26 Thomas Mennecke, "P2P Population Remains Steady," Slyck, http://www.slyck.com/story1314_P2P_Population_Remains_Steady_, October 20, 2006.

27 "YouTube's Effect on Peer-to-Peer," http://www.azoz.com/topics/youtube.html, April 27, 2010.

28 International Federation of the Phonographic Industry, Recording Industry in Numbers 2010, 2010.

29 Terra Firma, Annual Review, 2008.

listen to ten or fifteen preordained songs by a given artist in a given order, MP3s and Internet streaming enabled them to compile their own tailored listening experiences, suited to their individual preferences, habits, time frames and locations. Once this shift occurred in consumers' behavior and psychology, they could no longer recognize the same use value in the CD format, and were therefore unwilling to accord it the same degree of market value. This came about in significant part due to the massive distribution and adoption of "ripping" and "burning" technologies (some of which are created and manufactured by parents and affiliates of the plaintiffs themselves, e.g. Sony), which enable consumers to move songs easily from commercial CDs to their own computers, and from their computers onto homemade CDs.

As the Terra Firma report acknowledges, the labels themselves are to blame for taking a decade to absorb the significance of this shift in market demand, and for failing to accommodate it sooner, despite the existence of willing retailers, distributors, service and technology providers and, of course, consumers.

b. *An Increase In Small-Scale Commercial CD Bootlegging.*

Beginning in the late 1990s, CD replication technology became affordable at consumer prices, and by the early 2000s, writeable CD drives were standard equipment in new computers. While CD bootlegging had been a more industrialized operation up until this point, it now became profitable on a smaller scale, spurring a wave of illegal, under-priced CDs to enter the retail market, both in brick-and-mortar establishments and in ad hoc, streetcorner operations. By 2001, according to an IFPI publication, CD piracy was "split roughly evenly between CD audio discs made on factory production lines and those made in smaller scale CD-R operations in garages and labs," and pirate CD-R sales had tripled in the course of a single year, to 450 million units.[30] In addition to replacing some legitimate sales, these pirate sales further impacted the market by diminishing the average retail price for CDs, exerting downward pressure on legitimate retailers and distributors.

30 International Federation of the Phonographic Industry, IFPI Music Piracy Report, June 2002.

c. *Widespread Economic Recession.*

During the years of LimeWire's operation, the United States economy was challenged by two major recessions, with a period of limited economic expansion between them. These recessions impacted consumer spending across the board, and there is little question that they undermined the music retail market. Significantly, 2004, a recovery year, was the record industry's best of any from 1999 to the present. CD sales volume increased in 36 markets, including the United States.[31] The IFPI acknowledged the link between the economy and the music retail market at the time, arguing in a 2005 press release that "economic strength and strong releases helped CD volume growth of 2.8 percent and 4.5 percent in the US and UK, which together make up 47 percent of the value of the world market."[32]

d. *Increased Competition for Consumer Entertainment Spending.*

Even as Internet technology and content has demanded an ever-growing portion of consumers' time, attention and discretionary spending over the past decade, additional entertainment market entrants have demanded their share, as well. For example, home video, spurred by widespread adoption of the DVD format, and video games, spurred by major hardware upgrades by Microsoft, Sony and Nintendo, have grown precipitously during the years of the CD's decline. Home video sales in the US doubled between 2000 and 2005, growing by roughly $8 billion,[33] while video game console and game sales nearly tripled between 2000 and 2008, growing from $8 billion to $21.4 billion.[34]

Many other examples can be cited, including a boom in consumer expenditures for premium cable, broadband Internet access, mobile voice and data contracts, online video rental (e.g. Netflix) and mobile applications,

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31 International Federation of the Phonographic Industry, "Global music retail sales, including digital, flat in 2004," http://www.ifpi.org/content/section_news/20050322.html, March 22, 2005.

32 *Ibid.*

33 Ken Belson, "As DVD Sales Slow, Hollywood Hunts for a New Cash Cow," N.Y. Times, http://www.nytimes.com/2006/06/13/technology/13disc.html, June 13, 2006.

34 NPD Group, "2009 U.S. Video Game Indus. & PC Game Software Retail Sales Reach $20.2 Billion," http://www.npd.com/press/releases/press_100114.html, January 14, 2010.

collectively accounting for tens of billions of dollars in spending each year.

e. *Bankruptcy of Music Retailers and Decline in Shelf Space.*

As I discussed in Section II, the period during which LimeWire operated coincided with the effective death of music brick-and-mortar retail. Major chains like Tower, Sam Goody, HMV and Virgin Megastores went bankrupt or ceased operations, and "big box" retailers like Best Buy and Wal-Mart, after briefly dominating the market, scaled back their shelf space allocations for music considerably. While the music market factors described above no doubt contributed to these events, climbing real estate prices, driven by a speculative bubble peaking in 2006, also played a significant role. The rapidly dwindling availability of CDs in brick-and-mortar retail environments clearly undermined the total size of the music retail market, while also driving consumers to online channels, which are more heavily weighted toward lower-cost, lower-volume, lower-margin digital singles sales, further undermining future market value.

f. *Maturation of the CD Format and End of the Replacement Cycle.*

During the 1990s, the value of the music retail market was temporarily inflated by a "replacement cycle," during which consumers bought CDs to replace cassettes and LPs of artists whose work they already owned in these earlier formats. This cycle reached its natural conclusion with the maturity of the format in the late 1990s. Therefore, the 1999 market peak represents an aberration, rather than a benchmark for future growth.

This factor, as well as the ones mentioned previously, have been acknowledged by the major labels as playing a contributory role in the decline of music retail sales. As Warner Music Group has routinely written in its Annual Reports and other public filings from 2006 through 2010, "The industry began experiencing negative growth rates in 1999 on a global basis and the worldwide recorded music market has contracted considerably. Illegal downloading of music from the Internet, CD-R piracy, industrial piracy, economic recession, bankruptcies of record wholesalers and retailers, and growing competition for consumer discretionary spending and retail shelf space may all be contributing to a declining recorded music industry.

Additionally, the period of growth in recorded music sales driven by the introduction and penetration of the CD format has ended."[35]

Warner Music Group's North American chief executive Lyor Cohen has also identified the economic legacy of the music replacement cycle inflation as the "biggest challenge" facing WMG when he came to the company in early 2004. In a 2006 interview with the *Los Angeles Times*, he argued that "Warner's infrastructure was way too expensive. Throughout the 1980s and early '90s, the success of the compact disc format allowed music companies to build enormous, expensive staffs. When the industry began to decline in the late 1990s, most companies decided that rather than cut staff, they would take shortcuts to sell more records. That's why Britney Spears, the Backstreet Boys and 'NSync appeared, because labels had to find huge pop hits to pay for their staffs, no matter how short-lived those hits were."[36]

g. *The End of Minimum-Advertised Pricing for CDs.*

Until recently, it was common practice for the major labels to collectively inflate the retail price of CDs by requiring that retailers stick to "minimum advertised pricing" (MAP) thresholds for music, in exchange for advertising support. The practice only ended in 2000, when attorneys general from 43 US states launched an investigation into its potential anti-competitive implications. Two years later, the suit against the labels was settled for $143 million in cash and donations, with no admission of wrongdoing by the labels. However, then-Attorney General of New York Eliot Spitzer announced that the agreement was "a landmark settlement to address years of illegal price-fixing."[37]

In short, the music industry's sales peak in 1999 was boosted by a potentially anti-competitive price-fixing scheme, and the onset of decline in total market value coincided with its cessation a year later. Given that many music retailers

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35 Warner Music Group, Annual Report (Form 10-K), November 17, 2010; Warner Music Group, Annual Report (Form 10-K), December 1, 2006.

36 Charles Duhigg, "Getting Warner Music More Upbeat," L.A. Times, http://articles.latimes.com/2006/aug/28/business/fi-lyor28, August 28, 2006.

37 David Lieberman, "States Settle CD Price-Fixing Case," U.S.A. Today, http://www.usatoday.com/life/music/news/2002-09-30-cd-settlement_x.htm.

immediately reduced prices from the $15 range to the $10 range following the end of MAP pricing in 2000, it is likely that this was a significant contributory factor to market devaluation.

h. *Unbundling of Songs.*

While LPs, cassettes and CDs were the dominant music distribution formats, the full-length album, consisting of 10-15 songs "bundled" together, was the natural product format. Because this format encouraged consumers to pay for more songs than they necessarily wanted to hear (typically, only 3-4 "hits" would be included on a full-length album), it inflated the value of the music retail industry above the level of actual demand.

As MTV co-founder and former AOL Time Warner CEO Bob Pittman acknowledged a few years ago, the reversion to digital singles as the dominant sales format has had far more ruinous effects than file sharing. In Pittman's words, "Stealing music is not [what's] killing music. . . . When I talk to people in the music business, most of them will admit the problem is they're selling songs and not albums. I mean, you do the math."[38]

The advent of digital music, and specifically the digital singles market pioneered by Apple's iTunes Store, has led to the rapid unbundling of music; consumers may now pick and choose the songs they'd like to purchase, without paying extra for additional songs they may not care about. Harvard Business School professor Anita Elberse has researched this economic shift, and has concluded, like Pittman, that it is a significant factor in decreased sales revenues. As she wrote in a 2010 journal article: "I find strong support for the hypothesis that revenues for mixed bundles substantially decrease as music is increasingly consumed digitally. While the demand for individual songs is growing at a faster rate than the demand for albums is declining, the dollar amounts gained through new song sales remain far below the level needed to offset the revenues lost due to lower album sales."[39]

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38 Steve Knopper, Appetite for Self-Destruction: The Spectacular Crash of the Record Industry in the Digital Age, 2009.

39 Anita Elberse, "Bye Bye Bundles: The Impact of the Unbundling of Music in Digital Channels," http://forum.johnson.cornell.edu/faculty/kadiyali/ByeByeBundles.pdf, July 8, 2009.

i. *Shrinking Artist Rosters, Fewer Album Releases and Diminished Unit Shipments by Major Labels.*

Above, in Section II, I described the music industry's move toward a "blockbuster economy," characterized by risk aversion and a de-emphasis on artist development, during the 1980s and '90s. One of the primary effects of this development was a reduction in the total number of artists at each label. As British music industry researcher Nigel Parker explains in his book *Music Business: Infrastructure, Practice, and Law*, "The cumulative cost of promotional devices . . . frequently exceeds the cost of recording an album by a factor of three or much, much more. . . . So major record companies have cut their artist rosters heavily in order to concentrate on those who are most likely to generate very large record sales."[40]

With the overall decline in sales during the last decade, this trend has accelerated. Major labels have acknowledged that risk aversion remains central to their reasoning. In a 2004 press release, for instance, EMI announced it was "reducing its global roster by approximately 20 percent, affecting largely niche and under-performing artists. . . . to focus resources and efforts more effectively on the artists who have the greatest potential on both a global and local level."[41]

Another result of major label risk aversion and shrinking artist rosters is a diminution in the total number of albums released per year. A June 2003 article in *Sound and Vision* magazine cites two separate data sources demonstrating a 20-25 percent drop in new releases from 1999-2001,[42] the years immediately preceding LimeWire's ascendance in the marketplace. More recent data is difficult to obtain, as the IFPI has stopped reporting this figure in its annual publications.

With fewer major labels releasing fewer albums by fewer artists each year, it is hardly surprising that they have shipped fewer units, as well. According to RIAA

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40 Nigel Parker, Music Business: Infrastructure, Practice, and Law, 2007.

41 Patrik Wikström, The Music Industry: Music In the Cloud, 2009.

42 James K. Willcox, "Where Have All the CDs Gone?," Sound and Vision, http://www.soundandvisionmag.com/features/2003/06/where-have-all-cds-gone, June 2003.

publications, total US album units shipped declined from a peak of 1.07 billion in 1999 to 372.5 million in 2009.[43] Of course, the number of singles shipped climbed steeply during these years, but, as Elberse demonstrated, these can hardly be considered adequate replacements, due to the delta in retail value.

j. *Increased Competition From Used and Independently Distributed Music.*

There has always been a significant volume of recorded music sales that goes unrecognized by RIAA, IFPI and Nielsen SoundScan, and is not reflected in the market sizing figures cited elsewhere in this testimony. First is the market for used recordings, a legal but non-royalty-delivering commodity, and therefore one typically ignored by the labels, or targeted for elimination through both market pressure on retailers and lobbying efforts in legislatures. Second is the "long tail" of recordings made by the millions of independent musicians who either don't use record labels or whose labels are not members of these trade organizations. Although few of these musicians sell more than a few thousand recordings, collectively they represent millions of untallied sales, and tens or hundreds of millions of dollars annually in consumer music expenditures.

Neither of these markets has ever been conclusively measured, to my knowledge. However, there is compelling evidence that both have grown in the past decade, competing with RIAA and IFPI constituent recordings for consumer music expenditures. According to a 2007 *Billboard* article, the market for used recordings may have doubled or even quadrupled in recent years. Among the retailers they interviewed, "used CD sales have grown from about 5 percent to sometimes 10-20 percent of overall CD revenues."[44]

Independently distributed music has grown along similar lines, aided by plummeting production and distribution costs and instantaneous access to the global online music-buying population. As Wired editor-in-chief Chris Anderson

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43 1999 Yearend Statistics (published on RIAA.com); 2009 Year-End Shipment Statistics (published on RIAA.com).

44 Ed Christman, "NARM Coverage: New Laws Threaten Used CD Market," Billboard.biz, http://www.billboard.biz/bbbiz/content_display/industry/news/e3i9ebf2d8ce6fd1e267bac18d43959ac24, May 1, 2007.

demonstrates in his book *The Long Tail*, 45 percent of sales revenue at digital music seller Rhapsody can be accounted for by "products not available in [the] largest offline retail stores."[45] We can also see hints of this market's size by looking at individual aggregators of independent music. CD Baby, a decade-old and rapidly growing company which sells over 3 million songs by hundreds of thousands of independent artists, reports on its web site that it has paid out a total of over $157 million to its artists to date, (one-third of which was paid in the past 18 months),[46] suggesting a retail value in the range of $200 million. Similarly, independent digital music distributor TuneCore, founded in 2005, reported generating over $32 million in sales for 2009 alone.[47] While these are only pinpoints of data, they indicate a large and rapidly growing market for independently distributed market, off the IFPI/RIAA radar and in competition with major label music sales.

iv. To the Extent That Freely Available Online Music Has Affected Music Sales, LimeWire's Role is Minimal.

Although the plaintiffs represent LimeWire as one of the primary conduits for free, unpermissioned distribution of music in an otherwise tightly controlled marketplace, nothing could be further from the truth. In fact, the major labels have both willfully ignored and actively promoted numerous other channels for free music distribution online, which collectively account for tens or hundreds of millions of users accessing billions of song files without direct permission or payment. And record labels and recording artists have often encouraged or allowed free online redistribution and/or unremunerated remixing of their copyrighted work, for promotional, commercial and pro-social purposes. In fact, the plaintiffs' own web sites frequently link to many of these freely available assets in the course of their promotional messaging.

a. *Video Streaming, Download and Conversion to MP3.*

The plaintiffs both freely share artist videos via their "official" YouTube channels, and allow third parties to post unpermissioned copies of artist videos on sites like YouTube and Vimeo. Music fans can stream these videos without payment (and, in some cases, without even viewing

45 Chris Anderson, The Long Tail, 2008 (revised edition).

46 CD Baby, "About CD Baby," http://www.cdbaby.com/about.

47 Tunecore, "How People Use Nielsen to Hurt Musicians," http://blog.tunecore.com/2010/01/how-people-use-neilsen-to-hurt-musicians.html, January 21, 2010.

advertising), and can set up play lists consisting of their favorite artists' work. This essentially creates permanent, free, on-demand access to music for anyone with Internet access. Even more relevant to the case at hand, consumers can freely and easily download artist videos from YouTube, and convert them to MP3s with a single click. This is possible through a number of freely accessible and easily found resources, including browser plug-in software like Video DownloadHelper and Easy YouTube Video Downloader and at web sites like KeepVid.com and Zamzar.com.[48] Collectively, these software tools have been downloaded hundreds of millions of times, and these web sites garner over a million monthly viewers.[49] This functionality is not limited to personal computers; it is increasingly available for mobile customers, as well. For instance, MiTube, an application that saves YouTube videos to consumers' iPhones, was available for a time in Apple's iTunes Store, and is still popular among the millions of music fans who have "jailbroken" their phones.

b. *Music Blogs and Search Engines.*

At the time of writing, there are thousands of active music blogs, collectively garnering millions of monthly users. A great many of these blogs regularly post MP3s, albums and/or play lists available for free streaming and download. While some blogs focus on sharing out-of-print, orphaned or independent music, many more emphasize major label artists, as well as remixes and mashups of major label music. These blogs can be easily searched for MP3s at sites like elbo.ws and Hype Machine (hypem.com). Hype Machine offers additional functionality, including the ability to stream the MP3s hosted at listed blog sites directly from the search interface (much in the same way that Google offers previews directly from its image search results), and an alphabetized archive of bands and albums with direct free MP3 download access. Not only do the plaintiffs allow these sites to distribute their music openly and broadly, in some cases the labels' marketing and promotion departments

48 Quantcast.com estimates that Keepvid.com and Zamzar.com receive about 463,000 and 261,000 unique U.S. visitors per month respectively. *See* http://quantcast.com/keepvid.com; http://quantcast.com/zamzar.com.

49 At the time of writing, the latest version of Video DownloadHelper has been downloaded over 80 million times. *See* https://addons.mozilla.org/en-US/firefox/addon/3006/. The latest version of Easy YouTube Video Downloader has been downloaded over 6 million times. *See.* https://addons.mozilla.org/en-US/firefox/addon/10137/.

actively distribute music to bloggers with the understanding that it will be shared, presumably for the same reason they send free CDs and MP3s to radio DJs and music directors -- namely, to develop a wider fan base for the artist in question. As I mentioned above, many major label contracts actually deduct the costs of these "free goods" directly from the artists' royalties, by a factor of about 15 percent.

c. *Online Storage Services.*

There are several highly-trafficked sites, such as Rapidshare and MegaUpload (each receives millions of visitors each month),[50] that allow users to post files of any kind for free retrieval by third parties. Millions of MP3s and music videos are available on these sites, and the inventory is refreshed with every passing day. Downloaders discover unique retrieval URLs for individual songs, albums and videos via blogs, social media services, and email. They may also use specialized search engines like FilesTube.com (which gets millions of unique visitors per month)[51] to search for individual songs, artists and albums across a range of these remote storage sites.

d. *MP3 Download Services.*

Unsecured MP3 downloads, which can be easily shared via email, instant message, optical media, or any of the methods described above, are and have been available for years from a broad range of sites, some licensed by the major labels (e.g. eMusic, Amazon, iTunes) and others operating without their direct permission (e.g. allofmp3.com, against which the RIAA dropped its lawsuit in 2008). These sites operate with a range of revenue models, from 99-cent downloads to flat subscriptions to micropayments. At many of these sites (including Amazon and eMusic), full-length MP3 samples and sampler albums are available without any consumer payment at all, as promotional incentives for the artists and services.

50 Quantcast.com estimates that Rapidshare and MegaUpload receive about three million and two million unique U.S. visitors per month respectively. *See* http://quantcast.com/rapidshare.com; http://quantcast.com/megaupload.com.

51 Quantcast.com estimates that Filestube.com generally receives about 8.2 million unique U.S. visitors per month. *See* http://quantcast.com/filestube.com.

e. *Other Unlicensed P2P File Sharing Networks.*

LimeWire is only one of dozens of popular peer-to-peer file sharing programs. Software like uTorrent, Frostwire, Vuze and Bearshare offer users access to the same "back end" sharing technologies, like BitTorrent and Gnutella, that LimeWire offered. In other words, LimeWire represented only one, minimally differentiated, avenue of entry into a global network of sharers who connect through dozens of highly-trafficked entry points. Although it was for a time the most popular P2P client, LimeWire's closure has little if any consequence in terms of the availability of the same files to the same users of the same back-end networks.

f. *A Capellas and Instrumental Versions.*

Across a broad range of musical genres, including pop, R&B, rock and hip-hop, it is common practice for record labels to release both a capella (vocal-only) and instrumental (vocals omitted) versions of hit songs to the public at large. One of the primary strategic reasons for doing this is to allow DJs at clubs and radio stations to remix the music, adapting it to the specific tastes of their audiences, and thus promoting the "official" version of the work in the process. However, a widely acknowledged second-order effect of this market strategy is to enable millions of fans worldwide to create and redistribute their own remixes and mashups of the work, without official permission and without paying royalties. At the time of writing, Google searches for the titles of each of the top three songs on the Billboard Hot 100, followed by the word "remix" in each case, yield 1.3 million, 53.8 million, and 7 million results, respectively.

g. *Creative Commons Licensing.*

Although it has existed for less than a decade, tens of thousands of artists have already licensed hundreds of thousands of tracks under a Creative Commons license, which reserves copyright while relaxing many of the constraints commonly associated with proprietary music, such as proactively allowing free redistribution and remixing. Although the bulk of these artists and songs are not major label-affiliated, several high-profile artists have released music under this license, including the Beastie Boys, Kristen Hersh, Nine Inch Nails, David Byrne, DJ Vadim, Radiohead, Snoop Dogg and Youssou N'Dour.[52] Contrary to some public characterizations of the Creative Commons license, it doesn't eliminate the possibility of commercial exploitation; to the contrary, as I will discuss further below, bands like Nine Inch Nails have recognized career high revenues for work they released under this license, while enabling fans to share their work without threat of lawsuits.

h. *Mixtapes.*

In the hip-hop musical community, some of the top-selling albums are not official label releases, but "mixtapes" -- CDs and MP3 play lists featuring remixed classics alongside new radio singles and guest "drops" from celebrity rappers and DJs. These mixtapes are often distributed and promoted through environments and businesses not traditionally known for music retail, such as nightclubs, barbershops and parking lots. Record labels often pay popular mixtape DJs tens of thousands of dollars, as well as providing free, pre-market goods, in exchange for the promotional benefit their artists receive from inclusion on such a disc. Mixtapes do not only promote new and emerging rappers; many of today's top hip-hop stars, including 50 Cent, Drake and Lil Wayne, continue to contribute to mixtapes in order to maintain their air of authenticity and to stoke their fan bases between official market releases. Although it's true that record labels and the RIAA often call upon law enforcement agencies to crack down on mixtape distributors, they also continue to pay for mixtape inclusion. In some instances, such as the celebrated case of DJ Drama and Don Cannon, the forces behind the wildly successful "Gangsta Grillz" mixtape franchise, the labels both pay and prosecute.[53] As the *New York Times* reported in 2007, based on an interview with former EMI executive Ted Cohen, this strategy is "typical of the music industry's 'schizophrenic' approach to promotions; a label's marketing department wants to get its artists' songs in front of as many people as possible, even if it means allowing or ignoring free downloads or unlicensed videos on YouTube."[54] As DJ Drama told me when I

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52 Drew Wilson, "Creative Commons Responds to ASCAP," http://www.zeropaid.com/news/89521/creative-commons-responds-to-ascap/, June 25, 2010.

53 Samantha M. Shapiro, "Hip-Hop Outlaw (Industry Version)," N.Y. Times, http://www.nytimes.com/2007/02/18/magazine/18djdrama.t.html?pagewanted=1, February 18, 2007.

54 *Ibid.*

interviewed him for my book *Mashed Up* in 2008, "Everybody [at the label] is like, 'Don't talk about it, don't tell, but we support you. Here's this record – don't tell nobody where you got it from.'"

i. *Rewarding of DJs for Mashups and Remixes.*

In some cases, major labels and artists respond to DJs who have remixed and redistributed their work without permission by rewarding them, rather than punishing them. This reward comes in the form of (a) access to the original "master" recordings (yielding a higher quality of audio, as well as backing tracks and outtakes inaccessible to other DJs), (b) an opportunity to commercialize their previously underground, noncommercial remixes, and/or (c) inclusion of the remix or mashup into the artist's own recorded or live materials. For instance, mashup producer Go Home Productions told me during an interview that the rightsholders for the Doors' recordings were so taken with his Doors/Blondie mashup "Rapture Riders," that they gave him the master tapes to provide him with unfettered access to the original Jim Morrison vocals. Similarly, as I related in my book Mashed Up, Kylie Minogue responded to the Soulwax mashup of her song "Can't Get You Out of My Head" with New Order's "Blue Monday" by incorporating a live version of the mashup into her concert set lists. This was despite the fact that Soulwax's mashup was widely interpreted as a critique of Minogue's song for its brazen musical borrowing from the earlier New Order song.

B. Sharing Can Help Sales, Revenues and Profits.

i. <u>Direct Industry Benefits</u>.

Although file sharing has presented strategic and economic challenges to the music industry, it has also delivered significant benefits, both helping traditional record sales and opening new avenues for economic exploitation.

a. *Benefits of File Sharing for Recorded Music Sales.*

In 2000, as a music industry analyst at Jupiter Research, I published the results of survey analysis showing that, among US adults (sample size: 2,258), Napster users were 45 percent more likely than non-Napster users to have increased their music purchasing habits over the previous 12 months. This was the case even once I controlled the data for other factors, including age, income, and overall music purchasing volume. This study also found that the majority of Napster users remained unchanged in their music purchasing habits, although among those who did change, increasers outnumbered decreasers by a factor of 3 to 1.[55]

In 2002, I published follow-up research, again based on a Jupiter survey, showing that file sharing continued to have a mixed effect on music purchasing habits, with a net positive effect overall. In fact, we found that file sharers were 75 percent more likely than the average online music fan to have increased their music purchasing habits since they started visiting online music sites.[56]

In the years since then, a number of other researchers have reported similar or complementary findings. A sample of these include:

- 2004: Harvard/UNC study by Oberholzer and Strumpf showing that file sharing increases album sales for releases that sell more than 600,000 units.[57]
- 2006: Peitz and Waelbroeck find that file sharing is responsible for a net industry profit "because consumers can make more informed purchasing decisions because of sampling and are willing to spend for the original although they could consume the download for free."[58]
- 2006: Gopal, et al argue that "online search and sampling capabilities" represented by P2P "have a beneficial impact on sales," although another effect is to redistribute sales revenue from superstars to lesser-known recording artists.[59]

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55 Aram Sinnreich, "Digital Music Subscriptions: Post-Napster Product Formats," Jupiter Research, 2000.

56 Aram Sinnreich, "File-Sharing: To Preserve Music Market Value, Look Beyond Easy Scapegoats," Jupiter Research, 2002.

57 Felix Oberholzer & Koleman Strumpf, "The Effect of File Sharing On Record Sales: An Empirical Analysis," 2004.

58 Martin Peitz & Patrick Waelbroeck, "Why the Industry May Gain From Free Downloading – The Role of Sampling," 2006.

59 Ram D. Gopal, et al., "Do Artists Benefit From Online Music Sharing?," 2006.

- 2007: A study commissioned by the Canadian government finds that "there is a strong positive relationship between P2P file-sharing and CD purchasing" among file sharers, but that the overall effect of the technology on the music purchasing habits of the population at large is negligible.[60]

- 2008: Johns Hopkins researcher Wendy Chi, analyzing Forrester Research data, finds that "file sharing has a positive and statistically significant effect on music purchases, thus legal music purchases and illegal music downloads are complements."[61]

- 2009: A survey-based study of British Internet users aged 16-50, conducted by Demos and Ipsos Mori, finds that admitted file sharers spend 75 percent more on music per year than non-sharers.[62]

- 2009: A study of online music listeners aged 15 and up, conducted by the BI Norwegian School of Management, finds that file sharers are "buying twice as much music as they get for free, and also those who state that they download for free actually are the greatest consumers of paid music online," by a factor of 1000% compared to non-sharers. Significantly, this study required respondents to prove their music purchases, rather than simply attesting to them.[63]

- A 2010 meta-analysis by Viennese economist Peter Tschmuck analyzes 22 recent studies and finds that there are numerous well-designed studies with conflicting findings, ranging from positive effects to negative effects to neutral effects. Ultimately, he

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60 Birgitte Andersen & Marion Frenz, "The Impact of Music Downloads and P2P File-Sharing On the Purchase of Music: A Study for Industry Canada," 2007.

61 Wendy Chi, "Does File Sharing Crowd Out Copyrighted Goods? Evidence from the Music Recording Industry," 2008.

62 Mark Hefflinger, "Survey: Among Consumers, File-Swappers Spend Most On Music," Digital Media Wire, http://www.dmwmedia.com/news/2009/11/02/survey%3A-among-consumers%2C-file-swappers-spend-most-music, November 2, 2009.

63 Jared Moya, "Study: Pirates Buy 10 Times More Than They Steal," http://www.zeropaid.com/news/86009/study-pirates-buy-10-times-more-music-than-they-steal/, April 21, 2009.

> concludes, "simple causalities do not work to understand the present developments in the music."[64]

Of course, as Tschmuck observes, there are many studies over the same time period showing a negative or neutral effect of file sharing on music sales and revenues, as well. It is neither my role nor my intention to dispute these findings. As a researcher, I will simply reiterate that in my opinion there is compelling evidence linking file sharing to positive economic effects for artists and labels, and that the diversity of credible evidence on the matter undermines the industry's claims of irrefutable and significant market harm.

b. *Spurring Additional Revenue Streams.*

The music industry has already begun to reorganize to take advantage of the newly-energized, P2P-driven fan base for their artists. Recent years have seen an explosion of "360 deals," in which a record label or other industry institution (e.g. concert promoter LiveNation) will participate in all artist revenue streams including recordings, concerts, merchandise, publishing, endorsements and licensing. In 2008, Warner Music Group's Edgar Bronfman, Jr. announced that all new contracts on his labels would be 360 deals.[65] Even at the time, approximately 1/3 of the labels' artists were signed under these terms.[66] Since then, the numbers have only climbed. Because of the diversification and control 360 deals offer labels, they are so lucrative and low-overhead that they've come under heavy fire from pro-artist advocates. In the words of industry analyst Bob Lefsetz, who advised aspiring artists against signing such deals, "they want more of YOUR money for doing less work."[67]

Between these 360 deals and a host of other emerging revenue streams, record labels have significantly offset the

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64 Peter Tschmuck, "The Economics of Music File Sharing – A Literature Overview," Vienna Music Business Research Days, University of Music and Performing Arts Vienna, June 9-10, 2010.

65 Michael Arrington, "'360' Music Deals Become Mandatory As Labels Prepare For Free Music," TechCrunch.com, http://techcrunch.com/2008/11/08/360-music-deals-become-mandatory-as-labels-prepare-for-free-music/, November 8, 2008.

66 *Ibid.*

67 TheLefsetzLetter (blog), http://lefsetz.com/wordpress/index.php/archives/2007/11/11/360-deals/, November 11, 2007.

decreases in album retail revenues over the past decade or two. These new and growing sources of label revenue include but are not limited to:

- Performance rights revenues. This category includes the licensed use of music in broadcast, specifically royalties from satellite, digital and Internet broadcasting. A decade ago, these revenues were nonexistent, because terrestrial radio only pays royalties to publishers. But in 2009, according to the IFPI, statutory masters broadcast licenses from these new, digital broadcast platforms yielded $1.6 billion in value.[68]

- Synch rights revenues. In addition to the licensing revenues described above, record labels receive synchronization or "master use rights" revenues whenever their songs are used in television shows, movies or commercials. Although the industry has never published figures reflecting the size of this market, music licensing attorney Steve Gordon (a former major label executive and widely read author) told me that "in the last 20 years, master use licensing has gone way up and become a new, important income source for the labels," although he acknowledges that revenues have been flat during the recession years due to a shrinking advertising market. Overall, Gordon estimates that this market brings the labels about $1-2 billion per year.

- Music video games. Video game titles such as *Rock Band* and *Guitar Hero*, which didn't exist as a product category a decade ago, accounted for nearly a billion dollars in U.S. sales revenues in 2009.[69] Although licensing deals between game publishers and labels are private and vary from case to case, there is no question that the "hefty royalty"[70] that labels see from this category, and the heavy promotional impact these games can offer for bands, have contributed

68 International Federation of the Phonographic Industry, Recording Industry In Numbers, 2010.

69 Antony Bruno, "Music-based Videogames Losing Fans," Reuters, http://www.reuters.com/article/idUSTRE69M06L20101023, October 22, 2010.

70 Shirley Halperin, "'Rock Band' vs. 'Guitar Hero': Fall's Biggest Music Battle," Entertainment Weekly, http://www.ew.com/ew/article/0,,20222986,00.html, September 3, 2008.

significant direct and indirect revenues to major labels in recent years. As the IFPI itself has observed, video game licensing has been a "notable success" as an emerging source of label income.[71] In addition to these music-specific titles, labels garner significant additional licensing revenues from games such as the *Madden* and *GTA* franchises, which use commercial music in their soundtracks.

- Live events. The live music events sector has climbed precipitously in value over the past decade, as ticket prices have escalated, and audiences awash in digital recordings increasingly crave live contact with their favorite artists. Today, this sector is worth roughly $20 billion annually, or nearly three times what it was a decade ago. It's difficult to say what percentage of this accrues to labels through 360 deals, but a conservative estimate would be over $1 billion and growing, compared to zero a decade ago.[72]

- Hardware royalties. In different regions of the globe, record labels earn royalties on the sale of different forms of storage media (e.g. CD-Rs, DATs) and hardware devices (e.g. MP3 players, CD burners). Again, it's difficult to establish exactly the volume of revenues accruing to labels from this sector, but given that these product categories represent tens of billions of dollars in sales each year, the figure must be considerable.

c. *Research and Marketing via P2P.*

As EMI owner Terra Firma wrote in its 2007 Annual Review, "Historically, the industry has viewed digital principally as a piracy threat. In reality, it offers new possibilities across the value chain, from discovering and producing through to promoting music."[73]

In fact, the labels have exploited the user bases of online file sharing networks for research, marketing and distribution for

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71 International Federation of the Phonographic Industry, "IFPI Publishes Digital Music Report 2009," http://www.ifpi.org/content/section_resources/dmr2009.html, January 16, 2009.

72 International Federation of the Phonographic Industry, Recording Industry In Numbers, 2010.

73 Terra Firma, Annual Review, 2007.

years. They have partnered with platform providers like SNOCAP, QTrax and Grooveshark to place commercial tracks within peer-to-peer environments, relying upon consumers to promote and distribute for-pay digital music on their behalf. And they have also relied increasingly on market insights provided by companies like BigChampagne, which treats the file sharing networks as a global focus group, mining them for market and trend data.

d. *More Active, Engaged, Pro-Artist Consumers.*

As 50 Cent recently argued on CNBC, music fans who share files are likely to "end up at the concerts because they can't help but fall in love with the material at that point, whether they consumed it from downloading it on the actual Internet or they went and purchased the material."[74] Regardless of whether file sharing impacts record sales at all, either positively or negatively, there is little question that one of its effects is to deepen the relationship between fans and artists, making them active ambassadors of an artist's brand and work, and driving them to concerts and other artist-branded products and events. Recent research supports this assertion. As academic researchers van Eijk et al. conclude in a 2010 article, "buying and file sharing turn out to go hand in hand. Music sharers are as equally likely to buy music as other people: 68 percent of file sharers also purchase music. File sharers buy as much music as non-file sharers. However, file sharers spend more money on merchandise and go to concerts significantly more frequently."[75] Similarly, Dewenter, et al. (2010) find through economic analysis that "[f]ile-sharing has opposite effects on the prices for records and concerts. It decreases the price for records, but increases the price for live concerts. . . . File sharing can actually lead to higher firm profits through increased concert ticket demand."[76]

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74 CNBC, "50 Cent on Getting Rich," http://www.msnbc.msn.com/id/21134540/vp/32749464#32749464, September 2009.

75 Nico van Eijk, et al., "Legal, Economic and Cultural Aspects of File Sharing," 2010.

76 Ralf Dewenter, et al., "On File Sharing with Indirect Network Effects Between Concert Ticket Sales and Music Recordings," 2010.

e. *Consumer Education and Product Differentiation.*

In addition to deepening consumer relationships with their favorite artists, alerting them to new artists they might enjoy, and allowing them to sample before they buy, file sharing has been vital in alerting music fans to the benefits -- and the dangers -- of online distribution. In the past, new formats like the CD required significant marketing and education campaigns on the part of the labels. By contrast, P2P has offered consumers a chance to educate themselves, voluntarily adopting a new format *en masse* for the first time in the history of recorded music. Today, digital music's ubiquity, flexibility, portability and infinitesimal storage costs have become abundantly clear to the vast majority of music fans.

However, from the start, file sharing has also offered an advertisement for the shortcomings of non-commercial distribution: namely, incomplete access to catalog, potential security risks, lack of guaranteed quality, potential incompatibility between formats, and complex storage and retrieval procedures. Even a decade ago, when I surveyed Napster users and other digital music fans for Jupiter Research, there was a significant market demand for commercial digital music services, driven by guarantees of quality, availability and security. Today, with emerging mobile "cloud" distribution infrastructures, the gap between what P2P networks can offer and a fully-realized, easy-to-use commercial offering is significant enough to merit payment from millions of music fans in the US alone. And, as in the past, the greatest strategic obstacle to capitalizing on this demand remains effective licensing and pricing, rather than technical challenges or the existence of a free alternative.

ii. Indirect Industry Benefits: Artist Benefits.

Record labels exist principally in order to monetize the output of recording artists. Therefore, what's good for artists is ultimately good for labels as well, even if the economic benefit is not immediately evident. And there is little question that artists have benefited from peer-to-peer file sharing, as well as the free sharing of content over the web, due to the platform's enormous distribution and promotional power. As a result of this, we have seen a great many artists actively promote the free online distribution of their work, and have witnessed the development of several musical careers founded on the sharing activities of online fan communities.

a. *Economic Benefits of File Sharing for Artists.*

There is a significant volume of compelling research suggesting that file sharing adds more than it detracts to the sale of recorded music, through the mechanism of "sampling" (offering fans the ability to "try before they buy"). To the extent that this benefits record labels (an argument I have explored above), it also benefits artists, through increased royalty payments. However, file sharing has benefits for artists above and beyond this lift in sales.

One important factor is distribution and marketing. In the pre-Internet music industry, artists had only three channels to reach a significant number of consumers: retail, radio and television. Each of these channels is highly concentrated in its ownership structure, as in the record label sector. This high concentration, along with the native technological limitations of traditional media (e.g. limited shelf space and airtime) drastically diminishes the number and range of artists who are able to share their work through such channels. Internet-based distribution, especially peer-to-peer file sharing, eliminates these bottlenecks from the process. While a commercial radio station may play fewer than a hundred artists' work in a given week, and Wal-Mart's shelves may carry a few hundred at best, millions of artists have the capacity to reach their audiences around the globe via the "long tail" of P2P networks. While most of these songs are not paid for by consumers, exposure through this channel produces potential touring, merchandising, licensing and sales revenues to these millions of otherwise anonymous musicians.

Another important factor is market research. Both independent and major-label artists, with fan bases both large and small, can leverage the "wisdom of the crowd" to discover which songs and styles are most likely to connect with their customers. Because P2P networks offer a high volume of long-tail artists, eschew editorial and promotional considerations, and represent low-cost or free engagement for consumers, they are a far more accurate mirror of public taste and sentiment than audience measurement on narrower, higher-cost channels like radio and television can offer. Research firms like BigChampagne exploit this capacity commercially, offering market research based on the analysis of peer-to-peer network usage to major labels, broadcasters, and other music industry organizations.

b. *Artists Who Publicly Support File Sharing.*

Due in part to the economic benefits described above, and in part to an artistic desire to connect with fans, dozens of high-profile artists and their representatives have expressed support for file sharing over the past decade. Examples include:

- Lady Gaga, who told the Sunday Times that she "doesn't mind about people downloading her music for free, 'because you know how much you can earn off touring, right? . . . Make music -- then tour. It's just the way it is today.'"[77]

- Steve Winwood, who intentionally released free music to P2P networks, which his label reported had a positive impact on sales.[78]

- Chuck D, who testified before Congress that "the record industry is hypocritical and . . . P2P to me means 'power to the people.'"[79]

- Moby, who wrote that "file sharing is a reality, and it would seem that the labels would do well to learn how to incorporate it into their business models somehow."[80]

- The Flaming Lips' Wayne Coyne , who argued that "it works to musicians' benefit for people to be able to occasionally listen to their music and, if they really like it, go out and buy it."[81]

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77 "Lady Gaga Says No Problem If People Download Her Music; The Money is in Touring," http://www.techdirt.com/articles/20100524/0032549541.shtml (quoting The Sunday Times).

78 Katie Dean, "Winwood: Roll With P2P, Baby," http://www.wired.com/entertainment/music/news/2004/07/64128, July 9, 2004.

79 *Ibid.*

80 Joel Selvin and Neva Chonin, "Artists blast record companies over lawsuits against down loaders," http://articles.sfgate.com/2003-09-11/news/17506630_1_record-sales-recording-artists-downloaded-music, September 11, 2003.

81 *Ibid.*

- Janis Ian, who took the position that "free Internet downloads are good for the music industry and its artists."[82]

- Sananda Maitreya (formerly Terence Trent D'Arby), who released his own branded P2P client, arguing that the software was "perfect for me to ask my fans to share my music and at the same time continue to stay close to them."[83]

- Wilco's Jeff Tweedy, who argued that "I don't think bands should go out of their way to try and stop people from hearing their music" on P2P networks.[84]

- Martin Hall of Merge Records, who said that pre-release P2P album leaks are beneficial because "the way we look at this, and I think the majority of our bands agree, is: It's getting the record out there and getting people talking about the album."[85]

- Radiohead's Ed O'Brien, who said that "file sharing is like a sampler, like taping your mate's music. You go, 'I like that, I'll go and buy the album'. Or, 'you know what, I'll go and see them live'."[86]

- Blur's Dave Rowntree, who argued that "the fact that file sharing goes on, and is as popular as it is, is an incredibly positive thing for the music industry."[87]

- Pink Floyd's Nick Mason, who said that "file sharing means a new generation of fans for us. It's a great thing to have another generation discovering your music and thinking you're rather good. File sharing

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82 Janis Ian, "The Internet Debacle: An Alternative View," http://www.janisian.com/reading/internet.php (originally published in Performing Songwriter Magazine, May 2002).

83 "Multi-Platinum Grammy-Award Winning Artist Sananda Maitreya Becomes The First Major Artist To Fully Embrace File Sharing With His Own Branded P2P File Sharing Software," http://www.trustyfiles.comlcorp-press-sananda.php, October 5, 2004.

84 Douglas Wolk, "Days of the Leak," Spin, http://www.spin.com/articles/days-leak, July 31, 2007.

85 *Ibid.*

86 Ben Leach, "Blur and Radiohead join forces to battle Government over proposed piracy laws," The Telegraph, http:// www.telegraph.co.uk/technology/news/6165994/blur-and-radiohead-join-forces-to-battle-government-over-proposed-piracy-laws.html, September 10, 2009.

87 *Ibid.*

plays a part in that, because that generation don't do it any other way."[88]

- OK Go's Damian Kulash wrote an Op-Ed for the New York Times, in which he argued that "before a million people can buy our record, a million people have to hear our music and like it enough to go looking for it. That won't happen without a lot of people playing us for their friends, which, in turn, won't happen without a fair amount of file sharing."[89] OK Go later split with its label, EMI, partially as a result of EMI's anti-sharing policies.

- Shakira, who said that file sharing makes her "feel closer to the fans and the people who appreciate the music. It's the democratisation of music in a way. And music is a gift."[90]

- Jason Mraz, who claimed that half of his fan base attending his concerts learned about him through "illegal downloading."[91]

- Heart, who pre-released their album "Jupiters Darling" via free file sharing networks.[92]

- Sonic Youth's Thurston Moore, who wrote that file sharing "simply exists as a nod to the true love and ego involved in sharing music with friends and lovers. Trying to control music sharing – by shutting down P2P sites or MP3 blogs or BitTorrent or whatever

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88 Patrick Foster, "Musicians hit out at plans to cut off internet for file sharers," The Times, http://entertainment.timesonline.co.uk/tol/arts_and_entertainment/music/article6828262.ece, September 10, 2009.

89 Damian Kulash, "Buy, Play, Trade, Repeat," N.Y. Times, http://www.nytimes.com/2005/12/06/opinion/06kulash.html, December 6, 2005.

90 "Shakira hits back at Lily Allen in illegal downloading row as she claims file-sharing 'brings me closer to fans'," http://www.dailymail.co.uk/tvshowbiz/article-1221639/Shakira-hits-Lily-Allen-illegal-downloading-row-claims-file-sharing-brings-closer-fans.html, October 20, 2009.

91 Jonathan Krim, "Artists Break With Industry on File Sharing," The Washington Post, http://www.washingtonpost.com/wp-dyn/articles/A61254-2005Feb28.html, March 1, 2005.

92 "Heart Crazy on TrustyFiles P2P File Sharing Network Distribution," http://www.trustyfiles.com/corp-press-heart.php, July 19, 2004.

other technology comes along - is like trying to control an affair of the heart. Nothing will stop it."[93]

- Nine Inch Nails' Trent Reznor, who encouraged fans at his concert to "steal it, steal away, steal and steal and steal some more and give it to all your friends and keep on stealing" because the record labels are "ripping people off, and that's not right."[94]

- 50 Cent, who told an interviewer that "what is important for the music industry to understand is that this really doesn't hurt the artists. . . . A young fan may be just as devout and dedicated no matter if he bought it or stole it."[95]

- Vampire Weekend's Rostam Batmanglij, who told CNN that "we all grew up in the age of downloading music illegally, we're products of that culture. I personally believe that if you want music to be free, then it should be."[96]

- Aerosmith's Joe Perry, who said that Napster "should have been snapped up by the record companies a long time ago. It was obvious that the fans wanted it and they didn't mind paying for it but the record companies just turned a blind eye to it and basically destroyed an industry."[97]

- Green Day's Mike Dirnt, who said in a radio interview about the release of 21st Century Breakdown that "we leaked the whole record before it came out. We couldn't stand people not hearing it anymore. At the end of the day, if you write a good enough record, people are going to pick it up. Steal the damn record,

93 Thurston Moore, "The Best 90 Minutes of My Life," Wired, http://www.wired.com/wired/archive/13.04/play.html?pg=3, April 2005.

94 "Fan Video: Trent Follows up on Universal AU," http://www.theninhotline.net/news/permalink/1189989696, September 16, 2007.

95 "50 Cent: File-Sharing Doesn't Hurt Artists, Industry Should Adapt," http://torrentfreak.com/50cent-file-sharing-doesnt-hurt-the-artists-071208/, December 8, 2007.

96 "Vampire Weekend: Steal Our Music," CNN, http://www.cnn.com/video/?/video/showbiz/2010/04/16/vampire.weekend.iReport.cnn, April 16, 2010.

97 "Q&A: Steven Tyler and Joe Perry," U.S.A. Today, http://www.usatoday.com/tech/gaming/2008-02-14-aerosmith-qa_N.htm, February 14, 2008.

I don't care. If some kid doesn't have any money and his buddy gives him a copy of the record. . . he'll pick it up when he's 20."[98]

- Neil Young, who told an interviewer that "it's up to the masses to distribute it however they want. The laws don't matter at that point. People sharing music in their bedrooms is the new radio."[99]

- Keith Richards of the Rolling Stones, who said in an on-camera interview that "I've always felt that if it's worth pirating, then it must be worth something. It's more important to me that people, they want that. And even if [I] don't get paid for it, that doesn't mean so much to me."[100]

- Snow Patrol's Gary Lightbody, who told an interviewer that "I'm not anti-filesharing at all. This is the modern way. This is what we've brought on ourselves and you have to live in the society you created. Music is available to everyone if they know how to get and I say fucking go for it."[101]

- Blink-182's Tom Delonge, who said in a Guitar Center interview that "I believe that you should take down every barrier and put as much music out there for free. . . . and that will enable the band and the music and the art and everything to be bigger than it's ever been."[102]

Of course, not every artist supports file sharing; several high-profile musicians, such as Bono and Lily Allen, have come out strongly against the practice. But this doesn't change the fact that the high volume of artist support for P2P

98 "Mike Dirnt (Green Day) Interview," http://blogs.1077theend.com/aharms/2009/05/15/mike-dirnt-green-day-interview/.

99 Marshall Kilpatrick, "Interview with Neil Young on Music Piracy, MP3 Hell and Finding Freaks on the Web," http://www.readwriteweb.com/archives/interview_with_neil_young.php, May 6, 2008.

100 "Living Legends – Rolling Stones: Piracy," http://www.youtube.com/watch?v=yiwzXf6nYkc.

101 "Snow Patrol's Gary Lightbody: 'Music downloads? Go for it'," The Independent, http://www.independent.co.uk/arts-entertainment/music/news/snow-patrols-gary-lightbody-music-downloads-go-for-it-1674867.html, April 27, 2009.

102 Mike Masnick, "Blink-182's Tom Delonge: Time To Adapt, Give Music Away For Free, Monetize Other Things," http://www.techdirt.com/articles/20091106/1619446842.shtml.

indicates that, for a great many, it represents more of a benefit than a liability.

c. *Artists Leveraging File Sharing for Strategic Ends.*

In the previous section, I listed over two dozen high-profile artists who have gone on the record expressing their support for fan-distributed online music. Some of them, including Steve Winwood, Sananda Maitreya and Heart, actively released their music to file sharing networks. In addition to cases such as these, there are other significant examples of artists who have developed entire revenue strategies based around the assumption that file sharing can be a boon to business, rather than a death knell. These include:

- Nine Inch Nails. For his 2008 album *Ghosts I-IV*, Nine Inch Nails frontman Trent Reznor parted ways with his label, Interscope,[103] and released the music on his own website under a Creative Commons license, allowing his fans to freely redistribute the music in a noncommercial capacity, on file sharing networks and elsewhere. In addition to freely available digital files, NIN also released the music under a number of premium packaged formats, including multi-track DVDs, heavy duty vinyl, and an "ultra-deluxe limited edition" box set costing $300.[104] The 2,500 ultra-deluxe box sets sold out in a day,[105] and within the first week, NIN had grossed over $1.6 million in sales revenues across all formats.[106] Retail distribution was handled by Sony Music's RED division, as well as Amazon MP3.[107] The album's CD release was successful enough to win it 14th place on

103 "Nine Inch Nails," MTV, http://www.mtv.com/music/artist/nine_inch_nails/artist.jhtml.

104 Jeff Leads, "Nine Inch Nails Fashions Innovative Web Pricing Plan," N.Y. Times, www.nytimes.com/2008/03/04/arts/music/04nine.html?_r=1&ref=business&pagewanted=print, March 4, 2008.

105 "Trent Reznor Sells 2500 Ultra-Deluxe Vinyl NIN Ghosts at $300 Each in a Day," http://synthesis.net/2008/03/05/trent-reznor-sells-2500-ultra-deluxe-vinyl-nin-ghosts-at-300-each-in-a-day/, March 5, 2008.

106 "Should you give your music away for free?," www.mydiscoutlet.com/should-you-give-your-music-away-for-free/, April 8, 2010.

107 Todd Martens, "Nine Inch Nails album released on the web," L.A. Times, http://latimesblogs.latimes.com/extendedplay/2008/03/nine-inch-nails.html, March 2, 2008.

the *Billboard* 200 chart,[108] as well as the number 1 position on the Dance/Electronic Albums chart. For his following album, *The Slip*, Reznor pursued a similar strategy, to equally beneficial effect.[109]

- Radiohead. In 2007, Radiohead, which had recently parted with longtime label EMI over financial and strategic disputes,[110] self-released its album *In Rainbows* on its own website, offering fans the opportunity to pay anything they liked for the songs in DRM-free MP3 format.[111] Despite making the music effectively free and freely shareable, the band had a significant commercial success.[112] Although official sales figures for the self-released album have never been released,[113] the band's publisher, Warner Chappell, reported that sales of the music on the band's site were more profitable than total sales of their prior, major-label album.[114] Roughly two months after the self-release, the band distributed a retail CD version of the album via major label distribution deals.[115] In its first week of official release, sales of the CD format pushed In Rainbows to first place on the Billboard 200, as well as the UK Album Chart.[116]

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108 "Ghost I-IV – Nine Inch Nails," Billboard, http://www.billboard.com/search/?keyword=nine+inch+nails&x=0&y=0#/album/nine-inch-nails/ghosts-i-iv/1113935.

109 Eric Steuer, "Nine Inch Nails' "The Slip" out under a Creative Commons license," http://creativecommons.org/weblog/entry/8267, May 5, 2008.

110 Jeff Leeds, "In Radiohead Price Plan, Some See a Movement," N.Y. Times, http://www.nytimes.com/2007/10/11/arts/music/11album.html, October 11, 2007.

111 Jonathan Brown, "Radiohead album goes live on the internet," The Independent, http://www.independent.co.uk/arts-entertainment/music/news/radiohead-album-goes-live-on-the-internet-396544.html, October 11, 2007.

112 Greg Kot, "Radiohead's 'In Rainbows' experiment pays off with 3 million sales," Chicago Tribune, http://leisureblogs.chicagotribune.com/turn_it_up/2008/10/radioheads-in-r.html, October 20, 2008.

113 *Ibid.*

114 August Brown, "Radiohead's publishing company reveals the take from 'In Rainbow'," L.A. Times, http://latimesblogs.latimes.com/music_blog/2008/10/radioheads-publ.html, October 15, 2008.

115 Jon Pareles, "Pay What You Want for This Article," N.Y. Times, http://www.nytimes.com/2007/12/09/arts/music/09pare.html?_r=1&pagewanted=print, December 9, 2007.

116 "Radiohead CD tops UK album chart," BBC News, http://news.bbc.co.uk/2/hi/entertainment/7173993.stm, January 6, 2008; "Radiohead Nudges Blige From Atop Album Chart," Billboard, http://www.billboard.com/bbcom/news/article_display.jsp?vnu_content_id=1003694375.

The album went on to sell over 3 million copies in the nine months subsequent to the self-release period.[117]

- Prince. More than almost any other top-tier recording artist, Prince has shown an ongoing willingness to experiment with the Internet as a distribution, sales and marketing platform.[118] Although his stated opinion has been subject to numerous shifts and reversals,[119] (not long ago, he declared that the Internet is "completely over"),[120] he has benefited immensely from innovative distribution strategies based on free distribution and redistribution. An excellent example is his decision in 2007 to release his new album *Planet Earth* as a free CD included in 3 million issues of Britain's Mail on Sunday tabloid newspaper.[121] In addition to being paid a reported half a million dollars plus royalties by the paper's publisher, Prince went on to play a twice-extended, sold-out, 21-night engagement at London's O2 arena during the subsequent two months, which grossed over $22 million in revenues.[122] A copy of *Planet Earth* was given away freely to every ticket purchaser.[123] Although Prince has been a vociferous opponent of file sharing at times (and has sued torrent tracker The Pirate Bay),[124] there is little question that his financial success as a touring artist owes some of its longevity to his efforts to make his music freely available for people to access and share.

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117 *Ibid.*

118 Greg Sandoval, "Prince: The artist who formerly liked the Internet," http://news.cnet.com/Prince-The-artist-who-formerly-liked-the-Internet/2100-1030_3-6218288.html, November 13, 2007.

119 *Ibid.*

120 Kyle Anderson, "Prince Says Internet is "Over", But Radiohead, Trent Reznor And Other Beg to Differ," http://newsroom.mtv.com/2010/07/07/prince-internet-is-over, July 7, 2010.

121 Ann Powers, "It's worth a visit to Prince's 'Planet'," L.A. Times, http://articles.latimes.com/print/2007/jul/24/entertainment/et-prince24, July 24, 2007.

122 Greg Kot, Ripped: How the Wired Generation Revolutionized Music, 2009.

123 "NEWS – Prince album drama," http://uk.news.launch.yahoo.com/dyna/article.html?a=/070628/340/hbc3j.html&e=1_news_dm, June 29, 2007.

124 Greg Sandoval, "Prince to sue The Pirate Bay," http://news.cnet.com/8301-10784_3-9814504-7.html, November 9, 2007.

- The Beastie Boys, David Byrne, My Morning Jacket, Spoon, et al. In 2004, *Wired Magazine* partnered with Creative Commons to release a compilation of 16 tracks by well known artists, all released under a CC license allowing and encouraging fans to rip, remix and share the songs it contained.[125] A CD version was included inside the November 2004 edition of Wired, and the songs were available for free download online.[126] Although older participating artists like Byrne, The Beastie Boys and Gilberto Gil had established their careers by the time this compilation was released, younger bands like Spoon and My Morning Jacket saw significant growth in their success following the *Wired* project, enjoying their first top-ten hit albums in the years subsequent to its release.[127] While the compilation can hardly be held as the sole factor in these bands' success, I would argue that the thousands of remixes and untold millions of freely shared copies of their songs enabled by the release were no doubt a significant engine of new fan acquisition.

d. *Artist Careers Launched by Free Fan Distribution.*

In addition to simply delivering new fans and revenues to independent and major label recording artists, file sharing and other forms of free online fan-based distribution have been integral to launching new artists' careers, or vaulting them into the stratosphere. A few recent examples are included below:

- Justin Bieber. Two years ago, few people had heard of a 14-year-old singer from Stratford, Ontario named Justin Bieber. After his mother posted some home videos of him singing pop R&B songs to YouTube, his online popularity rose significantly, and he was "discovered" accidentally on the site by a former label marketing executive, who helped him sign a recording

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125 "The WIRED CD: Rip. Sample. Mash. Share.," http://creativecommons.org/wired.

126 Thomas Goetz, "Sample the Future," Wired, http://www.wired.com/wired/archive/12.11/sample/html?pg=1&topic=sample&topic_set=, November 2004.

127 Jeff Spevak, "A 'rebirth' of My Morning Jacket band," http://rocnow.com/article/afterdark/20108260314, August 26, 2010.

contract with Island Records.[128] By the time his first single was released in 2009, the singer was already the 23rd-most-popular musician on YouTube. In the year and a half since then, Bieber has only grown in popularity, fueled by free sharing on YouTube (where he is the 20th-most-popular musician of all time), Twitter (where he accounts for 3 percent of all traffic),[129] and P2P networks (where, according to BigChampagne, he is currently #5 on the most-downloaded list nationally within the pop category).[130] None of this free sharing has kept Bieber's first album, *My World*, from going Platinum in the US and Canada,[131] and it's clearly only helped fuel the "Bieber fever" driving millions of fans to buy his merchandise and attend his live concerts.[132]

- OK Go. Beginning with their second album *Oh No*, released on EMI's Capitol Records, OK Go has been known for their home video-style, low-budget, elaborately choreographed music videos, released via YouTube.[133] The video for the first single, "A Million Ways," became the most downloaded music video ever within a year after its release.[134] A subsequent video, for the single "Here It Goes Again," went viral on a massive scale,[135] garnering over a million views

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128 Jan Hoffman, "Justin Bieber is living the Dream," N.Y. Times, http://www.nytimes.com/2010/01/03/fashion/03bieber.html, January 3, 2010.

129 Brenna Cammeron, "Justin Bieber makes up for 3 percent of all traffic on Twitter," http://www.nydailynews.com/entertainment/2010/09/08/2010-09-08_justin_bieber_takes_up_3_of_all_twitter_traffic.html, September 8, 2010.

130 Ben Sisario, "A pop Chart for Web Era Challenges Billboard's," N.Y. Times, http://www.nytimes.com/2010/07/22/arts/music/22singles.html, July 21, 2010.

131 "Platinum-selling Pop Sensation Justin Bieber Scores #1 Album in the US with My World 2.0," http://www.universalmusic.com/artist-news, April 5, 2010; Jocelyn Vena, "Justin Bieber Goes Platinum In Canada, preps Second Single," http://www.mtv.com/news/articles/1622464/justin-bieber-goes-platinum-canada.jhtml, September 28, 2009.

132 Tom Lamont, "Bieber Fever: the 12-year-old who conquered America," http://www.guardian/co.uk/music/2010/apr/04/justin-bieber-teen-pop-interview/, April 4, 2010.

133 Mikael Wood, "OK Go: The Billboard Cover Story," Billboard, http://www.billboard.com/features/ok-go-the-billboard-cover-story-1004078654.story#, March 26, 2010.

134 Gil Kaufman "YouTube Faves OK Go: The Band Least Likely To Become Famous For Their Dancing," http://www.mtv.com/news/articles/153967/-go-risk-becoming-goofy-dancing-band.jhtml, August 29, 2006.

135 *Ibid.*

in its first week of release and more than 50 million views over a four-year span, and is the most-favorite YouTube music video of all time.[136] Following the release of this video, and the band's subsequent appearance on the MTV Video Music Awards the next month, Oh No sales spiked, achieving new sales records for the band.[137] As OK Go bassist Damian Kulash, Jr. argued in a 2008 Op-Ed in the *New York Times*, he considers the hundreds of millions of free streams and downloads of his songs and videos ("orders of magnitude above our CD sales") to be a "real success on the Internet" rather than a failure of the marketplace.[138] Despite these successes, EMI changed its policies as they released their third album, *Of the Blue Colour of the Sky*, preventing OK Go fans, bloggers and journalists from embedding their YouTube videos on third-party sites.[139] As a result, according to a 2010 Times Op-Ed by Kulash, views of their "*Here it Goes Again*" video immediately dropped by 90 percent.[140] Soon thereafter, the band parted ways with Capitol, and re-released its new album with indie Parachute Records.[141] Though sales of the new album have been middling, the band's success with other revenue sources has continued to climb. As former major label executive and founder of Family Records Wesley Verhoeve reported in a recent blog post, OK Go is "killing it in endorsements and synch action," and vastly outstripping their sales revenues through touring and advertising.[142]

- The Gregory Brothers. A Brooklyn-based independent band, the Gregory Brothers are currently

136 "5 Secrets of youTube's Success," http://www.wired.com/magazine/2010/03/ff_youtube_5secrets/all/1, March 22, 2010.

137 "Oh No," http://www.last.fm/music/OK+Go/Oh+No.

138 Damian Kulash Jr., "Beware the New New Thing," N.Y. Times, http://www.nytimes.com/2008/04/05/opinion/05kulash.html, April 5, 2008.

139 Mikael Wood, "OK Go: The Billboard Cover Story," http://www.billboard.com/features/ok-go-the-billboard-cover-story-1004078654.story#, March 26, 2010.

140 Damian Kulash Jr., "WhoseTube?," N.Y. Times, http://www.nytimes.com/2010/02/20/opinion/20kulash.html, Feb. 20, 2010.

141 Mikael Wood, "OK Go: The Billboard Cover Story," http://www.billboard.com/features/ok-go-the-billboard-cover-story-1004078654.story#, March 26, 2010.

142 http://www.wesleyverhoeve.com/the-post-soundscan-era-metrics-that-matter.

better known for their YouTube video series "Auto-Tune the News," (ATTN) in which they remix and harmonize television news footage, than for their more traditional 2009 studio album, which received positive reviews. Although ATTN has enjoyed significant traffic (millions of views per video) and press attention since its debut in the Spring of 2009, the band was catapulted to mainstream success with the July, 2010 release of ATTN episode 12b, "BED INTRUDER SONG!!!!"[143] This video, which remixed a Huntsville, AL local news story about an attempted rape, and featured the colorful personality of the victim's brother, Antoine Dodson,[144] garnered over 50 million YouTube views within its first four months of release.[145] Within a month of release, thousands of other YouTube fans had posted their own interpretations of the song, accounting for tens of millions of additional views to date.[146] This viral success translated to a degree of market success beyond YouTube; the song was made available for paid download on iTunes, and charted on the *Billboard* Hot 100, a rare accomplishment for an iTunes-only song. The Gregory Brothers shared 50% of writing credit and revenues with Dodson,[147] who has also used the video to sell merchandise and music of his own, and has reportedly used the revenues to move his family out of the projects, to a safer home.[148]

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143 Eliot Van Buskirk, "Gregory Brothers of 'Bed Intruder' Fame Discuss TV Pilot, Antoine Dodson," Wired, http://www.wired.com/epicenter/2010/08/gregory-brothers-bed-intruder-antoine-dodson-autotune, August 13, 2010.

144 Jenna Wortham, "From Viral Video to Billboard 100," N.Y. Times, http://www.nytimes.com/2010/09/06/business/media/06tune/html, September 5, 2010.

145 "The Top 10 Viral Videos of 2010," http://www.spike.com/blog/top-10-viral-videos/102980?page=2&numPerPage=1, December 22, 2010.

146 "'Bed Intruder' Meme: A Perfect Storm of Race, Music, Comedy And Celebrity," NPR, http://www.npr.org/blogs/alltechconsidered/2010/08/05/129005122/youtube-bed-intruder-meme, August 5, 2010.

147 Eliot Van Buskirk, "Gregory Brothers of 'Bed Intruder' Fame Discuss TV Pilot, Antoine Dodson," Wired, http://www.wired.com/epicenter/2010/08/gregory-brothers-bed-intruder-antoine-dodson-autotune, August 13, 2010.

148 Mike Thomas, "Chicago Transplant's fame grows beyond web," Chicago Sun Times, http://www.suntimes.com/lifestyles/2928984,kevin-antoine-dodson-tv-deal-112910.article, November 29, 2010.

e. *These Benefits Stand in Contrast to Historical Label-Artist Relations.*

Despite the labels' pro-artist stance, they have historically shown limited economic and career benefit even for the handful of working musicians to sign major label contracts, and have been consistently criticized for unfair or unethical business relations with their artists.

Major label record contracts typically include clauses whose primary effect is to diminish actual royalties paid to the recording artist. As pro-musician advocacy group The Future of Music Coalition argued in a recent, lengthy critique of these practices, "Outside of the major label music world many of these clauses are seen as an affront to basic logic."[149]

Several economic analyses have demonstrated the effects of these practices on actual artist revenues. Celebrated rock producer Steve Albini (Pixies, Nirvana, PJ Harvey) wrote a widely-read and reprinted 1993 article in *The Baffler*, demonstrating how such clauses, and other economic factors, could conceivably lead to band members signed to a $250,000 contract taking home roughly $4,000 apiece for their work.[150] More recently, online magazine *The Root*, in conjunction with Don Passman, author of *All You Need to Know About the Music Business*, conducted an economic analysis corroborating this point, demonstrating that "for every $1,000 in music sold, the average musician makes $23.40."[151]

Even the more justifiable contractual elements can be damaging to artists. For instance, "recoupment" clauses require the labels to make back their expenditures for producing, distributing, and marketing the music before any royalties are owed to the recording artist. As the RIAA has admitted on its own website, fewer than one in ten of their album releases ever make back the money the label has

149 Future of Music Coalition, "Major Label Contract Clause Critique," http://72.27.230.165/article/article/major-label-contract-clause-critique, October 3, 2001.

150 Steve Albini, "The Problem With Music," (excerpt from The Baffler), www.permanentrecordstudios.net/theproblemwithmusic.pdf, 1993.

151 Cord Jefferson, "The Music Industry's Funny Money," The Root, http://www.theroot.com/views/how-much-do-you-musicians-really-make, July 6, 2010.

spent;[152] therefore, by this logic, more than 90 percent of major label artists never see royalties beyond the initial advance.

Aside from these contractual considerations, the major labels have historically fought to diminish the degree of power, ownership and revenue recognized by recording artists, in the interest of maximizing their own profitability. One recent example is their lobbying effort to insert four words into the text of The Satellite Home Viewer Improvement Act of 1999, thereby with one tiny stroke reclassifying all recording artists' labor as "work-for-hire" under copyright law. The practical effect of this maneuver was to eliminate artists' rights to recapture control of their work after their contracts had expired. Although President Clinton signed this bill into law, subsequent Congressional testimony by major label artists like Sheryl Crow and Don Henley led to its repeal by the Senate.

Another highly visible, high-stakes battle between the major labels and their artists has revolved around the issue of whether digital downloads (such as those available from iTunes) are technically retail or licensing. According to traditional artist contracts, retail royalties are significantly lower (by a factor of about 3-to-1) than licensing royalties, which means that the answer to this question could be worth billions of dollars to either labels or artists. Currently, this battle is being waged in the form of a lawsuit between rapper Eminem and Universal Music Group. In September 2010, a Federal Appeals Court reversed a lower court's decision for UMG, finding in favor of Eminem. However, UMG is appealing this decision, and the case's eventual outcome is still uncertain.

IV. OPINION: THE LABELS' OWN CONDUCT HAS CONTRIBUTED TO THEIR LOSSES, TO THE EXTENT THAT SUCH LOSSES EXIST.

To the extent that label revenues have suffered in recent years, it would be a mistake to attribute the bulk of these losses to the actions of third parties, let alone LimeWire. In fact, as major label executives themselves have acknowledged on occasion, they have been hamstrung by their own strategic missteps and oversights. These can be divided broadly into three categories: technological, strategic and reputational.

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152 RIAA, "The Cost of a CD," http://web.archive.org/web/20021201191055/www.riaa.org/MD-US-7.cfm, archived.

A. Technological Missteps.

i. The Unsecured CD Format.

The record industry essentially opened the door for today's digital music environment when it developed and aggressively promoted compact disc technology in the early 1980s. Because CDs contain audio files in an unsecured digital format, it was only a matter of time before consumers with optical media drives in their personal computers were able to "rip" the files to their hard drives, to be copied and redistributed ad infinitum. In fact, CD-ROM computer drives were first introduced into the market in 1985, only half a decade after the audio CD's first appearance, and the two technologies both reached market maturity during the 1990s. Thus, while not every record label executive at the time necessarily had the expertise and the foresight to realize that the CD format betokened the end of control over distribution, it was hardly beyond the horizon of possibility for those in charge of technological strategy at the labels. As music industry historian Steve Knopper relates, Fraunhofer, the developer of MP3 technology, "tried to warn the industry in the early 1990s" of the potentially volatile combination of unsecured CDs and its new encoding format, "but didn't get anywhere. 'There was not that much interest at the time,'" Knopper writes, quoting a Fraunhofer employee.[153]

ii. Digital Rights Management.

It only became clear to the labels that the combination of unsecured CDs, massively distributed CD-ROM drives, Internet access and the MP3 format threatened to destabilize their control over music distribution around the end of the 1990s. The industry's response was the use of digital rights management (DRM) technology to introduce copy-protected digital audio files into the marketplace. While this may have seemed sensible at first (in fact, I published a research report in 1999 advocating its use), it became clear before long that DRM was only exacerbating the industry's problems.

DRM was problematic for a variety of reasons. For one thing, the restraints on reasonable use presented by DRM (e.g. copying songs to portable devices, or transferring them to CDs) eroded consumer trust and patience, and reinforced by contrast the benefit of music obtained through unlicensed channels. For another thing, DRM was prone to technical malfunction; even the ostensibly permitted uses were often difficult for consumers to accomplish, and their experiences were fraught with "server error" messages. DRM also presented strategic difficulties for retailers, and forced them to violate their customers' trust. For instance, when high-

153 Steve Knopper, Appetite for Self-Destruction: The Spectacular Crash of the Record Industry in the Digital Age, 2009.

profile digital music retailers like Yahoo and MSN decided to shut down their stores for financial reasons, they were forced to choose between maintaining their DRM servers indefinitely and at significant cost (which would allow consumers to continue listening to the songs they'd purchased), and shutting them down (which would essentially cause all their consumers' purchases to become non-functional). In both cases, the companies chose the latter course, and consumers lost out, with a significant blow to goodwill for both the retailers and the record labels. Finally, DRM actually undermined the market power of the labels by increasing the leverage enjoyed by Apple, which used DRM to create a successful "walled garden" between its iPod hardware, its iTunes software, and its digital music retail business, excluding third party retailers and manufacturers from the process and creating a near-monopoly.

The industry persisted in using DRM for years, despite the abundant critiques of its many drawbacks in the press, the academy and elsewhere, and despite the fact that the technology was completely ineffectual in stemming unlicensed redistribution. Only in 2007, long after the damage was done, did the major labels begin offering unsecured digital tracks for retail. As Edgar Bronfman, the head of Warner Music Group, said during conference remarks shortly thereafter, "We expected our business would remain blissfully unaffected even as the world of interactivity, constant connection and file sharing was exploding. And, of course, we were wrong."[154]

iii. Secure CDs and Malware.

In addition to using DRM on its digital inventory, the recording industry also tried to introduce copy protection into CDs themselves, despite the unencrypted nature of the format. The major labels employed a variety of vendors with a variety of techniques to accomplish this end, and actually shipped tens (possibly hundreds) of millions of units carrying copy protection software, without alerting consumers to the change in the marketing or packaging materials.

The best one could say about these copy-protected CDs is that they presented unforeseen difficulties to the consumers who bought them. They crashed computers and car stereos, they refused to play, they stymied various forms of fair use. Far worse, however, was the fact that tens of millions of these CDs carried "malware" -- technology designed to reprogram a consumer's PC without their knowledge or consent, remotely

154 "Bronfman On Digital Music: Apple Did It Right, We Did It Wrong," http://www.allaccess.com/net-news/archive/story/32851/bronfman-on-digital-music-apple-did-it-right-we-di, November 16, 2007.

surveilling the actions of that consumer, and opening their private files and communications to potential hacker attacks.

These problematic tactics led to trouble for the labels, especially for Sony Music (then Sony BMG), which was targeted by state attorneys general, the FTC, and class action lawsuits for the damages caused by its copy protected CDs. The company eventually settled the charges related to these technologies, paying millions of dollars in fines, free exchanges for affected CDs and up to $175 per consumer for computer repair costs -- a small price compared to the statutory maximum penalty of $120,000 per violation, considering that the company's actions were "intrusive and unlawful," in the words of FTC Chairman Deborah Platt Majoras.[155]

iv. <u>HD Audio Format Wars</u>.

Even as consumers were becoming increasingly accustomed to the benefits of digital music, albeit at a slightly perceptible cost in audio quality, the major labels were hard at work developing a new physical distribution format intended to replace the CD, featuring higher-capacity discs carrying higher-definition, multichannel audio in a secure format. In other words, these new discs were the diametric opposite of MP3s: slightly perceptible improvement in audio quality, and significantly less functional than CDs, in terms of portability and fair use. Despite this fact, the gamble was theoretically worthwhile for the labels; the successful mass market adoption of a secure, high-definition, multichannel physical format would have allowed the recording industry to regain a degree of control over music distribution, and undermined consumer demand for the MP3's highly "lossy" compressed stereo audio capabilities.

Unfortunately, the labels undermined their own efforts in a variety of ways. First of all, they had introduced the CD to the marketplace in the 1980s with the promise of "perfect" digital audio quality, a claim that was typically challenged only by the most finicky audiophiles. This made it difficult to position HD audio as a necessary or meaningful upgrade in the minds of most consumers. Second, the much-publicized problems with secure CDs made consumers leery of supporting a new and untested secure distribution format; once bitten, they were twice shy. Third, the labels largely failed to offset the format's limited functionality with additional features extending consumer benefits beyond those of MP3 (a policy I had advocated in published research and conference presentations as early as 2002). Finally, and most importantly, the industry failed to back a single HD audio disc format, allowing two competing technologies (SACD and DVD-Audio, each supported by its own contingent of labels) to duke it out

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155 Dawn Kawamoto, "Sony Settles With FTC In Rootkit Case," http://news.cnet.com/2100-1027_3-6154655.html, January 30, 2007.

in an ongoing "format war" for years. This format war added to the already significant degree of consumer confusion and mistrust, and delayed indefinitely the vital support from consumer electronics and computer manufacturers that would have aided consumer adoption. By contrast, the film industry successfully ended its own HD video disc format wars (much as it had in the case of VHS vs. Betamax a generation earlier), and has since benefited from the broad adoption of Blu-Ray technology, which accounted for roughly 400 million discs shipped in 2010, or 60 percent more than in 2009, according to research firm Futuresource.[156]

v. Additional Failed Formats.

Throughout the last 15 years, despite the increasingly obvious market benefits of unsecured digital download formats and streaming music services, the labels have continued to divert research, development, strategic focus and market influence into a variety of physical formats that failed to address adequately the changing needs of music consumers, and predictably failed to gain any market traction. Although the entire list is long and the reasons for failure are too numerous to elaborate here, selected failed distribution formats include MiniDisc, slotMusic, DataPlay, and UMD. Although each of these formats was announced to the press and the world at large with a certain degree of hype regarding its role as the "next CD," none of them ever began to approach the consumer appeal, awareness or adoption levels of MP3 and Internet streaming.

B. Strategic Missteps

As I noted above, EMI owner Terra Firma has acknowledged in public filings that "both the industry and the company" are to blame for a "slow response . . . to the move towards digital consumption. This shift has been detrimental to the consumer-oriented Recorded Music business."[157] Similarly, *The Telegraph* reported that Terra Firma chief Guy Hands told employees in a confidential 2007 email about his concern that "rather than embracing digitalisation and the opportunities it brings for promotion of product and distribution through multiple channels, the industry has stuck its head in the sand."[158] Along the same lines, Geoff Taylor, who runs British record industry trade group BPI, wrote in a 2009 Op-Ed piece for the BBC that "many critics have argued that the music industry could have avoided some of the problems it faces today if we had embraced

156 "Blu-Ray Video Disc Production to Approach 2bn Units by 2014," Futuresource Consulting, http://www.futuresource-consulting.com/press.html, December 2010.

157 Terra Firma, Annual Review, 2007.

158 Yvette Essen, "EMI Warning On Internet Music," The Telegraph, http://www.telegraph.co.uk/finance/markets/2817309/EMI-warning-on-internet-music.html, October 8, 2007.

Napster rather than fighting it. That's probably true, and I, for one, regret that we weren't faster in figuring out how to create a sustainable model for music on the Internet."[159]

As damning as they sound, these self-criticisms are still understatements. From the dawn of the consumer Internet to the present day, the recording industry has followed a consistent pattern of not only ignoring important technology and market trends, but actively opposing many of these developments with all of its might. In the words of Salon.com tech journalist Andrew Leonard and marketing blogger Adam Singer (as well as many others), the recording industry has been "fighting the future" for years.[160] As the industry's strategic missteps in recent decades are so numerous and complex that they have already provided the fodder for several exhaustively researched books on the subject (e.g. Steve Knopper's *Appetite for Self-Destruction: The Spectacular Crash of the Record Industry in the Digital Age* and Greg Kot's *Ripped: How the Wired Generation Revolutionized Music*), I will focus here only on a few highlights:

i. Ignoring, Then Fighting the MP3.

As I have mentioned, the recording industry was aware of the MP3 format in the early 1990s, and showed little interest early on in its strategic significance, either positive or negative. However, as the format's popularity grew with the online population later in the decade, the industry actively turned against it, attempting to limit and even criminalize its use. This effort has taken on many forms. Early on, the industry sued MP3 player manufacturers like Diamond Multimedia, arguing that its Rio devices violated the Audio Home Recording Act (AHRA). Following Diamond's successful defense, the labels attempted to legislate MP3 out of the market, by developing the Secure Digital Music Initiative -- a combination technology/lobbying effort that would have required consumer electronics manufacturers to create devices that would only play licensed and sanctioned digital songs. This effort, too, died on the vine after years of hope and hype.

It is also worth noting that Sony Corporation, which owns both a major label and a major consumer electronics manufacturer, has been at war with itself over digital music for years. In 2000, the label and the electronics arm took active and opposite sides in the Napster file sharing suit. Similarly, the label supported the RIAA in its 2001 suit against

159 Geoff Taylor, "Ten Years of Napster," BPI, http://www.bpi.co.uk/press-area/news-amp3b-press-release/article/ten-years-of-napster-7c-geoff-taylor-bbc-comment-piece.aspx, June 26, 2009.

160 "Adam Singer: Fighting the Future at Every Turn," http://www.hypebot.com/hypebot/2010/07/adam-singer-fighting-the-future-at-every-turn.html; Andrew Leonard, "The Digital Music Renaissance," Salon, http://www.salon.com/technology/col/leon/2004/07/01/music, July 1, 2004.

Launch.com, in which Sony Corp. was an investor. And for five years, the label effectively prevented the electronics arm from supporting MP3 in its devices. Thus, despite Sony's decades-old dominance in the portable music player market, and its invaluable Walkman brand, the company sat idly by as Apple introduced the iPod, which rapidly came to define and dominate the entire category, reaping tens of billions of dollars in sales -- far more than Sony Music in its best of years. The Walkman line of digital players only began supporting MP3 in 2004,[161] three full years after the iPod's introduction, and still lags behind iPod as a distant challenger.

ii. Squelching Innovation.

The 1990s and 2000s have been, in the eyes of many researchers, entrepreneurs and technologists, a golden age of cultural and business innovation. The Internet's global reach, low financial barrier to entry and instantaneous, data-rich interactivity have provided a perfect crucible for the rapid prototyping, revision and dissemination of new business and product ideas, generated by millions of creative contributors throughout the world. Because of its universal appeal and cultural ubiquity, music has been one of the touchstones of innovation, a "toe in the water" for both consumers and businesses experimenting with the digital marketplace. Ideally, this should have provided boundless benefit for artists and labels; research and development are usually expensive and time-consuming propositions, with a low success rate. Yet instead of encouraging, and partnering with, these innovators, the labels have typically responded to them as unadulterated threats, and have used both legal and market leverage to shut them down.

Again, an exhaustive list of technologies and services that have been punished by the labels for introducing innovation into the market is beyond the scope of the present work, but it is worth mentioning a few significant examples that were targeted despite offering fans new and desirable ways to enjoy music, and holding the promise of promotion and revenue for labels and artists alike.

- MP3.com. This site, launched in 1997, went through a variety of incarnations over the years. Its most innovative service, my.mp3.com, launched in 2000, allowed music fans to insert a CD into their local computer drives, thereby "adding" the music on that CD to their remote libraries, which were then available for streaming over the Internet from any location.[162] In this respect, the

161 Peter Cohen, "Sony to Support MP3 in Future Players," PCWorld, http://www.pcworld.com/article/117910/sony_to_support_mp3_in_future_players.html, September 23, 2004.

162 Jim Hu, "MP3.com settles copyright dispute with Warner, BMG," http://news.cnet.com/2100-1023-241677.html, June 9, 2000.

site was a decade before its time, anticipating and guiding the rise of today's emerging "cloud" network service infrastructure. The major labels sued the company for copyright infringement, and after paying tens of millions of dollars in settlement,[163] it was acquired by Vivendi Universal,[164] one of the plaintiffs, who shut it down and sold it off soon thereafter.

- iMeem. Founded in 2003, iMeem was an immensely popular, highly innovative digital music service. It was among the first to integrate what are now called "social media" features into its platform, and among the first to use advertising, rather than consumer payments, to support its business model. In 2007, Warner Music Group sued the company, claiming copyright infringement, and then settled shortly thereafter, once iMeem had agreed to pay licenses on Warner's terms -- a technique that became known in the blogosphere as "negotiating through lawsuit."[165] In 2009, after the company had struggled to stay afloat under these licensing terms, it was acquired by News Corp's MySpace (which had blocked iMeem content from its own site in the past).[166] MySpace promptly shut iMeem down, redirecting all traffic to MySpace Music, a site that had been launched in partnership with the major labels the prior year.[167]

- SeeqPod. Founded in 2005, SeeqPod was a music search engine and recommendation engine (akin to Apple's "genius" feature or Pandora's "music genome project"). Unlike most other search engines, SeeqPod specifically searched for playable files, allowing music fans to quickly and easily discover third party sites where they could listen to music that matched their tastes. In 2008-9, the company was sued by several major labels, for billions of dollars in damages. The plaintiffs also pursued third party developers who used SeeqPod's API to fuel their own services, effectively cutting off its revenue and business development prospects. Despite the

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163 *Ibid.*

164 Brad King, "MP3.com Goes Universal," http://www.wired.com/gadgets/portablemusic/news/2001/05/43972, May 21, 2001.

165 Yinka Adegoke, "Warner Music sues social network site for piracy," Reuters, http://www.reuters.com/article/idUSN1537407020070516, May 15, 2007; Matt Rosoff, "Warner settles with Imeem," http://news.cnet.com/8301-13526_3-9743880-27.html, July 12, 2007.

166 Matt Rosoff, "MySpace buries Imeem," http://news.cnet.com/8301-13526_3-10411710-27.html, December 8, 2009.

167 Greg Sandoval, "MySpace acquired Imeem--now what?," http://news.cnet.com/8301-31001_3-10401292-261.html, November 18, 2009.

fact that SeeqPod arguably had a strong "safe harbor" defense against copyright infringement (the same argument used by Google, Bing and other search engines), it quickly went bankrupt defending itself, and filed a petition for Chapter 11 in late 2009.[168] The following year, its technology assets were acquired by digital services company Intertrust, for use in a variety of services (e.g. Internet television, targeted advertising and healthcare information services), most of which have nothing to do with music.[169]

- Muxtape. Launched in the Spring of 2008, Muxtape allowed music fans to upload MP3s into online play lists, which would then be shareable as streaming music "mixtapes" for other fans. The site intentionally avoided legal pitfalls that had compromised similar sites, for instance not offering users the ability to search for, and retrieve, individual songs. As founder Justin Ouellette told NPR reporter Zena Barakat a month after launching, he viewed the site as a promotional boon to labels and artists: "its intended purpose is to introduce you to new music that you would then hopefully go and buy."[170] The site grew rapidly in size and reputation, and in a few short months was considered to be one of the brightest rising stars in the digital music arena. In August, 2008, the site was deactivated, and the front page featured a message saying that "Muxtape will be unavailable for a brief period while we sort out a problem with the RIAA." As it turns out, this was caused by a takedown threat from his web host, Amazon, which had received complaints from the major labels, even though they were in the midst of negotiations with Muxtape at the time. In other words, this was another likely example of "negotiating through lawsuit" in progress. However, unlike iMeem's founders, Ouellette chose not to respond to the threat by acquiescing to ruinous licensing terms. In his words: "I walked away from the licensing deals. They had become too complex for a site founded on simplicity, too restrictive and hostile to continue to innovate the way I wanted to."[171] Instead, Ouellette attempted to relaunch the site a few months later as a self-promotional tool for independent bands. Today, the site is

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168 Jacqui Cheng, "SeeqPod bullied into bankruptcy by record industry," http://arstechnica.com/tech-policy/news/2009/04/seeqpod-bullied-into-bankruptcy-by-record-industry.ars, April 1, 2009.

169 "Intertrust Acquires SeeqPod Assets," http://intertrust.com/news/press/seeqpod, August 30, 2010.

170 Zena Barakat, "Muxtape Speaks: Justin Ouellette on the BPP," NPR, http://www.npr.org/blogs/bryantpark/2008/04/muxtape_speaks_justin_ouellett.html, April 16, 2008.

171 "Muxtape," http://muxtape.com/story (originally posted on Muxtape.com on September 25, 2008).

deactivated, and the Muxtape.com front page simply shows an image of a blank audiocassette.[172]

iii. Allowing Apple to Monopolize Digital Music Retail.

There's no question that, with nearly 30 percent of all US music sales and 70 percent of all digital downloads, and no close competitors, Apple's iTunes store represents a near-monopoly in the music retail market. As most economists would argue, this kind of market dominance is not only bad for consumers, it's also bad for producers -- namely, the record labels themselves. This has become evident in Washington, as well; in May, 2010, The *New York Times* reported that the Department of Justice is "examining Apple's tactics in the market for digital music," and that the company had allegedly used its market dominance to "persuade music labels to refuse to give the online retailer Amazon.com [Apple's nearest competitor] exclusive access to music about to be released."[173]

Yet, if Apple represents a troublesome "frenemy" for the labels due to its size, it's a frenemy largely of their own making. Initially, the labels viewed the digital download market as a way to disintermediate retailers altogether, sidestepping their traditional music selling partners and swallowing the retail margin in addition to the wholesale they're accustomed to receiving. In 2001, they announced that they would be selling digital subscriptions direct to consumers via MusicNet and Pressplay, each backed by two or three of what were then five majors. Before the services could launch, US and European regulators had initiated antitrust investigations against the sites, and music industry press and analysts had roundly criticized their pricing, licensing and limited catalogs. Once it became clear that these services didn't have a bright future (both effectively closed in 2003), the majors finally began licensing to a wider range of DRM-protected distributors. As I've already discussed, the non-interoprability between rival DRM technologies produced market conditions in which the most competitive distributor could gain and maintain an upper hand, as the "barriers to switching" for consumers were unreasonably high. Apple's dominance was well-insured by the time the labels' insistence on DRM ended in 2007, and in the meantime they've done little to promote or support rival business models (like those described in the previous section) that would undermine Apple's position to a meaningful degree.

172 http://muxtape.com/.

173 Brad Stone, "Apple Is Said To Face Inquiry About Online Music," N.Y. Times, http://www.nytimes.com/2010/05/26/technology/26apple.html, May 25, 2010.

C. Reputational Missteps.

In the span of little over a decade, the major labels' reputation among many consumers has gone from a vaguely understood, but definitely "cool," set of brand names associated with popular musicians to a target for large-scale boycotts, malicious hacks, and vituperative invective.

Although the decline began with what many in the industry now acknowledge was its short-sighted strategy of suing, rather than embracing Napster, it has only accelerated over the past decade with additional high-profile suits against file sharing networks and other innovative digital music distributors, criminal suits against over 40,000 Americans accused of file sharing (including young children, octogenarian grandparents, stroke victims and multiple sclerosis patients), the rootkit debacle described above, and numerous defections by top-tier artists including Radiohead, Nine Inch Nails, and Madonna. In the words of a 2009 article in the *Minnesota Journal of Law, Science & Technology*, the industry's strategy to counter what it calls "digital music piracy" has "embittered or calloused a substantial portion of the public. In particular, the lawsuit component of the industry's approach, besides being ineffective, has proven highly repugnant."[174]

While the record labels are not in business for the purpose of being loved, there is little question that they have allowed their reputation to sink below the basic threshold of "goodwill" necessary for the marketplace to function optimally, and by doing so have most likely undermined their long-term prospects for building a sustainable 21st-century music industry that benefits artist, consumers and labels alike. Nor did these reputationally ruinous tactics achieve their short-term ends in an effective way. As a recent article in the Fordham Intellectual Property, Media and Entertainment Law Journal concluded, "these lawsuits have been neither financially, nor reputationally, advantageous. The media and public have cast the RIAA as a villain that sues single mothers and even the deceased. The lawsuits had a devastating effect on the users who were sued, even if the lawsuits were dropped. Moreover, despite the RIAA's efforts record sales have continued to decline."[175] This last fact has further undermined the business reputation (and therefore the revenue opportunities) of the major labels, whose seeming lack of long-term strategic vision, failed attempts at self-preservation, and embittered consumer relations have made potential partners, investors and customers increasingly leery of doing business with them.

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174 Daniel Reynolds, "The RIAA Litigation War On File Sharing and Alternatives More Compatible With Public Morality,' Minnesota Journal or Law, Science & Technology, 2008.

175 Genan Zilkha, "The RIAA's Troubling Solution to File-Sharing," Fordham Intellectual Property, Media and Entertainment Law Journal, 2010.

V. OPINION: FREE DOWNLOADING WILL CONTINUE REGARDLESS OF DAMAGES ASSESSED AGAINST LIMEWIRE.

I consider it highly unlikely that any damages assessed against the defendant in this case will have a significant effect on the availability of, or demand for, freely available music over the Internet. As I have suggested throughout this testimony, the most rational and effective response the record labels can offer to any threat posed by digital music is to embrace it fully, rewarding innovators for their contributions, consumers for their enthusiasm, and artists for their work. From my earliest days as a music industry researcher, I have believed in a workable solution to this challenge, and I still believe that market-based "carrots" will always be more effective than legal "sticks" as a means to produce a functional digital music industry. Those carrots may include cloud-based consumer services, a more streamlined licensing marketplace for businesses, a more economy-sensitive pricing model for recordings and live events, and an emphasis on collaboration rather than enmity between artists, labels, fans and technologists.

As to the sticks: If the massive financial burdens levied against former targets of industry lawsuits, such as MP3.com, Napster and Grokster, as well as the consumer P2P defendants, have undermined neither the supply of nor the demand for free music online, it's extremely unlikely that a severe judgment in the present case will succeed where those have failed. Furthermore, even if a judgment against LimeWire were to permanently cease all future investment in innovative music distribution technologies, there is already such a wealth of open-source software, and such a large global community of coders ready to reverse-engineer any digital roadblock the industry can erect, that the availability of free music online will remain as great as it ever was, if not greater. Given the unabated proliferation of freely available music online and the recording industry's own overdue decision to stop suing infringing consumers,[176] the likelihood of either diminished availability or demand for unauthorized music as a result of an award in this case is negligible.

In summary, the award of damages on the scale requested by the plaintiffs in this case will have a minimal deterrent impact on the availability of free music or the willingness of third parties to pick up where LimeWire left off. Furthermore, the most likely effect will be further erosion of the plaintiffs' already tarnished reputation among consumers and the business community, undermining their ability to effectively counter any economic and organizational challenges they face.

176 Sarah McBride & Ethan Smith, "Music Industry to Abandon Mass Suits," Wall Street Journal, http://online.wsj.com/article/SB122966038836021137.html?mod=rss_whats_news_technology, December 19, 2008.

Dated: January 14, 2011.

ARAM SINNREICH

EXHIBIT 1

Aram A. Sinnreich, Ph.D.

Key Skills Media, Entertainment, and Emerging Technology. Research and Strategy. Writing and Public Speaking. Business Analysis and Development.

Professional Experience

Rutgers University, School of Communication & Information **2010 - Present**
Assistant Professor, Journalism & Media Studies
- Designed and taught courses at undergraduate, masters and doctoral levels related to media, culture, music, games, technology, law and policy
- Produced ongoing research related to these fields
- Co-designed new masters program on "media innovation"
- Presented at major academic conferences
- Published academic research in books and journals

Radar Research, Inc. **2005 - Present**
Co-Founder and Managing Partner
- Custom research and consulting for media and technology clients including Sony Pictures, Google, EFF, Nokia, SEMPO and The Online Publishers Association
- Strategic planning, business development, competitive analysis
- Maintained high press visibility as a music, media and technology expert, with regular appearances in *The Wall Street Journal,* NPR, *The New York Times, Rolling Stone, Newsweek, LA Times,* ABC, NBC, CNBC and other top-tier media outlets
- Spoke at numerous industry conferences and events, such as EMP, Music 2.0 and OMMA
- Expert witness in several lawsuits including the Sony BMG "rootkit" class action suit
- Developed and maintained relationships with high-level executive clientele

OMD Ignition Factory **2009 - 2010**
Director, Innovation
- Developed innovative marketing strategies and tactics based on emerging media and cutting-edge cultural trends
- Ran business unit devoted to PepsiCo, our largest client
- Appeared as an expert on emerging media in the press and at conferences
- Business development, including new client acquisition and entrepreneurial partnerships

New York University, Steinhardt School **2007 - 2009**
Visiting Professor, Media, Culture & Communication
- Designed and taught courses at undergraduate and masters levels related to media, culture, games, technology, law and policy
- Produced ongoing research related to these fields
- Presented at major academic conferences
- Published academic research in books and journals

USC Annenberg School for Communication **2002 - 2007**
Doctoral Fellow and Lecturer

- Designed and taught four undergraduate and Masters-level courses, including "Music as Communication" and "Communication in the Virtual Group"
- Produced prize-winning research on music, film, technology, subcultures and networks
- Presented at major academic conferences
- Published academic research on music, media and tech in books and prominent journals
- Recipient of $50,000 academic grant from Google

Sinnreich Media Research **2002 - 2005**
Founder and President

- Custom research and consulting for clients including RealNetworks and Hitwise
- Maintained high press visibility as a music and media expert
- Expert witness in lawsuits including Supreme Court case *MGM vs. Grokster*

Jupiter Research **1997 - 2002**
Senior Analyst and Research Manager

- Produced syndicated research on media and technology and provided custom strategic consulting for senior executives at nearly every major entertainment and tech company
- Launched and managed Music and Regulation/Policy research divisions
- Regular appearances in top-tier television, print and radio news outlets including CBS (with Bryant Gumbel), ABC (with Peter Jennings), CNN, MTV, *Wall Street Journal*, *NY Times*
- Organized, keynoted and/or spoke at dozens of industry conferences and events, including Plug.In, Billboard Summits, SXSW, NARM, CMJ, and Midem.

Education

University of Southern California
Annenberg School for Communication

- Ph.D. in Communication, 2007
- MA in Communication, 2005

Columbia University School of Journalism

- MS in Journalism, 2000

Wesleyan University

- BA in English and Music, 1994

Stuyvesant High School

Other Experience

Author
Over the last decade, I have written features, business analysis, music reviews and restaurant reviews for a variety of publications. These include *The New York Times, Time Out New York, Billboard, Wired News, Truthdig.com, American Quarterly, Air America* and World Radio.

My first book, *Mashed Up: Music, Technology and the Rise of Configurable Culture,* was published in 2010 by University of Massachusetts Press.

Musician
Over the years, I have served as bassist, guitarist, vocalist, sound technician and/or composer for artists and groups including Tony award-winning writer/director/actor Trazana Beverly, seminal ska-punk band Agent 99 (Shanachie Records), dancehall reggae queen Ari-Up (lead singer of The Slits), Wilco guitarist Nels Cline, alt-traditional band Annalivia, jazz saxophonist Eric Pakula, NYC progressive soul band Brave New Girl, and LA dub-and-bass band Dubistry. Songs I have composed and performed have appeared on numerous compilations and soundtracks, including episodes of MTV's *Daria* and *Life as You Know It,* which won the 2005 Audi film festival.

Awards and Honors

- Voted one of *InformationWeek*'s top fifteen "Innovators and Influencers" and profiled alongside the CEOs of Accenture and JetBlue.
- Voted one of the "50 Most Important People in Streaming," *Streaming Magazine.*
- Voted one of the "15 Digital Music Industry Leaders," *Digital Music Weekly.*
- Numerous "top research" awards at major academic conferences

EXHIBIT 2

Aram Sinnreich – Publications, 2000-2010

Sinnreich, A. (2010). *Mashed Up: Music, Technology, and the Rise of Configurable Culture.* University of Massachusetts Press.

Sinnreich, A. (2010). Controllers, controlled. *Kill Screen Magazine.*

Sinnreich, A. (2010). Book Excerpt: 'Mashed Up: Music, Technology, and the Rise of Configurable Culture' *Truthdig.com*

Sinnreich, A. & Gluck, M. (2009). Conquering BD-Live Complexity: Strategies for Optimizing the Interactive Audience Experience [Uncredited whitepaper, Akamai.com].

Sinnreich, A., Latonero, M., & Gluck, M. (2009). Ethics Reconfigured: How Today's Media Consumers Evaluate the Role of Creative Reappropriation. *Information, Communication & Society, 12*(8); pp. 1242-1260.

Sinnreich, A. & Zager, M. (2008). E-Speech: The (Uncertain) Future of Free Expression. *Truthdig.com*

Sinnreich, A., Chib, A., & Gilbert, J. (2008). Modeling information equality: Social and media latency effects on information diffusion. *International Journal of Communication, 2*(1), 1-20.

Sinnreich, A. (2007). Right Move, Wrong Reasons: Inside the EMI/Apple Deal. *Truthdig.com*

Sinnreich, A. (2007). Closing the Box on Pandora? *Truthdig.com*

Sinnreich, A. (2007). Come together, right now: We know something's happening, but we don't know what it is. [Review of the book *Convergence Culture,* by Henry Jenkins]. *International Journal of Communication, 1*(1).

Sinnreich, A. & Gluck, M. (2006). Music and fashion: the balancing act between creativity and control. In D. Bollier and L. Racine (Eds.), *Ready to Share: Fashion and the Ownership of Creativity.* Los Angeles: Norman Lear Center Press; pp. 47-69.

Gluck, M. & Sinnreich, A. (2006). Clumsy To Cool: Branded Entertainment And The Rules Of In-Game Ads. *MediaPost*

Sinnreich, A. (2005). All that jazz was: remembering the mainstream avant-garde. *American Quarterly, 57*(2), 561-572.

Sinnreich, A. (2003). Microsoft Plays to Film Industry. *Wired.*

Sinnreich, A. (2003). Waiting Game: Key P2P Legal Rulings Coming. *Billboard.*

Sinnreich, A. (2002). Copy Protection Making Slow Progress. *Billboard.*

Sinnreich, A. (2002). Rollout of CDs With Anti-Piracy Safeguards Limited By Tech Glitches, Labels' Fears. *Billboard Magazine.*

Sinnreich, A. (2002). Secure CDs: Enforce Copy Protection by Adding Friendly Features. *Jupiter Research.*

Sinnreich, A. (2002). Driving Off-Line Subscriptions: Best Properties for Print Online. *Jupiter Research.*

Sinnreich, A. (2002). File Sharing: To Preserve Music Market Value, Look Beyond Easy Scapegoats. *Jupiter Research.*

Sinnreich, A. (2002). Devices and Subscriptions: Using Portability as a Differentiator. *Jupiter Research.*

Sinnreich, A. (2001). RealArcade Leverages Software Skills to Build a Media Business. *Jupiter Research.*

Sinnreich, A. (2001). Advice to Portals: Diversify or Dwindle. *Jupiter Research.*

Sinnreich, A. (2001). Next-Gen Layout and Design: Introducing the Active User Interface. *Jupiter Research.*

Sinnreich, A. (2001). Online Media Consolidation Offers No Argument for Media Deregulation. *Jupiter Research.*

Sinnreich, A. & Mulligan, M. (2001). European Digital Music Sales: Building a Global Product One Country at a Time. *Jupiter Research.*

Sinnreich, A. (2001). Music Forecast 2001: Remixing the Distribution Chain for Digital Music. *Jupiter Research.*

Sinnreich, A. (2001). Music Retail Strategy: Flex Physical Muscles to Drive Digital Dominance. *Jupiter Research.*

Sinnreich, A. & Romano, D. (2001). Jupiter Consumer Survey Report: Music, 2001. *Jupiter Research.*

Sinnreich, A. (2001). Salvaging Business Models from Music Recommendation Technology. *Jupiter Research.*

Sinnreich, A. (2001). Television and the Internet: A Blooming Love-Hate Relationship. *Jupiter Research.*

Sinnreich, A. (2001). Newspapers Online: You've Got to Lose Money to Make Money. *Jupiter Research.*

Sinnreich, A. (2001). Securing Digital Content and Communications: Balance Cost Against Risk. *Jupiter Research.*

Sinnreich, A. (2001). Adding it Up: Subscription Services Must Clarify Revenue Distribution Prior to Launch. *Jupiter Research.*

Sinnreich, A. (2001). Online Farm Clubs: A Good Idea in Search of a Business Model. *Jupiter Research.*

Sinnreich, A. (2000). Portal Evolution: Building Share Market by Market. *Jupiter Research.*

Sinnreich, A. (2000). Online Music Radio: Luring Listeners as Worlds Collide. *Jupiter Research.*

Sinnreich, A. (2000). Valuing Entertainment Rights: Beyond the Official Site. *Jupiter Research.*

Sinnreich, A. (2000). Digital Music Subscriptions: Post-Napster Product Formats. *Jupiter Research.*

Sinnreich, A. (2000). Love on the Barricades. *The New York Times.*

Sinnreich, A. (2000). Where the Solos Last Till Dawn. *The New York Times.*

EXHIBIT 3

ADDITIONAL SOURCES

Demos, http://www.demos.org/index.cfm

Ipsos MORI, http://www.ipsos-mori.com/

Steve Gordon, The Future of the Music Business, 2008 (2d ed.).

The Entertainment Software Association, http://www.theesa.com/

Standard & Poor's

American Marketing Association, Journal of Marketing

University of Chicago, Journal of Political Economy

International Journal of Industrial Organization

Journal of Business

Music Business Research, http://musicbusinessresearch.wordpress.com/

Communications & Strategies

Ronald S. Rosen, Music and Copyright, 2008.

pirate verbatim, http://pirateverbatim.com/

Sorin G. Stan, "Optimization of the CD-Rom System Towards Higher Data Throughputs," optical-storage.emedas.nl/publications/PhD_thesis.pdf, 1999.

Center for Democracy & Technology, http://www.cdt.org/

Consumer Affairs, http://www.consumeraffairs.com/

Business Journals Digital Network

Adam Singer, The Future Buzz, http://thefuturebuzz.com/

Torrent Reactor, http://www.torrentreactor.net/

ClearBits, http://www.clearbits.net/

Negativland, http://negativland.com/

Scot Hacker, MP3: The Definitive Guide, 2000.

Knowledge@Wharton, http://knowledge.wharton.upenn.edu/

The Moses Avalon Company, http://www.mosesavalon.com/

Jim Griffin (moderator), Pho List, http://www.onehouse.com/pho.htm