

When creators, corporations and consumers collide: Napster and the development of on-line music distribution

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The development of the information-based 'New Economy' is due in large part to the growth in industries that trade in intellectual property. These industries have been a leading sector in US economic expansion for the past two decades, and currently account for over \$40 billion of the US gross national product (Mann, 1998: 41). Intellectual property cases at some law firms have more than quadrupled in the past seven years, with clients now including banks, chemical companies and sports leagues as well as communication companies (Stern, 2000: G12). US public policy has played an active role in shepherding the growth of intellectual property. The 1996 Telecommunications Act encouraged consolidation and cross-ownership within and between telecommunications and media industries, which have since spent billions of dollars to find new markets for their products and services. In addition, the 1998 Digital Millennium Copyright Act (DMCA) extended intellectual property protection to domains previously overlooked by federal copyright law. The US government also has worked aggressively to increase the international copyright interests of US media conglomerates through World Intellectual Property Organization trade negotiations as well as GATT and other agreements.

Despite these frequent and predictable interventions by the US government in matters of commerce and intellectual property, a naive perspective, which we term the Internet Nirvana Theory of intellectual property,

pervades domestic public policy discourse on the 'New Economy'. According to this theory, the Internet is an arena of free exchange in which everyone wins. Creators of intellectual property will regain control over copyright while reducing barriers to entry and distributor interference in their productions. Distributors will gain a huge new revenue stream, eliminating material costs, overheads and geographic boundaries while creating opportunities for subscription and licensing systems that require perpetual repurchase of their goods and services. Consumer electronics and computer companies will sell new recorders, playback systems and auxiliary devices. Technology companies will reap a windfall through patents on anti-copying software and license fees. Service providers like telephone and cable companies will see growing demand for lucrative broadband services. Consumers will find innumerable choices at low cost as the Internet becomes a 'vast intellectual commons' in which 'nothing will ever again be out of print or impossible to find; every scrap of human culture transcribed, no matter how obscure or commercially unsuccessful, will be available to all' (Mann, 2000: 41).

Transaction Cost Economics informs this libertarian vision of 'frictionless capitalism' (cf. Gates, 1996), in which the Internet engenders continual gains in productivity and perfect market equilibrium between producers and consumers. A corollary, the Electronic Market Hypothesis, posits that networked computer technology will match buyers and sellers quickly and at minimal cost in a transparent market space (Kretschmer et al., 2000: 4). However, the dotcom dissolutions of 2000–2, coupled with a growing imposition of Old Economy intellectual property controls on the Internet, seriously challenge Internet Nirvana Theory. Peer-to-peer exchange of audio-visual information is now commercial by mandate, by creating the incentive or requiring host networks to impose subscription, authentication and billing technologies on their users.

These actions are reflected by the means with which the Big Five record companies (EMI, Universal, Sony, Time Warner and BMG [Bertelsmann]) have extended their market dominance to the Internet.¹ The Napster system of peer-to-peer sound file trading posed a serious challenge to the existing recording industry, but the decision in *A&M Records et al. v. Napster* firmly established the on-line intellectual property rights of entertainment industry conglomerates and reinforced the Big Five's existing market oligopoly. The defeat of Napster puts an end to one form of unregulated Internet market exchange. The question remains what the new platform for music distribution will be, and what flexibility and sharing of roles between creators, publishers and consumers will be allowed. Relying on news reports and industry analyses in trade publications, we use a political economic perspective to frame a stakeholder analysis of the on-line music market. We conclude that the Big Five seek a trans-dimensional extension of copyright law and leak-proof control of distribution channels through

legislation, litigation, mergers and acquisitions, and anti-copying technologies. These actions have marked the first stage of Old Economy power over on-line delivery of music, video and text. The Napster case began as a lawsuit by the international music oligopoly against an Internet start-up, but results in a regime in which private Internet communities must either police themselves or submit to corporate or state surveillance.

The music industry in transition

The entertainment industry is increasingly central to the domestic and global economies. In 1999, creative industries (film, video, audio, print and software) employed more workers than any other US manufacturing sector (Ziedler, 2000). As Vogel (1998: 132) notes, the recording industry may be the most pervasive and therefore fundamental of the entertainment industries. It suffered a slump in the mid-1990s as catalog sales reached saturation and the novelty of a new delivery system (compact discs) wore off. The Big Five reinforced their standing through the outright suppression of digital audiotape (which offered higher quality duplication than audio cassettes) for the consumer market, and began phasing out pre-recorded cassettes in favor of CDs, which return higher revenues at a lower manufacturing cost per unit. However, attempts at recycling catalogs through new but inferior delivery systems (Digital Compact Cassette and Minidisc) were unsuccessful, and more entertainment alternatives, such as video games, vied for consumer dollars. But after 1997, a strong economic upsurge helped buoy the recording industry and, by June 2000, some entertainment industry leaders, embracing Internet Nirvana Theory, forecast that the Big Five could triple their profits through Internet delivery. Analysts predicted on-line sales of music rising from \$836 million in 2000 to \$5.36 billion in 2005 (Lyn, 2000: 1; Mathews and Bridis, 2001: A24).

While the Big Five are positioning themselves individually and collectively to maintain their control over music production and distribution, they are also fighting off legal challenges to their dominance. In May 2000, the US Federal Trade Commission (FTC) ruled that the five major record companies illegally discouraged discount pricing of compact discs by retail stores. By withholding cash payments intended for cooperative advertising from retailers that advertised CDs below the suggested 'minimum advertised price', the Big Five artificially inflated CD prices.² On 8 August 2000, a coalition of 30 states and US territories also filed suit against the record industry for price fixing (Peers, 2000b: B7). The big five settled this suit in 2002. These legal challenges underscore the fact that Big Five have an obfuscated and multivariate role in the music value chain, depending on what facet of their business (promoter, agent, publisher and/or record company) is involved in a transaction in what role or roles.

Technological developments also have threatened the Big Five's hegemony over music distribution. The earliest form of digital content storage suitable for delivery by modem and PC was the WAV standard; three-minute songs in this format, however, required hours to download. In 1987, the Motion Picture Experts Group (MPEG, a branch of the Geneva-based International Organization for Standardization) developed new digital audio and video compression software. The most powerful version, MPEG-1 Layer 3 (MP3), could compress a 40-megabyte file to one-tenth of its original size. Meanwhile modem speeds increased, and songs could now be downloaded easily onto hard drives. However, MP3 developed outside of the Big Five's control, and offered no intrinsic protections against copying. MP3s therefore threatened the music industry by holding out the 'possibility of a business model that links artists directly to consumers, bypassing the record companies completely' (Garofalo, 1999: 349).

While MP3 undoubtedly will be succeeded by systems that afford greater possibilities for copy protection, it currently has a momentum that diminishes chances for the immediate adoption of a different format. The ubiquity of unprotected MP3 files has set hardware and software divisions of media conglomerates at odds. While consumer electronics divisions want digital music players that would be easy to use and free of restrictions, record companies want a player akin to a 'digital Fort Knox' (Strauss, 1999: B1). These conflicts also underscore the problems of synergy in recent mergers, such as Time Warner and America Online. As the *Wall Street Journal* noted, 'To Time Warner executives producing music, the Web makes stealing pirated copies of their products far too easy. AOL, on the other hand, has grown up in a Web culture that favors the free dissemination of everything from music to movies' (Peers and Wingfield, 2000: B1).

Despite these conflicts, record companies remain attractive to media conglomerates. In December 1998, the number of major recording companies dropped to five when Seagram bought PolyGram Records and merged it into its Universal division. Vivendi (the French wireless company) then purchased Seagram for \$34 billion in 2000.³ Recordings have marginal production costs compared to other electronic media, which can compensate for losses on movies and other costly products across divisions. Record companies also provide immediate cash flow to their parent companies, and their catalogs can generate money for decades through reissues, compilations and licensing. As record companies are absorbed into conglomerates, they are expected to provide predictable revenue streams and have greater quarter-to-quarter accountability. The recording industry has thus attempted to bolster short-term profits through rapid turnover of new artists and 'blockbuster' releases that can be cross-promoted in other media. Long-term profits have been addressed by

extending and deepening intellectual property controls through the strategies we describe below.

Public actions

Legislation

The recording industry earns profits by controlling intellectual property rights. On the distribution end of the value chain, record companies currently earn revenues from retail sales and the licensing of content for use in other media. On the production end, the business resembles a numbers game. While record companies claim to lose money on most releases, they compensate for failures with huge hits and catalog sales.⁴ Although copyright protections are universally justified as incentives for individuals to create, recordings (particularly those of new artists) are often contractually defined as 'work for hire', or collective works akin to films, on grounds that they involve producers, engineers and other personnel in addition to the featured artist. Therefore, these recordings are owned by the companies that finance and market them, not by the artist whose name appears on them. Empirical studies suggest strongly that control of copyright gives rise to collusive behavior and rent-seeking among record companies, creating strong incentives for price fixing (Klaes, in Dolfmsa, 2000). Such collusion is correlated with increasing vertical integration in the entertainment industry (Towse, in Dolfmsa, 2000).

The Big Five have been instrumental in recent legislation concerning intellectual property. The Audio Home Recording Act of 1992 authorized consumers to make copies of digital music for personal, noncommercial use, yet prohibited serial copies, mandating that consumer CD and DAT recorders incorporate Serial Copy Management System (SCMS) technology, which allows a single digital copy to be made from a digital source but disallows second-generation digital copies.⁵ The Digital Performance Rights in Sound Recordings Act of 1995 gave the owners of sound recordings (i.e. the record companies) exclusive control over their music in on-line webcasts. In contrast, radio stations have freedom to use music as they wish after acquiring a license from songwriters' organizations (Krasi-lovsky and Shemel, 2000: 79).

The two most important legislative acts affecting the content industries, however, were passed in 1998: the Sonny Bono Term Extension Act and the Digital Millennium Copyright Act (DMCA). In the former, Congress, responding to industry pressure, extended existing copyright protection for an additional 20 years. Authored works are covered for the life of the author plus 70 years, corporate-owned 'works for hire' for 95 years.⁶ Section 1201(a) of the DMCA made it illegal to circumvent copy-

protection technologies; the purpose of bypass is immaterial. The DMCA eliminated 'fair use' provisions of the 1976 Federal Copyright Act, dismissing the tenet that we buy the right to make unlimited copies for personal use after purchasing an original copy.⁷ The DMCA also treated Internet service providers and telecommunications networks as publishers, rather than common carriers, with the intent of forcing these networks to bar their users from sharing copyrighted material (Gomes, 2001: B4).

Intellectual property protections are negotiated in a policy environment that responds to the dynamic relationship between technological innovation and industrial interests. Copyright originally covered books; it was extended to maps and charts in 1790, to prints in 1802 and music in 1831, and subsequently to broadcasts, films and software. Mead (1999) finds that:

[T]he Copyright Act of 1790 stands as the point of divorce between the perceived purposes (which became the protection of authors and publishers) and the methodology of the law (which remained to protect a movable-type based printing industry). The understood goal of the law was set adrift from the actual workings of the law. (in Chartrand, 2000)

Today, intellectual property rights are bought and sold on the market, independently of creators, by corporate entities largely devoted to promotion and marketing. Dolfmsa (2001: 2) claims that the principal function of copyright is now to supply revenues to administrative organizations and intermediaries with little or no creative function, 'such as record companies and music publishers'. Moreover, copyright now covers anything 'fixed in a tangible medium of expression' and reaches anyone who makes a copy or other use of the original work. The result, Lessig (2000: 1) argues, is that '[c]opyright has thus morphed from a short, relatively insignificant regulation of publishers to a restriction that is effectively perpetual, and that regulates anyone with access to a computer or Xerox machine'.

Litigation

The domestic recording industry claims to lose \$300 million per year to pirate recordings; a report prepared for the recording industry predicted that by 2002, an estimated 16 percent of all US music sales, or \$985 million, would be lost to on-line piracy (Foege, 2000: BU4).⁸ The Big Five focused their mounting concerns about piracy in all formats on the legal case against Napster, which was released on the Internet in August 1999. Napster functioned as a music search engine that linked participants to a huge and constantly updated library of user-provided MP3s.⁹ Its key architectural feature was an on-line database of song titles and performers, searchable by keyword. The Napster network's MusicShare client provided access to search indices and file lists of those using the service. Its

brokered architecture effectively coordinated peers and increased search functionality, and its search and play interface was highly user-friendly. Napster also carried a strong populist appeal, harkening back to the digital bonhomie of the early Internet, in which users traded files directly with each other. From the Napster network's perspective, the larger the connected base of its peer-to-peer system, the greater the value of the network to creators, advertisers and consumers. Devout believers in the Internet Nirvana Theory depicted Napster as a classic 'win-win' proposition.

No sooner had Napster become a 'killer app' than legal woes beset the company. The Recording Industry Association of America (RIAA), a lobbying and trade group representing the Big Five's interests, filed suit against Napster on 7 December 1999, claiming that the free service cut into sales of CDs. Napster's enabling architecture became its legal vulnerability: when a computer with peer-to-peer software is connected to the Internet, it is configured to be both a receiver or client and a sender or server, and its user has become a publisher as well as a consumer. The legal case against Napster turned on the fact that although it did not generate revenue, the service supplied users with peer-to-peer software and provided a brokering service that managed a real-time index of available music files. This combination of marketed products and services, the RIAA argued, effectively turned Napster into a music piracy service. Napster's defenders claimed that its users enjoyed First Amendment protection, so the state could not enforce a prior restraint on the speech of Napster's user/publishers. Its attorneys also argued that the service's 'substantial, non-infringing uses' included allowing users to sample new music and 'space-shift' their collections between delivery systems like CDs and hard drives (Gomes, 2000: A3; M. Lewis, 2000: 1).¹⁰

Between February and August 2000, the number of Napster users rose from 1.1 million to 6.7 million, making it the fastest-growing software application ever recorded (Media Metrix, 2000). In late July, at the RIAA's request, Federal judge Marilyn Patel ordered an injunction against Napster, finding that the service was used primarily to download copyrighted music and rejecting Napster's arguments. In February 2001, a three-judge panel unanimously upheld the injunction, and Napster soon began filtering its system to block copyrighted material.¹¹ Napster declared bankruptcy and ceased operations in 2002. Despite the RIAA's claims that Napster-driven piracy was eating into profits, recorded music sales in US reached an all-time high of 785.1 million units in 2000, up 4 percent from 1999. The RIAA claimed that sales of CD singles dropped 39 percent in 2000 and inferred that Napster was to blame, yet fewer CD singles were released as the industry cut production. Some market research suggests that users did not utilize Napster primarily to 'steal' music through non-payment. Instead, they used Napster to 'sample' music before purchasing it. Users also were drawn to the huge array of music it presented, the obscure as well as the

popular – a vast catalog (including out-of-print material) that was otherwise inaccessible.¹²

The record industry's legal actions against Napster have increased the prospective transaction costs in e-commerce. Although cybercapitalism in theory should be 'frictionless', eliminating middlemen and cutting overhead costs, the Napster precedent reintroduces friction and increases the legal basis for artificially high consumer prices. We argue that corporate concerns about piracy are a legal and public relations foil for the entertainment industry, and propose that the Big Five's pursuit of the Napster case was a not a response to falling profitability due to piracy, but instead a successful counter-strategy to relieve anti-trust pressures while legally securing a claim to the Internet as an alternative delivery system to retail outlets. The timing of the Napster case is critical, as it was initiated at the same time as lawsuits against the Big Five for price fixing by US federal and state agencies.

It is doubtful that on-line distribution will significantly reduce costs to consumers, given the track record for pricing of previous formats. Record companies make higher margins from CDs than they did from vinyl LPs. Despite similar manufacturing costs and royalty payments to artists, CD prices have risen approximately 12 percent since 1998. The industry standard may rise to \$18.98 and possibly \$20, prices comparable to those in England and Japan (Strauss, 1998: B3).¹³ Although on-line distribution eliminates raw materials, storage and shipping, the Big Five have priced downloads of singles between \$2 and \$4 per song. The cost basis has been calculated by the record industry as the 'expense of encoding the music, royalties for the encryption, maintaining and operating the hardware and additional customer service' (Strauss, 2000: B3).

Private actions

Mergers and acquisitions

Despite the RIAA's public claims that no legal means for on-line music-sharing exists, the Big Five have privately hedged their bets through mergers and acquisitions that would allow file-sharing under their exclusive control. Shortly after the Napster decision, Bertelsmann (the only privately held company among the Big Five) broke ranks with the other major record companies on 31 October 2000, and announced that it would loan Napster \$50 million to develop a secure file-sharing system that would 'preserve the Napster experience' while compensating copyright holders. Bertelsmann was attracted by Napster's corporate identity, tangible assets and software (including the protocol and interface). In exchange, Bertelsmann retained the right to take a 58 percent interest in Napster when the new service is developed (Gomes et al., 2000: A3).

Bertelsmann's actions regarding Napster follow the example of the Musicbank storage locker service, which obtained licenses for content from Universal, Warner and Bertelsmann only after granting these companies an equity stake. The case of MP3.com is also instructive in this regard. MP3.com's stock was valued as high as \$63.61 before the company was hit by a barrage of copyright infringement lawsuits from artists, publishers and record labels against its MyMP3.com storage locker. In May 2001, seven months after winning a \$54.3 million judgment from the company, Vivendi purchased MP3.com for \$372 million.¹⁴ Vivendi offered \$5 per share for MP3.com's stock, which had traded for only \$3.01 per share before the acquisition was announced (Sorkin, 2001: C1). Despite its legal liabilities, MP3.com was attractive to Vivendi because it was one of the few firms with the technological infrastructure in place to operate a large-scale on-line distribution service.

In 2000–01, a NASDAQ crash cut the value of the US technology index 60 percent, and effectively burst the speculative bubble surrounding the Internet (Harmon, 2001: C1). As venture capital dried up, the number of e-commerce firms (including those devoted to on-line music recording, distribution and marketing) dropped significantly. This shakeout followed historical patterns of consolidation among new communication and transportation industries that required extensive capitalization, including railroads, automobiles, airlines, telephone companies and personal computers (cf. Chandler, 1977). The crash in Internet industrial capitalization was concurrent with the Napster lawsuit, and the Big Five repeatedly used high-profile lawsuits to deter venture capitalists from providing second- and third-round funding to Internet start-up companies. Offering funding and/or content licenses to these start-ups in exchange for equity, the big five acquired Internet distribution infrastructure below market value, and also saved research and development costs. Most importantly, they thwarted the creation of independent distribution systems. Alongside the Big Five's use of new template contracts that include on-line distribution rights and Internet domain names, the takeovers of Napster, MP3.com and other services gave the music oligopoly a growth strategy for a newly tamed Internet, as well as a possible way to minimize the delivery bottleneck of retail sales of physical recordings (Kretschmer et al., 2000: 10).

Many observers of the Napster case were surprised at the ease with which entrenched old-economy business interests triumphed over technological innovations that could empower creators and consumers. The legal pullback on Napster, and its subsequent appropriation by the Big Five, has historical precedents. While new communication technologies may initially appear to challenge and undermine pre-existing controls on content and distribution, they can ultimately benefit the status quo. Nearly a century ago, music publishers, alarmed that piano rolls would cut into sales of sheet music, filed a copyright lawsuit against manufacturers of these rolls.

The publishers lost their case in the Supreme Court, but they nevertheless persuaded the US Congress to require manufacturers of rolls (and, subsequently, phonograph records) to pay them royalties. Publishers later sued radio stations to stop the widespread practice of broadcasting musical works without paying royalties. These stations countered that their broadcasts increased sales of sheet music, but their argument failed in court, and commercial radio stations have paid to broadcast music ever since (Goldstein, 2000: A25). Live television, and later rebroadcast TV and the home videocassette recorder were all initially perceived as threatening by the film industry. Today, however, studio income from video sales and rentals rivals box-office receipts.

Technology

Despite the global framework developing for intellectual property, the US model for copyright protection is not shared universally. This model makes copyright the financial concern of an industrial group and its stable of artists. In contrast, the European model of moral rights affords creators greater control over the alteration of their works, and assigns pecuniary rights traditionally a secondary or derivative value (Vaver, 1987, in Chartrand, 2000: 231–2). This and other cultural and legal differences have led the European Union to mobilize tariff and non-tariff barriers to free trade with the US in audio-visual products. To circumvent trade conflicts and international disparities in copyright enforcement, the transnational Big Five media firms have united behind Digital Rights Management (DRM) technologies. These technologies ‘lock up’ content through ‘trusted systems’ in which copy protection is built into every component sold – the operating system, the artifact and the player.

In December 1998, the Secure Digital Music Initiative (SDMI) was formed by a consortium of record companies, hardware and software manufacturers, and distribution companies to create a universal DRM system. SDMI’s 200 members include AOL, AT&T, IBM, Microsoft, Matsushita, Sony, RealNetworks, Liquid Audio, ASCAP, Intel and Napster. Significantly, no consumer or civil rights groups are represented. Based on watermarking technology, SDMI’s system is intended to serve as a gate through which content must pass. The system enables time limits on use, restricts the potential number of copies that the purchaser can make from an authenticated original, and permits the tracing of protected content back to the original purchaser.

However, development of the SDMI standard has lagged far behind schedule. Its members have highly divergent and often antagonistic interests, and dissension within its ranks led executive director Leonard Chiariglione to resign in January 2001. These organizational antagonisms

were aggravated by a problem intrinsic to software development: every protection scheme can be broken. Shortly after SDMI's founding, the *New York Times* stated, '[SDMI] believes it can do in less than a year what the entire computer software industry has been unable to do in two decades: stop software piracy' (P. Lewis, 1998: D3).¹⁵ Moreover, DRM technologies to date have resulted in products that are complicated to use, and watermarks may degrade sound quality. Since much music is already available for free in some form to gain exposure, and since the Internet's overall lack of central control also reduces the ability to control distribution points, DRM may inadvertently inhibit the popularization of on-line music distribution channels.

Despite these problems, DRM may become a *fait accompli*. On-line rights management was legitimated by the Napster decision, which set a new cost basis for legal claims against infringing parties. DRM technology could therefore become required by law, as was the case with SCMS. Or, equally likely in an environment of industry consolidation and federal anti-regulatory sentiment, DRM could be imposed through private agreements between colluding copyright owners and their related hardware manufacturing divisions, initially beyond the reach of public authority. DRM would impose new costs on consumers by rendering existing formats and hardware obsolete. It also would defeat one of the principles of intellectual property most nettlesome to corporate interests: while copyright is designed to cover works for a limited amount of time, the incorporation of DRM into distribution would copy-protect them forever.

Why record companies will survive

The Napster decision formalizes the implementation of intellectual property controls on the Internet, and consolidates the Big Five's advantages in gatekeeping content and distributing products. Although the Internet in theory allows both creators and distributors to bypass traditional promotional media (print, radio and television) for direct access to consumers, in practice the lockup of the Internet for the Big Five and their parent companies gives them sizeable cross-promotional and cross-industrial channels for marketing products on-line as well as off-line. The Internet provides an enhanced marketplace for record companies, since goods may be copied and transported over the Internet at marginal costs, and unwanted goods may easily be disposed of or delisted. By implementing rights-managed distribution on the Internet, the Big Five will be able to buy, sell and resell audiences and intellectual property in a kind of market arbitrage. This arrangement is possible because, '[w]ithout the material substratum restraining them, commodities may respond instantly to the fractal climate of fashion' (Stallabrass, 1996: 62–3).¹⁶ Envisioning a plethora of on-line

packages for consumers, Edgar Bronfman of Seagram predicted: 'You'll be able to program bundles or song packages, compilations, video singles and video compilations. You'll be able to buy or program songs by genre, by era, by the hour or half-hour or minute or day' (Peers, 2000: R14).

The Big Five may find a subscription model to be most lucrative, whereby users pay a flat monthly fee to access record company catalogs via computers, fixed and portable stereos, cell phones and 'Internet appliances'.¹⁷ In April 2001, two subscription systems were announced: Duet (now PressPlay), a project of Universal, Sony and Yahoo; and MusicNet, comprised of BMG, Warner, EMI, AOL and RealNetworks (Markoff, 2001: C1; Wingfield and Ordonez, 2001: B5). These systems have precedents in CD-ROMs and video games, in which users buy a license that allows them to access information. Unlike one-time sales, subscriptions generate steady cash flow and provide a convenient benchmark by which to measure growth. Since subscriptions are usually paid in advance of receiving the product or service, they avoid the volatility of retail sales or pay-per-play. Subscriptions also maximize revenues from those who use the service infrequently, while encouraging increased use among heavy users, and allow the provider to charge higher rates to advertisers (Meyers, 2001: 25). These companies can also harness a growing collection of customer databases derived from Web activity to reduce marketing uncertainty and provide revenues through resale to other vendors (cf. Gandy, 1993).

Subscriptions present new challenges, however. According to one observer:

[R]evenue generated [by subscription] is contractually considered 'other income'; by federal statute, record companies would have to pay artists a significantly larger cut than what they typically earn from CD sales. If subscription services supplant CD sales, label groups will make less money, paying artists more and making less per song. (Zisson, 2001: 1)

Subscription prices would need to make up in volume what is lost in profitability, suggesting cost pressures and even price wars among music services. Subscriptions also would penalize chain music stores and retail outlets, which now account for 80 percent of sales in the popular music market. Large catalogs also would require on-line music subscription services to negotiate separate licensing deals with potentially hundreds of record companies, thousands of music publishers, numerous codec license holders, and developers of copy-protection software, all of whom will seek a portion of revenues.

Despite the problems and potential resistance to such a model within the recording industry, no proven alternatives to subscriptions have emerged. Record companies may try to offer their own subscription models, but ultimately will have to license their catalogs to each other to attract the

largest number of users. Yet licensing content between the Big Five invites anti-trust action; in 1995, the major record companies dropped their plans to create a competitor to MTV after a Justice Department investigation (Banks, 1996: 82). The Big Five undoubtedly remember their experience with MTV, which asserted marketing controls that conflicted with music industry initiatives, and so may also be wary of allowing third parties to promote and distribute their products over the Internet.

As Kretschmer et al. (2000: 10) state, 'It is always dangerous to open up a new market if it threatens you in the old.' Copyright litigation has been a successful stalling tactic, allowing the Big Five to reorganize their business relationships and sort out on-line delivery systems in a way that will preserve their *de facto* oligopoly of production and distribution. This tendency is evidenced in the growing scope and density of interlocking legal ties and technologies that protect the music industry oligopoly. As they cross the threshold into the era of digital distribution, these ostensibly competitive record companies have united behind the RIAA and SDMI in attempts to control content and distribution. The recent litigation surrounding on-line music delivery is intended to protect the Big Five's intellectual property rights on the Internet and allow it to create additional revenue streams, but the implications of this litigation are much broader. Despite lip service to the rights of creators, entertainment and media companies are increasingly confiscating these rights through what Hugenholtz (2000: 1) terms the 'copyright grab'. Corporate copyright holders seek to maximize the value of their properties by pursuing international copyright protections, by suing for closure of distributors who refuse cooperation on their terms and then absorbing their operations, and by collaborating on DRM technology. The result is that the recording industry oligopoly has systematically extended its lien on intellectual property into new dimensions of social space as well as cyberspace.

The Big Five have expanded their own options for putting more new products into larger and larger markets, but their efforts have also led to what Ronald Bettig views as 'the continuing enclosure of the intellectual and artistic commons', in which 'more and more knowledge and culture are being privately appropriated and submitted to the logic of the marketplace' (P. Lewis, 2000: A17). The Internet Nirvana theorists hoped that Napster would remain exempt from the rest of the intellectual property regime – that a renewed commitment to social regulation based on technological innovation and deregulation, would help the world avoid the fate of cultural enclosure by the culture industries. Dolfisma (2000: 1), writing optimistically before the Napster verdict, stated, 'Currently technological developments and a liberal, free market ideology are working together to create a global economic sphere' – even in acknowledgment of entrenched, anti-competitive conglomerates, industry collusion and the impulse to consolidation enabled by industry deregulation. With few

concessions to creators or consumers, the Big Five have disproved Internet Nirvana Theory by successfully using copyright enforcement to tighten their grip on Internet music distribution. The events in the wake of the Napster verdict suggest that, while cyberspace affords new means of packaging and delivery, the ultimate commercial value of music is not an inherent character of the product, but of the manner in which it reaches the user. The commercialization of the Internet transforms the experience of on-line music from a network-enabled community of freely participating individuals to a network-delivered commodity that is relentlessly measured and metered.

Notes

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1. In 1999, these companies collectively controlled 77.5 percent of the global market in recording sales and 87 percent of recording sales in the US. The 1999 global industrial rankings were as follows: Universal, 21.8 percent; Sony, 19.0 percent; EMI, 12.9 percent; Warner Music Group, 11.9 percent; BMG, 11.9 percent. Domestically, the rankings were Universal, 28.11 percent; Sony, 19.47 percent; BMG, 15.24 percent; Warner, 12.82 percent; EMI, 11.38 percent (Goldsmith et al., 2001: A25).

2. The minimum advertised price strategy was intended to aid local retailers, which were being undercut by electronics 'superstore' chains like Best Buy and Circuit City, which used CDs as 'loss leaders' to entice consumers. The FTC estimated the cost of the minimum advertising price strategy to consumers between 1996 and 1999 at \$480 million (Wilke, 1999: A3; Peers and Ramstad, 2000: B1).

3. A proposed joint venture between Warner and EMI would have created a \$20 billion colossus that would be the largest music publisher and one of two largest record companies in the world. The proposal was withdrawn when the European Commission threatened to reject a proposed merger of Time Warner and AOL. A subsequent attempt by BMG to purchase EMI failed for similar reasons (Goldsmith and Boston, 2000: B8; Shishkin and Wilke, 2000: A3).

4. In 1999, only 88 recordings accounted for 25 percent of all record sales. This number amounted to three-tenths of 1 percent of all CDs issued (Mann, 2000: 50).

5. The Act also implemented a tax on digital recorders and recording media, with the bulk of proceeds going to the record companies. Given the fact that electronics manufacturers now own record companies, they pay themselves a tax.

6. The 'work for hire' status of recordings has long been disputed between record companies and artists, who see themselves enjoying a status similar to book authors, rather than working as employees of record companies. Although most recordings are works for hire, the 1976 Federal Copyright Act allowed recording artists to reclaim their copyrights after 35 years for all contracts dated after 1 January 1978. In November 1999, an amendment was slipped into an unrelated

bill (the Satellite Home Viewer Improvement Act) that would have allowed record companies to retain the rights for the full length of copyright (95 years) (Pareles, 2000: B1). The amendment was defeated in the House and Senate after extensive lobbying by performers.

7. In October 2000, the US Copyright Office allowed only two minor three-year exemptions to the law. One exemption involves Internet filters, which would enable people to circumvent software encryption and see what sites are being filtered. The other allows users to bypass malfunctioning security features on software they have purchased (Mathews, 2000b: B10).

8. However, some executives acknowledged that the Internet is not a threat to profits. Jay Samit, senior vice-president of EMI, told Reuters news service in June 2000 that 'We've far more to fear from a surplus of CD manufacturing here in Asia, where in some markets 90 percent of CDs are bootlegged, than from the Internet' (Lyn, 2000: 2).

9. Peer-to-peer should not be confused with 'distributed processing', in which sections of large problems are distributed to client computers to achieve collective computational power that exceeds supercomputers. Brokered peer-to-peer networks like Napster use a central indexing server to keep track of files available on the system. More recent peer-to-peer systems like Gnutella and Freenet eliminate the client/server relationship, allowing users to connect directly to each other in constantly mutating networks.

10. Artists were divided over the impact of Napster on music sales. In April 2000, Metallica charged that Napster, along with Yale, Indiana and the University of Southern California, violated copyright laws by enabling students to swap digital music files. The band sought \$10 million in damages (in a particularly striking irony, the band issued a free cassette demo tape in the early 1980s and encouraged fans to make copies as a promotional strategy). Rapper Dr Dre also filed lawsuit but other artists rallied to Napster's defense, including Limp Bizkit (who received tour funding from Napster), The Offspring and Public Enemy, whose leader, Chuck D., is one of the most virulent critics of the Big Five.

11. Yet the filtering procedure proved to be more difficult than anticipated as some songs were listed under a variety of names or had their titles misspelled. Additionally, some material not owned by record companies, or approved for Napster's 'Featured Music Program,' was removed without approval of artists (Richtel, 2001: C1).

12. A Yankelovich poll released in June 2000 reported that 66 percent of all respondents who had downloaded music said that 'listening to a song on-line has at least once prompted them to later buy a CD or cassette featuring the same song'. That same month, the Annenberg School at the University of Southern California released a survey finding that 63 percent of students who downloaded MP3s still bought the same number of CDs; 10 percent were buying more CDs; and 39 percent of students who downloaded MP3s purchased CDs that contained the same music due to their superior sound quality (Latonero, 2000: 2; Mathews, 2000a: A3).

13. In contrast, while videotapes were originally priced at \$100 when introduced in early 1980s, copying and ubiquity has lowered their prices in some cases to \$10, in spite of inflation and no major technological advances.

14. MP3.com had previously settled copyright infringement claims with the other four major record companies for \$20 million each.

15. A Microsoft executive belittled the record industry's complaints: 'The software industry loses more money to piracy than the record industry makes' (Shapiro, 1999: B4).

16. This fragmenting tendency was already evident with Napster: Andy Greenwald of *Spin* stated, '[Napster's] very nature – the trading of one song at a time – will place an emphasis on singles. In colleges one song tends to make a hot list, sweep the campus, and then be replaced by another the next week' (Paton, 2000: 1).

17. User authentication and profiling allow a subscription service to regulate access to music through the client software, network feeds, and the use of metadata or computer code attached to MP3 and other files. Metadata encoding of on-line assets permits companies to embed listening and recording restrictions into the media files themselves. A subscriptions-based or pay-per-play payment plan, coupled with metadata tagging of assets, is central to Napster's planned re-configuration into a secure music delivery network.

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