

A YEAR TO REMEMBER? or a time to forget?

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1. INTRODUCTION

The last twelve months saw two critical changes in the U.S. and Europe that may forever change the landscape in media law. In the U.S., the four major record companies actually came to eliminate all DRM protections for downloaded music sold through several competing online stores, including a ubiquitous Amazon.com. The sea change came after the majors grew increasingly disappointed with the ability of digital sales to recapture revenues lost in the previous decade for a number of contested reasons. In Europe, the French government participated in a landmark deal that would widen online catalog while getting the ISPs to participate in online content identification. The events of the last year merge with the critical changes of the past three -- the development of social networking and the reemergence of online advertising -- to continue what we can reasonably describe as a perfect storm..

2. DRM AND INTEROPERABILITY

While legal scholars may debate the connection of TCP/DRM and fair dealings and other user exemptions, I shall as an economist confine my attention to actual market events alluded to above.

Before DRM is pronounced dead, we acknowledge that the present difficulties of DRM in the download market face two critical complications that interfere with any direct test of the technologies. First, TCP/DRM-protected music tracks now compete with engrained file-sharing networks where tracks are downloaded free of charge, often illegally.. Second, consumer acceptance of protected downloads flagged due to the limited compatibility of different playing devices and online services.

Neither consideration necessarily reflects the inherent tastes of consumers to the controls of technological content protection. Indeed, viewers at academic and research libraries have no large argument with online catalogs of databases and journals that allow viewers

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to safely access vast amounts of information from their desktops. There is no additional allowance in these catalogs to allow viewers to “rip, mix, burn” reports from online copyrighted materials. And while additional user rights in online libraries might be attractive, users would reasonably forego such options if the financial integrity of the services were to decline, thus jeopardizing their existence. Concerns regarding monetization are then antecedent to the user rights that follow.

As the market’s leading portable device for music downloads, the Apple iPod now accommodates iTunes tracks protected by the company’s Fairplay DRM technology as well as unprotected MP3s that users have ripped from personal collections or downloaded from the Internet. According to Piper Jaffrey, Apple’s iTunes now account for 90% of all tracks sold in the legitimate a la carte download market;¹ second place eMusic does not carry acts from major labels. However, while MP3s can be played on any device, Apple’s Fairplay protection can play only on iPods, and iPods admit no other protected DRM technology. Consequently, each potential buyer of an iTunes download faces the future possibility that collections of purchased tracks will become useless if another music player otherwise becomes preferred.²

The evidence confirms the predictable consequences of the market lockup. Steve Jobs himself admitted in February, 2007 that the average iPod has only 22 tracks purchased directly from iTunes; the remainder were MP3s ripped or downloaded from elsewhere.³ Moreover, a full 83% of iPod owners do not purchase digital music regularly.⁴ Apple’s iPod devices have sold well primarily because they allow fans carry their MP3 collections everywhere. And iTunes has gained market share primarily because the base of iPods has increased, not because each iPod users stocks up on iTunes⁵.

To no practical avail, major content owners had tried since 2004 to resolve these compatibility problems by coming forth with a standards interface, named Coral, that might have accommodated interoperability among different DRMs.⁶ Under pressure from European regulators to implement compatibility in some manner, Apple in February, 2007 instead rejected all forms of accommodation for their DRM. Rather, Jobs asserted the importance of maintaining the company’s trade secrets regarding DRM but simultaneously calling upon the record labels to abandon DRM altogether.⁷

.Faced with a market impasse and the unabated use of free file-sharing, the four major record companies (Universal Music Group, Warner Music, EMI, and Sony BMG) came in the next months to sell DRM-free tracks in online stores. While EMI in April, 2007 came first to offer through iTunes and Amazon unprotected MP3 tracks encoded in a higher resolution format,⁸ the market-leading Universal Music Group (UMG) in August priced unprotected MP3s at 99 cents at Amazon, Wal-Mart, Rhapsody, Google, Best Buy, Trans World Entertainment, PassAlong Networks, and Puretracks; UMG did not sign a similar contract with iTunes. Warner Music began to offer DRM-free downloads through Amazon.com in December,⁹ and SonyBMG did so in the first quarter of 2008.¹⁰ The move by Sony BMG is especially noteworthy, as the venture had aroused some controversy in 2005 by embedding CDs with a surreptitious DRM that was transferred

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and buried in user personal computers when the tracks were ripped and stored in hard drive.¹¹

With all four labels offering unprotected MP3s of most music catalog, it may be true that DRM is finished in the U.S. download markets. However, there are two areas in the music sector where technological content protection must yet bear proper scrutiny – subscription services and advertising supported content. Greater applications like in television, movies, photography, art, and textual work.

Regarding subscription services, Rhapsody and Napster etc. now offer to listeners the attractive option of unlimited streaming and temporary downloads of millions of catalog tracks. Priced at a monthly fee of \$15. Nonetheless, streaming services have disappointed artists and labels; subscription now accounts for a modest 5% of world revenues in digital markets, while downloads and mobile (i.e., ringtones) respectively notched market shares of 48%. and 47%.¹²

The growth of streaming is hurt by two additional impediments. First, subscribers fear that playlist details may be lost if they migrate to a rival service. This compatibility problem could be resolved if competing services would agree to standards to memorialize playlists for crossovers, much as competitive banks accommodate one another's customers at ATM machines.

Second, licensors of any record track must also contract with the song publisher for the rights to use the underlying composition upon which the track is based. The matter is a non-issue for the download services, where rights for musical compositions have been made available through compulsory licenses.¹³ However, streaming and limited download providers in the U.S. do not have statutory guarantees, and are thus lacking in substantial amounts of publisher catalog. Indeed, the Digital Media Association claimed in 2007 that subscription services lacked rights to some 50 percent of the compositions that its members now seek.¹⁴ Senior executives at RealNetworks and Napster agreed also that licensing difficulties for publisher catalog – not piracy – represented the single biggest business problem that limits the uptake of their subscription services.¹⁵ The fragmentation of rights has then created an anti-commons that hinders the market uptake of one of the most attractive online services – subscription music.

3. THE FRENCH CONNECTION

The U.S. and Europe may now have embarked on two different courses to engage ISPs to participate in the war against illegal file-sharing. The media industry then faces a critical experiment that should affect future tactics in the enforcement of legitimate rights.

Content owners in the U.S. continued in the past year to bring actions against serial uploaders and websites that made available software used predominantly in the unauthorized redistribution of copyrighted material. Content owners also continued to press for mandatory use of filtering technologies through litigation – e.g., *Viacom v.*

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*YouTube*¹⁶ -- and for voluntary adoption of content identification technologies through the User Generated Content Principles.¹⁷ Neither of these activities implicated the ISPs.

While ISPs historically avoided any additional role beyond compliance with the notice and takedown provisions of the DMCA,¹⁸ several ISPs in the U.S. and Canada (including AT&T¹⁹, Shaw, and Rogers) now appear willing to voluntarily filter traffic for infringing works. To do this, a cooperating ISP would install network devices that would extract audio fingerprints or watermarks from transmitted files and compare the extracted information with identification data that rights owners may catalog online.

Nonetheless, voluntary filtering of online transmissions lacks universal appeal among U.S. ISPs. For example, Verizon does not “want to get into the business of inspecting the bits and figuring out what is and is not appropriate traffic.”²⁰ The company may reasonably fear the legal complications that could arise from its refusal to handle all traffic, thus presenting a potential loss of status as a common carrier. These common carriers are also major beneficiaries of the broadband extension that free media encourages.

While Capitol Hill has stayed out of the issue, Europe has recently considered more direct legislative approaches to bring about ISP involvement.. In November, 2007, the Sarkozy government announced the *Agreement for the Development and Protection of Cultural Works and Programmes on New Networks*, (aka the *Olivennes Agreement*), which advocated a warning and sanction mechanism aimed at deterring copyright infringement.²¹ This sanction mechanism is legally based on the responsibility of the subscriber to deter fraudulent use, currently found under Article L. 335-12 of the Intellectual Property Code.²² Jean Berbinau, general secretary of French regulatory body *Autorité de Régulation des Mesures Techniques* (Regulatory Authority for Technical Measures), said that legislation will pass by summer, 2008.²³ Some considerable action is forthcoming.

Under the terms of the Olivennes Agreement, a participating ISP would send out in its name electronic warning messages to any network subscriber alleged to have downloaded infringing work. Repeat infringers will be referred to judges or to appointed officials for sanctions ranging from temporary suspension to complete termination (hence the name “three strikes and out”). As a public guidepost to discourage later infringers, the government authority will publish monthly statistics on its enforcement activities. The same authority may request that ISPs impose additional protection measures and sanction those who fail to respond to injunctions.

France’s deal represents a considerable social compact, having attracted more than 40 signatories, including three ministers (finance, justice and culture), five internet service providers²⁴ and the country’s content providers. To sweeten the financial attraction, content owners also agreed to drop within one year all non-interoperable DRM on permanent downloads, and so allow compatibility of online purchases with any sort of computer or digital player. The French film industry also agreed to move post-cinema

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release dates from seven and a half months to six months, which would match the rules established for DVDs.²⁵

The general appeal of the French approach varies elsewhere. With no direct government intercession, the four major ISPs in Japan apparently agreed to a similar approach.²⁶ Less warm to the idea, the British government recently issued a white paper that included a vague call for "voluntary, preferably commercial solutions" by April 2009.²⁷ For its part, the Swedish government explicitly rejected "three strikes" and out, noting that shutting down an Internet subscription was "a wide-reaching measure that could have serious repercussions in society".²⁸ And in Ireland, the major record companies actually sued the largest ISP, Eircom, in an attempt to force it to block illicit downloads.²⁹

A somewhat different initiative appeared in Brussels in November, 2007, when the European Parliament's Committee on Industry, Research and Energy (ITRE) issued a report that called upon ISPs "to apply filtering measures to prevent copyright infringements" in order to "rethink the critical issue of intellectual property".³⁰ Under the proposed filtering system, ISPs would automatically read fingerprints or watermarks and move directly to disable download transmissions found to infringe copyright. The ITRE proposal seems to have been withdrawn in January, 2008.

European officials in France and elsewhere seem to have focused on the download and thus place the costs upon ISPs (and presumably their subscribers) rather than content owners themselves. Video filtering technology is not nearly as sophisticated as audio, leaving the possibility of a vast number of false negatives and false positives in this growing area.

Any undue reliance upon fingerprinting could be problematic, as infringers may use encryption software to avoid central detection by the ISPs. Indeed, in sworn testimony in June, 2007 before the U.S. Congress, a critical academic witness (University of Utah) testified that the fingerprinting technology of Audible Magic was critical in combating infringement on his university's computer network.³¹ However, the same authority acknowledged that the fingerprinting operation could be defeated entirely by end-to-end encryption, which is made possible through online software. Yet another authority (Arizona State University) also reported considerable success with Audible Magic, but simultaneously feared a technology arms race that would soon result once fingerprinting were defeated.³²

If content filtering is defeated, protocol filtering could be installed to slow or eliminate packets headed by p2p protocols.³³ Independent of concern for copyright protection, ISPs can now use protocol filtering to control high-bandwidth traffic on many former illegal networks as well as the unencrypted BitTorrent handshake. Due to the video-handling capabilities of newer software versions, ISPs will increasingly attempt to use protocol filtering to eliminate congestion.

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However, protocol filtering too presents its concerns. First, content can again be encrypted, and traffic monitoring thus avoided.³⁴ An arms race may then be beginning between users and their ISPs. Second, while protocol filtering can discern certain P2P protocols, it would have no ability to determine whether a particular transmission actually infringes copyright. Here, the BitTorrent protocol now gathers appeal for a number of noninfringing uses related to cooperative research, software upgrades, library digital files, and distance education requirements. Indeed, all major studios have signed deals with Joost, a legitimate distributor of content based on the BitTorrent protocol,³⁵ and MPAA members have spoken generally of the possible efficiencies.³⁶

The combined parties of Europe here may be emphasizing the harms of downloading without considering equally the upload. In this respect, Bill Rosenblatt of DRM Watch writes “[T]he Olivennes Agreement does nothing to help stem the supply of unauthorized content. Ironically, far from eliminating DRM in France, it may well shift DRM usage to that most ironic of purposes: to aid pirates in uploading content so that users can download it without being detected. All but the most trivial encryption schemes would suffice for this purpose, because they would foil fingerprinting and watermarking technologies.”³⁷ The policy vector in Europe is evidently directed differently than in the U.S., where uploaders appear to be the prime target.

If Mr. Rosenblatt is correct, this apparent emphasis may be misfocused. As the RIAA has evidently proven, major uploaders (who apparently did not encrypt) can be identified without the use of filtering technology.³⁸ As a jurisprudential matter, it would then be interesting to learn if the litigation war against piracy can be made more cooperative, more automatic, and possibly more conciliatory. This may be possible if ISPs and court administrators are made part of the process. In this regard, electronic warnings, ongoing human oversight, and temporary suspensions have some higher moral appeal, at least compared to lawsuits and financial settlements, particularly when combined with DRM interoperability and expanded catalogs for online use. There would also be some apparent moral advantage if court administrators could use the authority of the government to publish activities in a public forum. Relatively speaking, an even-handed administrative approach to the upload may prove to be a more effective and somewhat gentler option than the present litigation battles that now consume the American landscape.

3. ADVERTISING AND SOCIAL NETWORKS

The events of the last year merge with the critical changes of the past three -- the development of social networking and the reemergence of online advertising. Social networking is the touchstone technology of Web 2.0, a highly interactive “metadomain” involving virtual clubs where content can be shared and redacted with extended network interactions and user editing rights. To allow social networks to eliminate user transactional fees, financing for social networks may presumably come from the pockets

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of advertisers who would be attracted to the growing numbers and specific demographic natures of interconnected audiences.

Social networks — such as Myspace, YouTube, LiveJournal, Friendster, and Facebook — now allow people with common personal interests to post or exchange blogs, instant messages, music recommendations, photos, classifieds, event notices, and other items of personal interest. As a signal event in the past two years, News Corporation acquired the Web site, MySpace. With over 100 million viewers,³⁹ MySpace now is the world's sixth most popular website, and the third most popular website in the U.S.⁴⁰ Another social networking site, YouTube, now may include some 72.8 million videos and some 2,8 million user channels.⁴¹ YouTube was launched in February, 2005 with an initial investment of \$12.5 million, and was bought out by Google in October, 2006 for \$1.65 billion.⁴² Now a target of a lawsuit from Viacom for unauthorized use of copyrighted material, YouTube now accommodates the insertion of rich media banner ads that can monetize Google's investments in the social network..⁴³

Regarding online advertising, the recent history of two digital companies — Google and America Online — should tell us how the market now views the future. The leading search engine Google accounts for over 50% of searches on the Internet and derives some 98% of its annual revenues from the sale of advertising to online sponsors. Since 2002, the company has seen advertising revenues increase from \$439 million to 16.6 billion and net earnings per share increase from \$0.86 to \$13.53.⁴⁴ By contrast, the former online bellwether AOL in September, 2006 abandoned its subscription model and made its search engine and accompanying software freely available to all broadband users.⁴⁵ AOL expected that the lost subscription fees will be compensated by the gain in advertising dollars expectedly arising from its larger viewing audience.

Online advertising continued the uptrend in the year 2007, as companies spent a record \$31 billion on web-sites, search engines, social networks, and blogs.⁴⁶ Forrester Research predicted in 2007 that this amount would double to \$61 billion by 2012.⁴⁷ For its part, ZenithOptimedia predicted in 2007 that Internet ad spending would overtake radio spending by the end of 2008, and thus become soon the fourth most popular advertising medium in global spending (behind television, newspapers and magazines).⁴⁸

The nexus of networking and advertising will advance further through the development of massive multi-player distributed games (or virtual worlds), such as Second Life.⁴⁹ Virtual worlds now offer to users the potential for networked engagements that combine problem-solving, cooperation, and competition in gamed situations. In virtual space, users can create second selves called avatars, which can visit, make friends, build homes, buy virtual items, and run businesses in online universes. As the appeal grows, virtual worlds will increasingly accommodate themes with merchandising, entertainment, or cultural venues; e.g., avatars may engage one surrounding by the characters, places, and songs of Disneyworld, National Geographic, or ancient Greece. .

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There is clear potential for advertising and social networking to help out the media industries.. For the besieged music industry, this author calculates label profits could double if as little as 2.5% percent of broadcast radio advertising in the U.S. could be diverted to the revenue line of record labels.⁵⁰ As an enabling instrument to engage fans and widen advertising bases, Web 2.0 then offers great potential for the industry to monetize investments.

A great potentiality is demonstrated by News Corp.'s MySpace, which announced in January, 2007 a deal to integrate SNOCAP into a "Mystore" widget, and thus allow bands to make licensed MP3 tracks directly available to MySpace audiences..⁵¹ Listeners may then exchange or recommend their downloads with one another, and thus build their appeal through recommendation and social networking. Now ranked as the top social music site, Imeem is a social networking site music fans engage one another with shared blogs, photos, audio, and video.⁵² The company has more than 25 million visitors per month^l and attracts over 65,000 new users every day.⁵³

Nonetheless, analysts must yet be cautious before claiming advertising to be the magic bullet that can lead content owners and service providers to entirely abandon transactional and subscription charges that have been the incumbent means of financing content. At present, advertising in the U.S. has not reached the narrow tail of the website universe. Indeed, the top 10 Web sites accounted for more than 70 percent of online advertising revenue in the first half of 2007, while the top 50 sites accounted for 90 percent.⁵⁴ As advertisers attach a premium for integrated buys and one stop shopping, it remains to be seen whether niche markets can cut the mustard.

Indeed, Beth Comstock, former head of NBC Universal's Integrated Media Fund (an investor in media and digital companies), phrases the caution:

"I'm getting to the point where I feel like every answer to every business development pitch is 'We're going to be advertiser supported' ...It's just not going to be possible ... There are not going to be enough advertising dollars in the marketplace. No matter how clever we are, no matter what the format is."⁵⁵

Even ZenithOptimedia is cautious: "the [growth rate of 29 percent] will start to slow naturally. It can't continue to grow explosively forever. It's quite possible that new formats will arrive, but looking at the existing formats, they are starting to mature."⁵⁶

NOTES

^l"iTunes Store Still Dominates with 90% Market Share", April 15, 2007, at <http://www.ipodhacks.com/article.php?sid=2191> (retrieved March 4, 2008).

²Steve Jobs, Thoughts on Music, February 6, 2007, at <http://www.apple.com/hotnews/thoughtsonmusic/> (retrieved August 28, 2007) ; What Steve Jobs's DRM announcement means, February 22, 2007, at http://www.boingboing.net/2007/02/22/what_steve_jobss_drm.html (retrieved August 28, 2007);

³Id.

⁴Id.

⁵ Supra note 5 and surrounding text

⁶B. Rosenblatt, Coral Consortium Aims to Make DRM Interoperable, DRM Watch, October 7, 2004. see also <http://www.coral-interop.org/>, (retrieved March 4, 2008).

⁷“Supra note 5

⁸Caroline McCarthy, EMI, Apple partner on DRM-free premium music, CNET News.com, April 2, 2007 1 at http://news.com.com/EMI+Apple+partner+on+DRM-free+premium+music/2100-1027_3-6172398.html. (retrieved August 31, 2007)

⁹Cassimir Medford, Amazon, Warner Rock MP3s, Red Herring, December 27, 2007, at <http://www.redherring.com/Home/23366>, (retrieved March 4, 2008).

¹⁰C. Holahan, Sony BMG Plans to Drop DRM, Business Week.com, January 13, 2008., (retrieved March 4, 2008). .

¹¹Business Week, November 29, 2005, at <http://www.businessweek.com>, (retrieved March 4, 2008).

¹² IFPI Digital Music Report, International Federation of Phonographic Industries, London, 2008..

¹³DIGITAL PERFORMANCE RIGHT IN SOUND RECORDINGS ACT OF 1995, 109 STAT. 33]] Public Law 104-39, encoded at 17 U.S.C. ¶115 , <http://www.copyright.gov/legislation/pl104-39.html>

¹⁴ J. Potter, Testimony, Oversight Hearing on "Digital Music Licensing and Section 115 of the Copyright Act." United States House of Representatives Subcommittee on Courts, the Internet and Intellectual Property, Committee on the Judiciary, March 8, 2005, <http://judiciary.house.gov/OversightTestimony.aspx?ID=300>

¹⁵Id.

¹⁶ <http://news.justia.com/cases/featured/new-york/nysdce/1:2007cv02103/302164/> (retrieved March 24, 2008).

¹⁷ <http://www.ugcprinciples.com/>. The companies supporting these principles include CBS Corp., Dailymotion, Fox Entertainment Group, Microsoft Corp., MySpace, NBC Universal, Veoh Networks Inc., Viacom Inc. and The Walt Disney Company.

¹⁸That is, the name, address, and electronic signature of the complaining party [512(c)(3)(A)(i)]; the infringing materials and their Internet location [512(c)(3)(A)(ii-iii)], or if the service provider is an "information location tool" such as a search engine, the reference or link to the infringing materials [512(d)(3)]; sufficient information to identify the copyrighted works [512(c)(3)(A)(iv)]; a statement by the owner that it has a good faith belief that there is no legal basis for the use of the materials complained of [512(c)(3)(A)(v)]; a statement of the accuracy of the notice and, under penalty of perjury, that the complaining party is authorized to act on the behalf of the owner [512(c)(3)(A)(vi)]. At <http://www.chillingeffects.org/dmca512/faq.cgi#QID130>

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¹⁹B. Stone, AT&T and Other I.S.P.'s May Be Getting Ready to Filter, New York Times, January 8, 2008, <http://bits.blogs.nytimes.com/2008/01/08/att-and-other-isps-may-be-getting-ready-to-filter/> (retrieved March 24, 2008).

²⁰ISP Copyright Filter Debate Continues: Verizon Stays Away, While Rep. Bono Is All For Filtering, at <http://techdirt.com/articles/20080130/152634129.shtml>; see also R. Fiscus, [Verizon VP says no plans to examine customer traffic](http://www.afterdawn.com/news/archive/12762.cfm), January 30 2008, at <http://www.afterdawn.com/news/archive/12762.cfm>

²¹S. Smith, French reveal anti-piracy plans for online media, November 26, 2007, at http://tech.monstersandcritics.com/news/article_1376389.php/French_reveal_anti-piracy_plans_for_online; B. Johnson and E. B. King, Pirates face crackdown over movie downloads, November 24, 2007, at <http://www.guardian.co.uk/technology/2007/nov/24/crime.france>. (retrieved March 24, 2008).

²²Agreement for the development and protection of cultural works and programs in the new networks ,November 23, 2007, <http://www.popolodellarete.it/showthread.php?t=6010>, (retrieved March 24, 2008).

²³ E. Bangeman, [France's plan to turn ISPs into copyright cops on track](http://arstechnica.com/news/ars/post/20080128-frances-plan-to-turn-isps-into-copyright-cops-on-track.html), January 28, 2008, at <http://arstechnica.com/news/ars/post/20080128-frances-plan-to-turn-isps-into-copyright-cops-on-track.html>, (retrieved March 24, 2008).

²⁴Free, Noos, Club Internet, Wanadoo and Tiscali France. <http://news.bbc.co.uk/1/hi/technology/3935675.stm> , (retrieved March 24, 2008).

²⁵Infra note Rosenblatt.

²⁶D. O'Brien, Three Strikes, Three Countries: France, Japan, and Sweden,

²⁷Creative Britain: New Talents for a New Economy, at 51, http://www.culture.gov.uk/Reference_library/Publications/archive_2008/cepPub-new-talents.htm, (retrieved March 24, 2008).

²⁸O'Brien, supra note 26.

²⁹Record Labels Sue Irish ISP, Demand Music Piracy Filtering, <http://www.zeropaid.com/news/9323/>, (retrieved March 24, 2008).

³⁰Internet service providers [would] cooperate in the fight against internet piracy by enforcing their contractual terms and conditions, which permit them to remove or block access to infringing material and to suspend and terminate accounts with subscribers who infringe intellectual property rights; [and would] apply filtering measures to prevent copyright infringements; ITRE Paragraph 9 <http://www.eff.org/issues/eff-europe/bono-cult-amendments>, see also L. Phillips, Music Firms Want EU to Cut Off Pirates; D. Mitchell, Piracy and Privacy, December 29, 2007, (retrieved March 24, 2008).

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³¹Testimony, Charles Wight, Associate Vice President for Academic Affairs and Undergraduate Studies University of Utah, Hearing: The Role of Technology in Reducing Illegal File-sharing: A University Perspective, June 5, 2007, Committee on Science and Technology, U.S. House of Representatives, June 5, 2007, http://science.house.gov/publications/hearings_markup_details.aspx?NewsID=1846. Since deploying the Audible Magic software two years ago, the university found that complaints from the RIAA and MPAA dropped by 90%.

³²Testimony, Adrian Sannier

³³I SPs - Technical options for addressing online copyright infringement, http://www.eff.org/files/filenode/effeurope/ffpi_filtering_memo.pdf, (retrieved March 24, 2008).

³⁴“When these devices see a certain usage pattern, they will send "TCP RST" packets to disrupt the communication between a Comcast user and a peer elsewhere. They only seem to do this when the Comcast user is uploading, not when they're downloading. Even though ADSL, cable and wireless broadband all have much lower upload speeds than download speeds, the uploading can still be the problematic part. Being a good citizen in the BitTorrent world means uploading as much as you download. So BitTorrent and other peer-to-peer file sharing applications use the upload capacity to the max. However, cable networks have very limited return channel capacities, because they were originally designed for one-way distribution of TV signals. So even though Comcast's connections to the rest of the internet can easily carry the peer-to-peer uploads, it's the local cable infrastructure that gets into trouble with too many peer-to-peer uploads: this will delay the traffic of other users.” I. van Beijnum, “P2P BitTorrent Filtering by Comcast & Verizon”, at <http://www.ipv6.com/articles/blog/Comcast-Verizon-Filtering-P2P-Traffic.htm>, (retrieved March 24, 2008).

³⁵ <http://www.joost.com> (retrieved March 24, 2008).

³⁶Indeed, Fritz Attaway of the Motion Picture Association of America — certainly not a copyright minimalist — would come in July, 2006 to term the joining of Hollywood and peer-to-peer networking as a “marriage made in heaven.” Confusion from 'Grokster,' Other Suits Slows Legitimate P2P Deals, Players Say, WARREN'S WASH. INTERNET DAILY, June 23, 2006, <http://diariaa.com/article-warrens-legal-confusion.htm>. His colleague Dean Garfield aptly made the point; “the challenge with p2p is not the technology, but the business model of those who have chosen to use the concepts ... for their own illicit purposes.” Letter from Dean Garfield, Vice-President and Director of Legal Affairs, World Wide Anti-Piracy, Motion Picture Association of America, Inc. to Deborah Platt Majoras et al., FTC Commissioners (Nov. 18, 2004) (Public Comments, Peer-To-Peer File-Sharing Technology: Consumer Protection and Competition Issues: Announcement of Public Workshop and Request for Public Comment and Participation, FTC File No. P03 4577), available at <http://www.ftc.gov/os/comments/p2pfileshare/OL-100030.pdf>.

³⁷B. Rosenblatt, New French Law Threatens ISP Access for Illegal Downloaders, November 28, 2007, at <http://www.drmwatch.com/legal/article.php/3713551> (retrieved March 24, 2008).

³⁸While the RIAA has threatened or taken action against some 20,000 suspected file sharers since the inception, the market-research firm NPD Group reports that some 41 million

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users downloaded music illegally last year. Big Champagne reports that file-sharing among the infringing population remains at historic highs.

³⁹Yinka Adegoke, MySpace to Sell Music from Nearly 3 Million Bands, YAHOO! NEWS, Sept. 3, 2006, http://news.yahoo.com/s/nm/20060903/tc_nm/media_myspace_songs_dc; Dan Smith, Online Social Networks & Communities are Here to Stay, September 22, 2006, at http://www.knowmoremedia.com/2006/09/online_social_networks_communi.html (retrieved March 4, 2008).

⁴⁰<http://en.wikipedia.org/wiki/MySpace> (retrieved March 4, 2008).

⁴¹<http://en.wikipedia.org/wiki/YouTube#Copyright> (retrieved March 4, 2008).

⁴² Andrew Ross Sorkin & Jeff Leeds, Music Companies Grab a Share of the YouTube Sale, N.Y. TIMES, Oct. 19, 2006, at C1.

⁴³Erik Sass, YouTube Partners with Ad Networks, Aug. 10, 2006, ONLINE MEDIA DAILY, <http://publications.mediapost.com/index.cfm?fuseaction=Articles.san&s=46629&Nid=22401&p=204029>, (retrieved March 24, 2008).

⁴⁴Google, Form 10-K Annual Report, Consolidated Statements of Income, For the Fiscal Years Ended December 31, 2006 and December 31, 2007, available at <http://www.sec.gov/Archives/edgar/data/1288776/000119312506056598/0001193125-06-056598-index.htm>. (retrieved March 4, 2008).

⁴⁵Electronic mail, security software, instant messaging, social networking, and parental controls.

⁴⁶Reuters News, Too Many Hands Grabbing for Online Ad Dollars?, Red Herring, October 12, 2007, at <http://www.redherring.com/Home/22968> (retrieved March 4, 2008).

⁴⁷Kristina Knight, Forrester: Online ad spend to hit \$61 billion by 2012, BizReport, October 29, 2007, at http://www.bizreport.com/2007/10/forrester_online_ad_spend_to_hit_61_billion_by_2012.html. Forrester's expected breakdown in 2012 is search marketing (\$25 billion), display advertising (\$14 billion), social networking (\$10 billion), video (\$7.1 billion), e-mail (\$4 billion), and mobile (\$2.5 billion). Id. The comparable breakdown in 2006 was display ads (35 percent), search (43 percent), classified (19 percent), and email/mobile (3 percent). Zenith, *infra* note.48

⁴⁸F Aup, "ZenithOptimedia: Internet Ad Spending Will Overtake Radio Next Year", The ClickZ Network, Apr 3, 2007. at <http://www.clickz.com/showPage.html?page=3625467> (retrieved March 4, 2008).

⁴⁹ Visionary Strategies, <http://www.visionarymms.com> (retrieved Oct. 5, 2005).

⁵⁰ At present, no amount of total \$20 billion spent in broadcast radio advertising is diverted to record labels and performing artists (other than the songwriters) The four major record companies (which may account for 75–80% of the industry total) now earn annual revenues of some \$10 billion per year for sale of label product.. Assuming a very generous profit rate of 5%, profit levels for these labels now amount to some \$500 million in profits, or 2.5% of the radio advertising total. Label profits could then double if as little as 2.5% of broadcast radio advertising could be diverted, presumably through the shift of listeners to advertising based services made available through the internet,

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⁵¹ K. Holton, Independent record labels sign MySpace deal, Washington Post, January 21, 2007, www.washingtonpost.com/wp-dyn/content/article/2007/01/21/AR2007012100286.html. (retrieved March 4, 2008).

⁵² At <http://en.wikipedia.org/wiki/Imeem> (retrieved March 4, 2008).

⁵³ Id.

⁵⁴ Supra note 50

⁵⁵ Id.

⁵⁶ Supra note 52

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