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IMPOSE A NONCOMMERCIAL USE LEVY TO ALLOW FREE PEER-TO-PEER FILE SHARING*

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TABLE OF CONTENTS

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* Peer-to-peer file sharing is a highly fluid area of law and policy with new, noteworthy developments taking place almost every day. Unfortunately for readers, but perhaps thankfully for tired authors, there comes a time when texts published in hard copy are put to bed and can no longer reflect ongoing developments. This Article reflects developments through October 31, 2003. I trust that its basic thesis and argument will remain relevant for a good time after that, even as some of its detail is overtaken by subsequent events.

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I. INTRODUCTION

Commentators and courts have universally hailed the Internet as an abundantly fertile field for self-expression and debate. But this acclamation masks sharp disagreement over whether certain Internet activity should be lauded or deplored. A prime example is the unlicensed use of copyright-protected material. The explosion of sharing and remixing of popular songs and movies over Internet-based peer-to-peer ("P2P") networks like Napster, KaZaA, and Morpheus has evoked sharply discordant reactions. Some commentators embrace the collection, exchange, and transformation of existing works as part and parcel of the individual autonomy, self-expression, and creative collaboration for which we celebrate the Internet. Others denounce those activities as massive piracy of intellectual property. They fear that P2P file swapping poses a mortal threat to the copyright system that sustains authors, artists, and a multi-billion-dollar-a-year industry in the production and dissemination of creative expression.

The P2P controversy has degenerated into a steadily intensifying war of words and legal action. The copyright industries have successfully shut down a number of P2P networks — most famously, Napster — and continue to bring lawsuits against others. They have also sought to compel telecommunications and consumer electronics companies to disable unlicensed P2P sharing of copyright-protected works.[1] The industries are now targeting individuals who trade large

1. *See infra* notes 28–48.

numbers of files as well.[2] Yet, despite this three-pronged attack, unlicensed P2P file swapping continues apace. As of September 2003, over 20 million audio files and as many as half a million video files were being exchanged each day.[3]

As is often the case with such conflicts, both sides of the P2P debate make some credible arguments. On one hand, we should rigorously applaud the online collecting, swapping, reworking, and remixing of music, films, television programs, art, and stories. P2P file sharing is not just downloading music and movies for free. It is a vehicle for finding works that are otherwise not available, discovering new genres, making personalized compilations, and posting creative remixes, sequels, and modifications of popular works. By engaging in such activities, people who might previously have been passive consumers now assert a more active, self-defining role in the enjoyment, use, and creation of cultural expression. They also share their interests, creativity, and active enjoyment with others. As Larry Lessig crisply puts it: "This is the art through which free culture is built."[4]

But at the same time, Internet users' widespread unlicensed downloading of audio, video, graphic, and text files could well supplant markets for copyright-protected expression. Digital technology makes it easy for Internet users to distribute multiple perfect copies of a work throughout the world without compensating the authors or other copyright holders. Such untrammeled P2P file swapping could

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2. In September 2003, the Recording Industry Association of America ("RIAA") brought lawsuits against 261 file swappers from various locations across the United States. On October 17th, it announced that it would bring a second round of lawsuits, this time against 204 persons whom it alleges swap music files on a large scale. *See* John Schwartz, *Record Industry Warns 204 Before Suing on Swapping*, N.Y. TIMES, Oct. 18, 2003, at B1. The industry has pressed for criminal prosecutions as well. *See* Declan McCullagh, *DOJ to Swappers: Law's Not on Your Side*, CNET News.com, *at* http://news.com.com/2100-1023-954591.html (Aug. 20, 2002) (reporting statement by Department of Justice attorney that the Department is prepared to begin prosecuting individuals who engage in P2P file swapping, following Congressional and industry lobbying for such prosecutions).

3. These are rough estimates derived from industry analyst reports. According to NPD MusicWatch Digital, the total number of music files traded in April 2003 was 852 million. This figure fell to 655 million music files in June 2003, following commencement of the RIAA's well-publicized campaign threatening individual file sharers with legal action. Press Release, NPD Group, RIAA Lawsuits Appear to Reduce Music File Sharing, According to the NPD Group (Aug. 21, 2003), *available at* http://www.npd.com/press/releases/press_030825.htm. On the other hand, Nielsen/NetRatings reported a mere 5% decrease in file sharing on KaZaA — the dominant P2P file sharing network in the United States — in the week following the RIAA's commencement of lawsuits against 261 file swappers in September 2003. *See* Amy Harmon & John Schwartz**,** *Despite Suits, Music File Sharers Shrug Off Guilt and Keep Sharing,* N.Y. TIMES*,* Sept. 19, 2003, at A1. *See also* Laura Holson*, Studios Moving To Block Piracy of Films Online*, N.Y. TIMES*,* Sept. 19, 2003, at A1 (reporting that "industry analysts suggest there could be as many as 500,000 copies of movies swapped daily").

4. LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD 9 (2001).

eviscerate the economic incentive for creating many types of valuable works.

Commentators and policy-makers have put forth a variety of proposals to address the P2P file swapping controversy. In this Article I advance and provide a blueprint for an idea that I think holds the most promise: allowing unrestricted noncommercial P2P file sharing in return for imposing a levy on P2P-related services and products.[5] The levy, which I will term the "Noncommercial Use Levy," or "NUL," would be imposed on the sale of any consumer product or service whose value is substantially enhanced by P2P file sharing (as determined by a Copyright Office tribunal). Likely candidates include Internet access, P2P software and services, computer hardware, consumer electronic devices (such as CD burners, MP3 players, and digital video recorders) used to copy, store, transmit, or perform downloaded files, and storage media (like blank CDs) used with those devices. In return for imposing the NUL, the law would provide copyright immunity for individuals' noncommercial copying and distribution of any expressive content that the copyright owner has previously released to the public.[6] Individuals' noncommercial adaptations and modifications of such content would also be noninfringing as long as the derivative creator clearly identifies the underlying work and indicates that it has been modified.

A Copyright Office tribunal would determine the amount of the NUL, although interested parties would have an opportunity to negotiate a rate in advance of the tribunal's ruling. In determining the NUL amount, the tribunal would apply the "fair return" standard set forth in the Copyright Act for certain compulsory licenses. But to minimize uncertainty and administrative costs, the tribunal would use a readily calculable formula to approximate fair return during the initial five-year period in which the NUL is in place. It would set the levy at an amount calculated to reimburse copyright holders for what I term their "adjusted net revenue" actually displaced by P2P file sharing, and I estimate that an average levy of some four percent of the retail price of P2P goods and services would provide ample reimbursement. Once collected, levy proceeds would be allocated among copyright holders in proportion to the popularity of their respective works and of user-modified versions of their works, as measured by digital tracking and sampling technologies.

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5. In a forthcoming book, Terry Fisher presents a levy proposal that, while differing in some significant respects from the one I present here, shares much the same principles, goals, and structure. *See* WILLIAM W. FISHER III, PROMISES TO KEEP: TECHNOLOGY, LAW, AND THE FUTURE OF ENTERTAINMENT (forthcoming 2004) (manuscript at Ch. 6), *available at* http://cyber.law.harvard.edu/people/tfisher/PTKChapter6.pdf.

6. *See infra* text accompanying note 146 (setting forth what I mean by "noncommercial"); *infra* text accompanying notes 140–141 (explaining that "expressive content" does not include computer software).

The NUL stands alongside two well-established mechanisms for allowing unhindered uses of copyright-protected material while still compensating copyright holders. These are: (1) levies on equipment and media used to make personal copies; and (2) compulsory licenses for distributors of copyright-protected material, such as those available to record companies for producing cover recordings, cable and satellite TV operators for transmitting off-air broadcasts, and webcasters for transmitting sound recordings.[7] A common feature of copyright law in many countries, including the United States, these statutory compensation regimes are sometimes criticized for their administrative costs and other regulatory inefficiencies. In parallel, the critics tout the efficiency benefits of proprietary copyright, in which the copying, distribution, transmission, and modification of expressive works can be undertaken only on terms agreed upon by the copyright owner. In a proprietary copyright regime, they argue, the market seamlessly prices copyright licenses in line with consumer demand, distributes payments to the copyright owners, and informs authors and publishers about how much consumers value different types of expression, thereby guiding them to produce and disseminate the creative expression that consumers want.[8]

But as economic analysts have recognized, copyright, like intellectual property in general, is a "particularly costly form of property."[9] In essence, a proprietary copyright regime, no less than statutory compensation, is a necessarily imperfect (and inefficient) solution to a systemic market failure — the inability of markets to generate an adequate supply of creative expression given the public goods characteristics of expression. And as I will discuss, proprietary copyright's drawbacks are greatly magnified in the P2P environment. When applied to P2P file sharing, proprietary copyright imposes inordinate enforcement and consumer welfare costs. It also impedes tech-

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7. Like the equipment and media levies, the NUL would serve to allow noncommercial personal uses. But unlike existing levies, the NUL would allow noncommercial distribution and modification along with personal copying, it would be imposed on Internet Service Providers and other suppliers of services that enable users to receive and distribute content, and it would allow distribution by individual P2P participants, rather than by the entities upon which the compulsory fee is imposed.

8. *See, e.g.*, PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX 216 (rev. ed. 2003) (favoring extension of copyright law to include personal uses, but opposing enforcement through law-backed digital rights management).

9. William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 268 (1987). *See also* ALEXANDER R.W. ROBSON & STERGIOS SKAPERDAS, COSTLY ENFORCEMENT OF PROPERTY RIGHTS AND THE COASE THEOREM 2–3 (CESIFO Working Paper No. 762, 2002), *at* http://papers.ssrn.com/paper.taf?abstract_id=341400 (last visited Oct. 10, 2003) (noting that, given the need for case-by-case balancing of intellectual property holder control and user access, the costs of enforcing intellectual property are higher than those of enforcing more standardized forms of property).

nological innovation, cements barriers to market entry, and suppresses much of the bottom-up self-expression that P2P networks engender.

In contrast, my proposed Noncommercial Use Levy would give noncommercial users and creators freedom to explore, share, and modify many of the expressive works that populate our culture. On the whole, consumers would also pay less for access to those works than under a proprietary copyright regime since the NUL would be set at a "fair return" rather than a willing-seller rate. Nevertheless, in compensating copyright owners for displaced revenues, the NUL would continue to underwrite the creation and dissemination of new original expression. In fact, the levy would not only provide ample remuneration for authors and publishers but would fund a broader spectrum of creators than under our current copyright system.

My proposed Noncommercial Use Levy, I hasten to add, is not a panacea. Any regime designed to spur the production of a public good will involve trade-offs. The NUL is certainly no exception. Mindful of those shortcomings, I have structured the NUL to minimize administrative costs and to achieve some of the efficiency benefits of proprietary copyright while avoiding proprietary copyright's untoward stifling of P2P file sharing. For example, allocating NUL proceeds in line with consumer uses, as metered by digital tracking technology, would replicate the signaling and resource allocation functions of the market pricing system without the deleterious effects of copyright holders' proprietary control. The result, I argue, is that a comparison of trade-offs strongly favors the NUL over a proprietary copyright regime.

The NUL should also enjoy a comparative advantage in the political arena. To be certain, it would not be any interested party's first choice for resolving the P2P controversy. But copyright industries, authors, providers of P2P-related services and products, and consumers of P2P-related services and products would ultimately all have reason to support its implementation. To see why this is so, Part II of this Article presents some background to the P2P controversy and a snapshot of where the controversy stands today.

Part III then compares the NUL to proprietary copyright. It first counters the principal conceptual (or rhetorical) objection to the NUL: that the NUL, like statutory levies and compulsory licenses, is an anomalous and disfavored exception to the rule that creative expression is the copyright holder's "property." It demonstrates, rather, that the NUL fully comports with copyright's underlying premises and objectives. Part III then addresses the trade-offs involved in applying proprietary copyright to P2P file sharing. It emphasizes that our choice of regime should involve a comparative assessment of costs and benefits, not a reflexive deferral to the property model.

Part IV briefly describes current compulsory license and personal copying levy regimes. It concludes that while those regimes might provide useful precedents for a paying P2P regime, they fall far short of the comprehensive solution that my proposed NUL would provide.

Part V presents my blueprint for the NUL. As with any such policy prescription, the "devil is in the details," and my purpose in Part V is to provide a fairly complete and precise outline of the NUL and how it would operate. To that end, I describe which uses of copyright-protected expression would enjoy the NUL privilege, what sorts of expression would be subject to the privilege, which devices and services would bear the NUL surcharge, by what procedure and criteria the NUL amount would be determined, and how NUL proceeds would be distributed.

Continuing in that vein, Part VI counters two principal objections to a regime such as the NUL. The first is that the NUL could not yield sufficient funds to compensate copyright holders without imposing unpalatable costs on consumers. The second is that the NUL would unfairly and inefficiently require low-volume users of copyright-protected material to subsidize both copyright owners and high-volume users.

Finally, Part VII favorably compares the NUL with three proffered alternatives for resolving the P2P file sharing controversy. These include (1) "digital abandon," a regime in which the law accords authors neither proprietary control nor a right to receive remuneration for noncommercial P2P uses of their work; (2) "digital lockup," a regime in which proprietary copyright reaches full fruition as copyright holders use digital encryption to control all uses of their works; and (3) a regime of government compensation to copyright holders paid out of general tax revenues, rather than a levy on P2P-related goods and services.

II. BACKGROUND: EFFORTS TO STEM P2P

The copyright industries have long insisted that they must be able to control the use of their works if they are to make their content inventories available over digital networks.[10] But the ubiquity and decentralized character of P2P file-swapping capability makes that control extraordinarily, if not prohibitively, costly. As a result, the P2P controversy is a story of the copyright industries' increasingly

10. *See, e.g.*, *The WIPO Copyright Treaties Implementation Act, Hearing on H.R. 2281 Before the Subcomm. on Telecomm., Trade, and Consumer Protection, House Comm. on Commerce*, 105th Cong. 43–45, 56 (1998) (statements of Hilary B. Rosen, President and CEO, Recording Industry Association of America, and Steven J. Metalitz, on behalf of Motion Picture Association of America) (asserting that copyright industries will not put their content online unless assured that it is secure from unlicensed copying).

brazen — some say desperate — attempts to shut down P2P file-swapping networks, disable P2P technology, and shift the costs of control onto third parties, including telecommunications companies, consumer electronics manufacturers, corporate employers, universities, new media entrepreneurs, and the taxpayers.

Copyright holders could, in theory, launch a massive campaign of lawsuits against file swappers to stem the P2P tide. Courts have held that the P2P swapping of copyright-protected material infringes on those copyrights even if undertaken without monetary compensation.[11] However, copyright holders have, at least until recently, regarded infringement actions against individual P2P file-swappers as impractical and impolitic. P2P file swappers' sheer numbers and worldwide scope, coupled with the need to identify which Internet users are swapping files,[12] make widespread enforcement prohibitively costly. Well-publicized, targeted enforcement imposing substantial penalties against selected individual file swappers might successfully drive many users off P2P file sharing networks. But especially given that the likely targets of such actions would include children, unwary parents, and college students, that strategy carries significant public relations and marketing risks.[13] The recording industry's initial foray, a much-ballyhooed bevy of lawsuits targeting 261 file swappers in various locations throughout the United States, ignited a significant public opinion backlash (as well as some public expressions of contrition and support), capped by Senate hearings that scrutinized the industry crackdown and proposed legislation that

11. A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1015 (9th Cir. 2001) (stating that personal uses are "commercial," and thus disfavored for fair use, whenever users "get for free something they would ordinarily have to buy").

12. The anonymity of the Internet poses a barrier to discovering file-swappers' identities, but generally not an impermeable one. Digital tracking technology serves as a useful tool for identifying the Internet addresses of computers used for file swapping, which, combined with court-ordered discovery, can assist copyright holders in identifying individuals who are swapping files. If the individual maintains infringing material on his ISP's server (e.g., if the material is on an ISP-hosted web site), the copyright holder may obtain a subpoena requiring the ISP to identify its subscriber. *See* 17 U.S.C. § 512(h) (2000). At issue in current litigation is whether the copyright holder may also obtain a subpoena to require the ISP to identify a subscriber who maintains infringing material on his own computer or must rather seek to discover that information by filing a John Doe lawsuit. *See infra* note 34.

13. Public opinion surveys suggest that the vast majority of Internet users and a slim majority of the American public at large believe that there is nothing morally wrong with downloading music for free from the Internet. *See* Lior Jacob Strahilevitz, *Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks*, 89 VA. L. REV. 505, 542–44 (2003) (summarizing polling data from various sources and presenting an insightful discussion of social norms as they affect P2P file swapping). The actual practice of downloading music without payment from P2P file-sharing networks is also widespread, particularly among young people. Surveys indicate that in the United States about half of all people between the ages of 12 and 22 with access to the Internet have done so. *See* Steve Lohr, *Fighting the Idea That All the Internet is Free*, N.Y. TIMES, Sept. 9, 2003, at C1 (citing July 2003 survey by industry analyst Forrester Research).

would make it more difficult for the industry to bring such actions in the future.[14]

The copyright industries look to four principal sources to overcome these enforcement barriers. These are (1) Digital Rights Management: technology designed to detect and impede unauthorized consumer file swapping; (2) shifting enforcement costs onto third parties: legal rules that require third parties — new media enterprises, telecoms, consumer equipment manufacturers, employers, and universities — to assist in putting technological controls in place and preventing any unauthorized file swapping that escapes technology's grasp; (3) taxpayer-funded enforcement: Department of Justice prosecution of those who engage in and assist P2P file swapping; and (4) sabotage: using technological self-help to disable P2P networks. Each illustrates the difficulties and costs of enforcing proprietary copyright in the P2P arena.

A. Digital Rights Management

Copyright industries have begun to deploy Digital Rights Management technology ("DRM") to detect and block unauthorized uses. Digital watermarks, fingerprints, and Internet spiders can help detect individual file swappers. Better yet, from the copyright industry perspective, encryption can prevent unauthorized access and copying. In theory, technological access and copy controls could vastly reduce enforcement costs. If consumers are technologically unable to make and distribute unlicensed copies, copyright holders need not bring copyright infringement suits to control their content in digital networks.

But skilled programmers can readily design software and other devices to circumvent such measures. In fact, computer security experts maintain that no technological barrier can ultimately prevail over determined hackers who have physical access to the encrypted items,

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14. *See* Press Release, Senator Norm Coleman, Coleman Seeks Information on File-Sharing Crackdown, Industry Impact of Peer-To-Peer Networks and New Industry Business Models (Sept. 16, 2003), *available at* http://www.senate.gov/~coleman/newsroom/pressapp/record.cfm?id=211668. *See also* Frank Ahrens, *Use of Act Subpoenas to Name File Sharers Criticized*, WASH. POST, Sept. 30, 2003 at E5; Frederic J. Frommer, *Senator Seeks Lower Downloading Penalties*, Associated Press Newswires, Oct. 2, 2003, *available at* http://www.guardian.co.uk/uslatest/story/0,1282,-3220188,00.html (reporting Senator Norm Coleman's statement that he intends to introduce legislation to reduce legal penalties for people who download copyrighted music off the Internet); Consumers, Schools, and Libraries Digital Rights Management Awareness Act of 2003, S. 1621, 108th Cong. (2003) (proposing repeal of a Digital Millennium Copyright Act provision that permits copyright owners to obtain an ISP subscriber's identifying information without a court order). As of this writing, the RIAA publicly responded to the backlash only by insisting that it has no choice but to play the "heavy," and then by providing advance notice to the 204 individuals it has targeted in its second round of lawsuits against alleged large-scale file swappers. *See* Schwartz, *supra* note 2, at B1.

including, in this instance, mass-marketed CDs and DVDs, personal computers, consumer electronic devices, and software embedded in those items.[15] And once someone, anywhere in the world, puts circumvention software or decrypted content on a computer linked to a P2P network, that item will rapidly spread to others on the network. As a Microsoft computer security team has concluded, "any content protection system will leak popular or interesting content into the darknet [i.e., the Internet], because some fraction of users — possibly experts — will overcome any copy prevention mechanism or because the object will enter the darknet before copy protection occurs."[16] Accordingly, the copyright industries accurately contend, if technological controls are to have any chance of being broadly effective, the law must prohibit the dissemination of software and other devices capable of skirting DRM technology.

Copyright industry efforts to obtain legal backing for DRM have thus far met a receptive ear in Congress. In 1998, Congress enacted the Digital Millennium Copyright Act ("DMCA"), which, among other things, protects technological copying and access controls against circumvention.[17] While some legal protection for DRM might be warranted, the DMCA lays the groundwork for extensive copyright holder control over digital content, far more than would be enjoyed under traditional copyright law. Armed with DRM technology and the right to prevent circumvention, content providers could require payment each time a user reads, views, or listens to a work online. In fact, they could often do so even with respect to works that are no longer protected by copyright.[18] As a leading commentator aptly puts it, the

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15. *See, e.g.*, Peter Biddle et al., The Darknet and the Future of Content Distribution (2002), *available at* http://crypto.stanford.edu/DRM2002/darknet5.doc (last visited Oct. 22, 2003) (paper presented by Microsoft computer security experts at 2002 ACM Workshop on Digital Rights Management, concluding that DRM, watermarking, and other technological copy control schemes are "doomed to failure"). Leading computer security expert and Princeton University professor, Edward W. Felten, has reached a similar conclusion: "The consensus among independent experts, including me, is that strong copy protection (protection that a moderately skilled person expending moderate effort cannot break) simply is not possible on general-purpose computers such as PCs. A strong copy protection scheme for PCs is as implausible to many experts as a perpetual motion machine." *Competition, Innovation, and Public Policy in the Digital Age: Is the Marketplace Working to Protect Digital Creative Works?: Hearing Before the Senate Comm. on the Judiciary,* 107th Cong. *(*Mar. 11, 2002) (statement by Edward W. Felten, Associate Professor of Computer Science at Princeton University and Director of the Secure Internet Programming Laboratory), *available at* http://www.felten.com/felten_ testimony.pdf.

16. Biddle et al., *supra* note 15 (first assuming and then, after surveying available control technologies, concluding that DRM circumvention cannot be technologically prevented).

17. 17 U.S.C. § 1201 (2000). Technically, copyright holders can prevent the circumvention only of access controls, not copying controls. But they can prevent the provision of any technology, product, service, device, or component that is primarily designed to enable the circumvention of either type of control. As a result, most users will be unable to obtain the tools they need to circumvent, even if the law does not forbid the circumvention itself.

18. *See* David Nimmer, *How Much Solicitude for Fair Use Is There in the Anti-Circumvention Provision of the Digital Millennium Copyright Act?*, *in* THE

DMCA lays the legal foundation for a regime of "universal pay-per-use and *de facto* perpetual protection."[19]

B. Shifting Enforcement Costs to Third Parties

The copyright industries have invoked both the DMCA and traditional copyright law to hold new media enterprises liable for individuals' P2P file swapping and other personal uses of copyright-protected expression. Merely fortifying DRM controls with a prohibition against individuals' circumvention would require suing individual circumventers. It would thus have left copyright holders facing much the same enforcement costs and public relations risks as suing individual infringers under traditional copyright law. But the DMCA goes a significant step further: it targets suppliers, outlawing the provision of any service or manufacture and distribution of any device that is "primarily designed" to enable circumvention.[20] Copyright holders have used those provisions to sue online distributors of computer programs that enable users to circumvent the copy and access protection on streaming music and DVDs.[21]

The industries have also (thus far, not entirely successfully) pushed the bounds of traditional copyright law, including the doctrines of vicarious and contributory liability, to shut down P2P networks and other new media designed to facilitate personal uses of copyright-protected works. Record labels and, more recently, movie studios have sued providers of P2P network services (like the original Napster) and P2P file-trading software (like Morpheus) for supporting users' allegedly infringing copying and distribution of copyright-protected works.[22] They sued MP3.com for enabling subscribers to access songs on subscriber-owned CDs via the Internet.[23] And they sued ReplayTV for selling a digital video recorder that enables con-

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COMMODIFICATION OF INFORMATION 193, 211–15 (Niva Elkin-Koren & Neil Weinstock Netanel, eds. 2002) (presenting case studies showing how otherwise non-infringing activity would be subject to content provider control under the Act).

19. *Id*. at 220.

20. 17 U.S.C. § 1201(a)(2), (b) (2000).

21. *See* RealNetworks, Inc. v. Streambox, Inc., No. C99-2070P, 2000 U.S. Dist. LEXIS 1889 (W.D. Wash. Jan. 18, 2000) (music streaming); Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001) (DVDs).

22. Two appellate court decisions have affirmed the issuance of preliminary injunctions against providers of P2P file sharing services or suppliers of P2P file sharing software. *See* A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001); *In re* Aimster Copyright Litig., 334 F.3d 643 (7th Cir. 2003). In contrast, in a case currently on appeal before the Ninth Circuit, a California district court held that suppliers of KaZaA and Grokster software were not liable for contributory copyright infringement. *See* Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 243 F. Supp. 2d 1073 (C.D. Cal. 2003).

23. UMG Recordings, Inc. v. MP3.com, Inc., 92 F. Supp. 2d 349 (S.D.N.Y. 2000).

sumers to skip commercials and share copies of TV programs with others.[24]

The copyright industry's insistence on control has brought it into conflict with telecommunications and consumer electronics companies as well as with Internet users and new media entrepreneurs. The copyright and telecommunications industries negotiated a partial solution to their conflict. In effect, their agreement deputizes Internet Service Providers ("ISPs") to enforce copyrights against ISP subscribers. The ISP safe harbor provisions of the DMCA,[25] which were drafted by copyright and telecommunications industry representatives, immunize an ISP from liability for infringing material that an ISP subscriber places on an ISP server so long as the ISP removes that material upon receiving proper notice from the copyright holder.[26] A parallel provision immunizes Internet search engines from liability for linking to infringing material if the search engine removes the link upon receiving the copyright holder notice.[27]

As might be expected, the safe harbor provisions have led to the removal from the Internet of considerable material, both infringing and non-infringing. Copyright holders have not been shy about sending out DMCA "take down" notices,[28] and in numerous instances, risk-averse ISPs and search engines have removed subscriber content in the face of dubious copyright infringement claims.[29] As Google feebly explained after cutting links to sites of a Church of Scientology

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24. Paramount Pictures Corp. v. ReplayTV, Inc., No. CV 01-9358, 2002 WL 1301268 (C.D. Cal. Apr. 26, 2002).

25. 17 U.S.C. § 512 (2000).

26. *See id*. § 512(c).

27. *See id*. § 512(d).

28. For example, the Motion Picture Association of America ("MPAA") states that it has sent out over 100,000 such notices since 2001. *See, e.g.*, *MPAA Snooping for Spies*, Wired News, *at* http://www.wired.com/news/politics/0,1283,54024,00.html (July 22, 2002). *See also* Motion for Leave to File and Brief *Amicus Curiae* of United States Internet Service Provider Association in Support of Respondent at 2, Recording Indus. Ass'n of Am. v. Verizon Internet Servs., Inc., No. 1:02MS00323, (D.D.C. 2002), *available at* http://www.eff.org/Cases/RIAA_v_Verizon/20020911_US_ISPA_amicus.pdf (noting that "[e]very day, members of US ISPA collectively receive dozens, if not hundreds, of notifications under § 512(c) alleging online copyright infringement").

29. *See*, *e.g.*, *MPAA Snooping for Spies*, *supra* note 28 (describing the lawsuit that the proprietor of Internetmovies.com filed against the MPAA after the MPAA notified his ISP, apparently incorrectly, that he engaged in illegal file swapping and the ISP disconnected his Internet service); Declan McCullagh, *Google Yanks Anti-Church Sites*, Wired News, *at* http://www.wired.com/news/politics/0,1283,51233,00.html (Mar. 21, 2002). A 1999 report on the first year of experience under the DMCA notice and take down provisions, co-authored by counsel for Adobe Systems and Yahoo! and presented to the World Intellectual Property Organization, found that (1) ISPs generally comply with take down notices within 24 hours, (2) most of the websites that are subject to the notices are noncommercial, and (3) some 5% of take down notices are sham claims used to silence or harrass critics. *See* Batur Oktay & Greg Wrenn, *A Look Back at the Notice-Takedown Provisions of the U.S. Digital Millennium Copyright Act One Year After Enactment* 12, 17, WIPO Doc. OSP/LIA/2 (Dec. 1, 1999), *available at* http://www.wipo.org/eng/meetings/1999/osp/pdf/osp_lia2.pdf.

critic in the face of a DMCA take down notice from the Church, "Had we not removed these URLs, we would be subject to a claim for copyright infringement, regardless of its merits."[30]

Yet even that generally acquiescent ISP (and search engine) response has failed to satisfy the copyright industry. A principal reason is that the DMCA safe harbor provisions are largely inapplicable to current P2P technology. Current technology does not require file swappers to upload content to websites that reside on ISP servers and to which others are directed by search engine links. Rather, P2P software, like Gnutella, Morpheus, and, for that matter, the original Napster, enable Internet users to find and exchange files located on other users' hard drives. Users do transmit files *through* ISP networks. But the DMCA provides ISPs with complete immunity from liability for monetary damages and sharply limits the availability of injunctive relief where the ISP acts merely as a conduit for user transmissions.[31]

The copyright industries have begun aggressively to pursue a number of strategies to sidestep those limitations. In so doing, they have unhinged the delicate working compromise that had characterized copyright and telecommunications industry relations since the enactment of the DMCA.[32] A group of record labels recently sued the four companies that control the Internet network backbone, seeking an order enjoining the companies from allowing their routing systems to be used to access a China-based website for downloading unlicensed music recordings.[33] The recording industry has also sought to minimize its own litigation and discovery costs by employing a per-

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30. McCullagh, *supra* note 29 (quoting the letter from Google to the church critic). This generally acquiescent ISP and search engine response is quite predictable. As scholars have noted, ISPs and their subscribers have asymmetric incentives. ISPs do not fully share the benefits its subscribers derive from placing material, whether infringing or non-infringing, on the network. As a result, imposing liability on ISPs for subscribers' infringing material induces ISPs to overdeter, purging any material that a copyright holder claims is infringing. *See* Assaf Hamdani, *Who's Liable for Cyberwrongs?*, 87 CORNELL L. REV. 901 (2002); Neal K. Katyal, *Criminal Law in Cyberspace*, 149 U. PA. L. REV. 1003, 1096–110 (2001) (discussing the problem of asymmetric incentives in imposing liability on ISPs for their subscribers' criminal conduct generally).

31. *See* 17 U.S.C. § 512(a) (2003). In order to benefit from the safe harbor, the conduit provider must accommodate standard DRM measures and must implement a policy of terminating the accounts of repeat infringers in "appropriate circumstances," but it is not required to seek to identify those infringers. *Id*. § 512(i)(1). So long as the ISP does so, the copyright holder's sole recourse against an ISP conduit provider is to seek an injunction requiring the ISP to terminate the current account of the infringing subscriber or, where the infringing material resides on an online location outside the United States, to block access to that site. *Id*. § 512(j)(1)(B).

32. *See* John Borland, *ISPs Gird for Copyright Fights*, CNET News.com, *at* http://news.com.com/2100-1023-957023.html (Sept. 9, 2002).

33. Arista Records, Inc., v. AT&T Broadband Corp., No. 02 CV 6554 (KMW) (S.D.N.Y., filed Aug. 16, 2002). The record companies withdrew their complaint after the offending web site mysteriously went offline. *See* Anick Jesdanun, *Record Companies Drop Lawsuit Against ISPs*, Associated Press Newswires, Aug. 22, 2002, *available at* http://www.grammy.com/news/industry/0822riaa.html.

functory, *ex parte* procedure, available under the DMCA, whereby court clerks issue subpoenas compelling ISPs to identify subscribers whom the industry alleges are trading music files.[34]

In their efforts to shift enforcement costs onto third parties, the copyright industries have also sought to elide DMCA limitations on the third-party liability of suppliers of devices that can be used to circumvent DRM controls. The DMCA device provisions forbid only devices "primarily designed" to enable circumvention. As the Act expressly provides, it does not require general purpose consumer electronics products, like personal computers, televisions, and DVD players, to incorporate DRM-compliant technology that would prevent consumers from copying protected content.[35]

But copyright industries are now pressing consumer electronics manufacturers to make their products DRM-compliant.[36] Consumer electronics manufacturers have resisted copyright industry efforts to adopt uniform DRM technical standards. Although the manufacturers espouse a commitment to protecting intellectual property, they oppose the degradation of device capability, drag on innovation, and risk of government official interference that technology mandates would entail.[37] Consumer electronics manufacturers also benefit from the increased sales that P2P file sharing engenders, and have even promoted their products as tools to "rip, mix, and burn."[38]

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34. In January 2003, a D.C. district court granted the RIAA's motion to enforce its subpoena compelling Verizon Communications to reveal a subscriber's information. *See In re* Verizon Internet Servs., Inc., 65 U.S.P.Q. 2d 1574 (D.D.C. 2003). Verizon has appealed the ruling. At issue is whether the RIAA may obtain a subpoena under Section 512(h) of the DMCA to require Verizon to identify its subscribers, or must rather seek to discover that information by filing John Doe lawsuits. *See* Declan McCullagh, *Music Body Presses Antipiracy Case*, CNET News.com, *at* http://news.com.com/2100-1023-954658.html *(*Aug. 21, 2002) (describing RIAA request and Verizon opposition). Pacific Bell Internet Services, operated by telecommunications giant SBC Communications, and St. Louis-based cable television and ISP company Charter Communications have also sued the RIAA to contest subpoenas that would compel the ISPs to deliver subscribers' identifying information. *See* Stefanie Olsen, *Charter Files Suit Against RIAA*, CNET News.com, *at* http://news.com.com/2100-1027-5087304.html (Oct. 6, 2003); Matthew Broersma, *ISP Sues Record Industry Over Subpoenas***,** CNET News.com, *at* http://news.com.com/2100-1027-5058107.html (July 31, 2003).

35. *See* 17 U.S.C. § 1201(c)(3) (2003). There is an exception. The DMCA does require that analog video cassette recorders incorporate specified DRM-compliant technology. *See id*. § 1201(k). The Act also provides, somewhat cryptically, that an ISP may benefit from the safe harbor from contributory and vicarious liability only if it "accommodates and does not interfere with standard technical measures," i.e., DRM. *Id*. § 512(i)(1)(B).

36. *See* Drew Clark & Bara Vaida, *Copyright Issues: Digital Divide*, nationaljournal.com, *at* http://nationaljournal.com/about/njweekly/stories/2002/0906nj1.htm (Sept. 6, 2002) (detailing the ongoing struggle between Hollywood and Silicon Valley).

37. *See id*.

38. That particular advertising slogan was Apple Computer's. *See* John Naughton, *Hollywood at War with the Internet*, Times Online (London), *at* http://www.timesonline.co.uk/article/0,,7-365250,00.html (July 26, 2002); *see also* Brad King, *Are Ads a Gateway to Illegal CDs?*, Wired News, *at* http://www.wired.com/news/mp3/0,1285,51719,00.html (Apr. 11, 2002) (describing Apple and Gateway ads). In a dramatic turnabout, Apple is now

The copyright and consumer electronics industries largely remain at loggerheads.[39] Copyright industry-backed legislation would have required consumer electronics equipment, including personal computers and television sets, to meet DRM control standards.[40] That bill was taken off the table in the face of staunch consumer electronics and information technology opposition. But following a copyright industry initiative, the Federal Communications Commission recently announced its intention to require adoption of the "broadcast flag," a DRM control standard for digital television broadcasts.[41] From the other side, legislation backed by the consumer electronics and telecommunication industries would prohibit such FCC technology mandates, would require copyright holders to obtain a court order before discovering the names of ISP subscribers alleged to have infringed copyright, and would expressly permit consumers to make certain personal copies and to bypass copy control technology where necessary to do so.[42]

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a leading seller of licensed online music, through its iTunes service, although Apple may be driven more by a desire to use online music as a loss leader to drive sales of its computers and iPod music players than to enter the music business for its own sake.

39. In January 2003, a group of hardware and software manufacturers, including Microsoft, Intel, Dell, IBM, Apple, and Motorola, reached a much touted agreement with the RIAA whereby the RIAA would refrain from seeking government-mandated DRM-compliant technology and the parties would work together to develop and implement mutally acceptable technical measures that protect content. *See* Bill Holland, *Trade Groups Unite On Copyright Protection*, BILLBOARD, Jan. 25, 2003, at 3 (reporting RIAA announcement of the "landmark cross-industry agreement"); *see also* Katharine Mieszkowski, *Hollywood and Silicon Valley: Together at Last?*, Salon.com, *at* http://www.salon.com/tech/feature/2003/01/15/hollywood_tech/index.html (Jan. 15, 2003) (interviewing Electronic Freedom Foundation attorney Fred von Lohmann, who downplayed the agreement's importance). Differences of interpretation among the parties surfaced soon after the agreement was announced, and it remains to be seen what effect the agreement will actually have. In addition, neither the Motion Picture Association of America nor the Consumer Electronics Association joined the agreement.

40. The so-called Consumer Broadband and Digital Television Act would mandate technical standards for DRM controls absent agreement between content providers and consumer electronics companies. *See* John Borland, *Antipiracy Bill Finally Sees Senate*, CNET News.com, *at* http://news.com.com/2100-1023-866337.html (Mar. 21, 2002).

41. *See* Jonathan Krim, *FCC Rule Would Control Digital TV Copies*, WASH. POST, Oct. 16, 2003, at E1. *See also* Digital Broadcast Copy Protection, Notice of Proposed Rulemaking, FCC 02–231 (FCC Aug. 8, 2002). The Commission has also announced that it intends to adopt a DRM standard for digital cable television receivers, set top boxes, and digital recorders. *See* Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment, Second Report and Order and Second Further Notice of Proposed Rulemaking, CS Docket No. 97-80 (FCC Oct. 9, 2003). Consumer electronics companies dropped their opposition to the regulations after it became apparent that the regulations would require neither strong encryption nor specific government mandated technology.

42. *See* Consumers, Schools, and Libraries Digital Rights Management Awareness Act of 2003, S. 1621, 108th Cong. (2003); Benefit Authors Without Limiting Advancement or Net Consumer Expectations (BALANCE) Act of 2003, H.R. 1066, 108th Cong. (2003) (BALANCE replaces the Digital Choice and Freedom Act of 2002, H.R. 5522, 107th Cong. (2002)); *see also* Heather Fleming Phillips, *New Bills Aim to Protect Consumers' Use of*

As of this writing, where Congress will go with these competing initiatives is anyone's guess. The consumer electronics and technology sector is several times larger than the entertainment sector.[43] It remains to be seen whether Hollywood's special cachet will be sufficient to overcome that disparity in the legislative arena.[44]

Copyright industries have also threatened to hold employers liable for employees' P2P file swapping in the workplace. The Motion Picture Association of America, Recording Industry Association of America, National Music Publishers' Association and Songwriters Guild have sent a letter to 1,000 large corporations expressing alarm that "piracy of music, movies, and other creative works is taking place at a surprisingly large number of companies."[45] The letter then states that such use of a company's digital network subjects the company to "significant legal liability under the Federal copyright law" and ominously warns that the entertainment industries plan to "aggressively enforce [their] rights in cases of copyright infringement."[46] The copyright industry missive follows a similar letter sent to more than 2,300 university presidents demanding that they prevent students' P2P file swapping.[47]

There is nothing inherently unseemly about enlisting third parties to enforce copyright by making them liable for others' infringements.[48] Indeed, imposing third-party liability can be an efficient mechanism for enforcing legal rules in many areas, including copy-

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Digital Media, SiliconValley.Com, *at* http://www.siliconvalley.com/mld/siliconvalley/4193841.htm (Oct. 1, 2002).

43. *See* Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63 (2003). *See also* Naughton, *supra* note 38.

44. In addition, consumer electronics is largely a low-margin, commoditized business, while copyright industries earn large rents. As a result, copyright industries may have a relatively greater incentive and ability to lobby for legislation that protects and extends copyright industry rents.

45. Letter from Motion Picture Association of America et al. to Fortune 1000 Companies (Oct. 25, 2002), *available at* http://www.riaa.com/pdf/Corporate%20Outreach.pdf; *see also* Anna Wilde Mathews, *Movie, Music Firms Protect Rights*, WALL ST. J., Oct. 24, 2002, at B2 (quoting from the copyright industry letter). In case the companies did not get the message, in February 2003, the RIAA and MPAA sent out a six-page brochure to Fortune 1000 corporations detailing the possible legal exposure, including possible criminal sanctions, of companies — and company directors — whose employees engage in unlicensed file swapping. *See Hollywood Targets Corporations to Fight Illegal Downloading*, SiliconValley.com *at* http://www.siliconvalley.com/mld/siliconvalley/5178283.htm (Feb. 13, 2003).

46. Letter from Motion Picture Association of America et al., *supra* note 45, at 1.

47. *See* John Borland, *Hollywood Chases Down Campus Pirates*, CNET News.com, *at* http://news.com.com/2100-1023-961637.html (Oct. 10, 2002). The Motion Picture Association of America has also sent cease-and-desist letters to university administrators demanding that they take action against student P2P file swapping. *Id*. Copyright holders have also sued universities for allowing their students to swap files. *See* Hamdani, *supra* note 30, at 905 n.12 (discussing Metallica lawsuit against Yale University).

48. For an illuminating discussion of the possible advantages and disadvantages of imposing third-party liability in the Internet context, see Hamdani, *supra* note 30; Katyal, *supra* note 30.

right.[49] But the copyright industries' efforts to do so in the P2P context would impose significant externalities, both on socially valuable uses of existing expression and on the development and provision of welfare-enhancing goods and services. On some fronts, copyright industry efforts lead to overdeterrence (e.g., ISP and search engine removal of material that is noninfringing or potentially valuable speech even if infringing). On other fronts, staunch third party resistance suggests that copyright industry efforts to enforce proprietary copyrights on P2P networks will ultimately be for naught. In either event, given its substantial innovation-impeding and welfare-reducing costs, even successful enforcement might not be worth the candle.

C. Taxpayer-Funded Enforcement

The copyright industry has also lobbied aggressively for federal criminal prosecution of P2P file swappers and those who assist them.[50] The industry-supported No Electronic Theft Act ("NETA"), enacted in 1997, provides that large-scale file trading, even if undertaken without any intent to profit monetarily, can constitute a crime.[51] Likewise, the DMCA provides for criminal penalties for both individual acts of willful circumvention and the dissemination of circumvention technology.[52] The Department of Justice has been sparing in bringing indictments under those Acts, but at the urging of entertainment companies and their congressional supporters, Department officials have announced plans to prosecute more aggressively those engaged in P2P file-swapping-related activity.[53] Pending legislation

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49. *See* Hamdani, *supra* note 30; Katyal, *supra* note 30; Douglas Lichtman & William Landes, *Indirect Liability for Copyright Infringement: An Economic Perspective*, 16 HARV. J.L. & TECH. 395 (2003); *see also* Reinier Kraakman, *Third Party Liability, in* 3 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW (Peter Newman ed., 1998).

50. *See generally* Note, *The Criminalization of Copyright Infringement in the Digital Era*, 112 HARV. L. REV. 1705 (1999).

51. The No Electronic Theft Act changed the definition of "financial gain," a prerequisite for criminal penalties for willful copyright infringement, from "for profit" to the "receipt, or expectation of receipt, of anything of value, including the receipt of other copyrighted works." No Electronic Theft Act, Pub. L. No. 105-147, 111 Stat. 2678 (1997) (codified in 17 U.S.C. § 101)

52. The DMCA describes criminal violation in the same terms as the NETA: "willfully and for purposes of commercial advantage or private financial gain." 17 U.S.C. § 1204(a) (2003). Thus file trading could in and of itself constitute "private financial gain" under the DMCA, as it can under NETA. *Cf.* Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 YALE L.J. 1575, 1640 n.309 (2002) (stating that "[a] circumventor would seem to be in jeopardy of criminal penalties even if the circumvention is trivial," but recognizing that this may depend on whether courts interpret "commercial purpose" and "financial gain" to exclude personal uses).

53. *See* Mathews, *supra* note 45; Declan McCullagh, *DOJ to Swappers: Law's Not on Your Side*, CNET News.com, *at* http://news.com.com/2100-1023-954591.html (Aug. 20, 2002) (reporting statement by Department of Justice attorney that the Department is prepared to begin prosecuting individuals who engage in P2P file swapping, following Congressional and industry lobbying for such prosecutions).

would also require the FBI and DOJ to allocate some of their scarce law enforcement resources to warning the public that committing "acts of copyright infringement" or other "theft of intellectual property" through the Internet may result in criminal prosecution.[54]

Ultimately, P2P file swapping is unlikely to be contained without draconian criminal prosecutions of individual file swappers. P2P networks make possible the worldwide, decentralized, viral distribution not only of cultural expression but also of information and software tools that enable users to engage in P2P file sharing and to circumvent DRM controls. As noted above, once someone, anywhere in the world, puts cultural expression or circumvention software on a computer linked to a P2P network, those items may be made available to all others on the network. Moreover, public opinion surveys indicate that most people think there is little, if anything, morally wrong with P2P file sharing.[55] In the face of the ease of P2P dissemination and the permissive social norm, even third-party liability and implementation of DRM-compliant technology might not be sufficient to force the P2P genie back in the bottle. Accordingly, the copyright industries increasingly view the aggressive policing of individuals' computer hard drives and criminal prosecution of individuals engaging in P2P file swapping as essential tools for deterring such conduct.

D. Sabotage

Copyright industries have tentatively begun to use technological self-help, including placing faulty files on P2P networks, to make P2P file sharing less desirable.[56] Conducting such sabotage on a massive scale could be a public relations nightmare, and in any event might not succeed against P2P network countermeasures.[57] Nevertheless, the industries are laying the foundations for the more extensive use of aggressive self-help. Among other forays, they have backed legislation that would immunize copyright holders from liability to ISPs and

54. Piracy Deterrence and Education Act of 2003, H.R. 2517, 108th Cong. (2003).

55. *See* Strahilevitz, *supra* note 13.

56. *See* Paul Bond, *Mercenaries in P2P Tech War: Hired Firms Using "Spoofs" to Foil Sharers*, HOLLYWOOD REPORTER, Oct. 22, 2003 (reporting copyright holders' hiring of firms to flood P2P networks with "decoys"); James Maguire, *Hitting P2P Users Where It Hurts*, Wired News, *at* http://www.wired.com/news/digiwood/0,1412,57112,00.html (Jan. 12, 2003) (describing industry "spoofing"); *cf.* Strahilevitz, *supra* note 13 (suggesting that copyright industries might effectively use technological self-help, including swamping P2P networks with faulty files, to erode the trust and sharing norm that undergirds P2P networks).

57. For example, in response to industry uploading of faulty music files, the current version of KaZaA includes a feature for users to rate particular files. *See also* Will Knight, *'Rewiring' File-Sharing Networks May Stop Attacks*, NewScientist.com, *at* http://www.newscientist.com/news/news.jsp?id=ns99993037 (Nov. 11, 2002) (reporting Stanford researchers' model for redesigning P2P networks to make them less vulnerable to hacker and copyright industry attacks).

their subscribers for "disabling, interfering with, blocking, diverting, or otherwise impairing" P2P file sharing networks.[58]

E. The Result: Logjam

In short, the copyright industries' antidote for peer-to-peer copying and distribution is to attempt to assert hermetic control over every access and use of digital content, backed by DRM technology, ISP and other third-party policing, compliant consumer electronics, taxpayer-financed criminal prosecutions, and aggressive technological self-help. With the possible exception of sabotaging P2P networks, there is nothing inherently reprehensible about using these tools to reduce enforcement costs. And although, as some critics have charged, the industries might be engaged in a socially inefficient, last ditch effort to stave off obsolescence in an age of P2P creation and distribution, the industries' aims might well be socially beneficial. The industries might simply understand that uncontrolled access to and uses of digital content could well undermine any incentive for the industry to distribute works in digital format or event to invest in new expression.

But whatever their motives and the desirability of their aims, copyright industry efforts seem increasingly scattershot. At times they lead to the suppression of valuable, noninfringing expression and at others they fail to suppress anything.

In the meantime, moreover, the copyright industries have not offered, and appear to be unwilling or unable to offer, a robust alternative to P2P file sharing. In rearguard response to the peer-to-peer networks that they are making every effort to quash, copyright industries have recently licensed online distribution ventures through which consumers can buy content for listening, viewing, reading, or limited download. These services are a significant improvement over the industries' prior resistance to making any of their content available online. But given the limitations imposed by the copyright industries and the thicket of rights clearances that entangle even industry-backed

58. To Amend Title 17, United States Code, to Limit the Liability of Copyright Owners for Protecting Their Works on Peer-to-Peer Networks, H.R. 5211, 107th Cong. § 1(a) (2002); *see also* Declan McCullagh, *Hollywood Hacking Bill Hits House*, CNET News.com, *at* http://www.news.com.com.2100-1023-946316.html?tag=rn (July 25, 2002). After the bill was introduced, its sponsor, Representative Howard Berman, redrafted it in the face of severe criticism. In February 2003, Berman announced that he might abandon the proposal in light of his Hollywood constituents' opposition to new provisions, included in an effort to mollify the bill's critics, that would impose liabilities on copyright holders who "go too far in attacking pirates." Jon Healey, *Rep. Berman May Not Revive Internet Piracy Bill*, L.A. TIMES, Feb. 21, 2003, § 3, at 3.

ventures, these ventures provide only a fraction of the content and consumer utility that are available for free via P2P.[59]

The copyright industries' war on unauthorized P2P file sharing and their unwillingness — or inability — to unleash content for untethered online distribution thus come at a price. They threaten to quell the Internet's promise of disseminating cultural works at nominal cost. And they would stifle the Internet's potential for empowering users to select, share, compile, and remix those works using a broad array of network connected devices.

At bottom, the industry approach, whether well-founded in principle or not, has created a logjam that shows no signs of abating in the near future. Nor can anyone predict what will ensue when and if the logjam breaks. The affected parties thus ought to welcome, at least grudgingly, a regime like the NUL that could enable P2P file sharing to proceed apace while providing compensation for copyright holders. Each has much to lose from the status quo, or risks losing much if the current, highly volatile equilibrium should upend to that party's detriment. In that light, each party has something to gain from the NUL.

For their part, the copyright industries face the daunting prospect that their efforts to enlist third parties to enforce copyright holder control will come to naught and that the prosecution of individual P2P file swappers will prove politically unpalatable.[60] Moreover, even if the industries win their battle in the United States, they face a serious risk of being unable to halt the operation of P2P file swapping sites from countries with laxer laws regarding copyright in general, or contributory infringement in particular.[61] If the copyright industries fail to stem the P2P tide, they could well face dire consequences. Not only would unlicensed copying, distribution, and modification of industry

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59. *See* Amy Harmon, *What Price Music?: How Your Favorite Song Went on 99-Cent Special*, N.Y. TIMES, Oct. 12, 2003, at B1 (describing tension between record labels "that want to restrict what consumers can do with the music they buy and the new on-line retailers, which argue that people won't use their services if they can't use it freely"); Holson, *supra* note 3 (reporting significant restrictions that Movielink, a joint venture of five major movie studios to rent downloadable films via the Internet, imposes on customers, including that customers cannot burn movies onto discs, must watch the movies on a computer screen, and have only 24 hours to finish the film once they begin watching); Jon Healey, *Music Site Will Burn Profit to Lure Subscribers*, L.A. TIMES, Feb. 13, 2003, § 3, at 1 (reporting that major record labels insist that the online services use restrictive music formats, which prevent users from transferring files from computers to MP3 players or other devices).

60. *See, e.g.*, Lee Gomes, *Software Makers Turn Small-Time Pirates Into Political Prisoners*, WALL ST. J., Nov. 11, 2002, at B1 (expressing outrage at the copyright-industry-induced criminalization of file swapping).

61. In the Netherlands, for example, an appellate court has held that KaZaA is not contributorily liable for its users' file swapping. *See* Buma & Stemra v. Kazaa (Amsterdam Ct. App. 2002), *available at* http://www.eff.org/IP/P2P/BUMA_v_Kazaa/20020328_kazaa_appeal_judgment.html (unofficial English translation). Unlicensed P2P file swapping is no less rampant outside the U.S. than it is in this country. *See* Mark Landler, *U.S. Is Only the Tip of Pirated Music Iceberg*, N.Y. TIMES, Sept. 26, 2003, at A1.

repertoire continue to run rampant, but the industries would be left without any compensation for those uses.

Authors and artists generally, though far from universally, stand behind the copyright industry in its efforts to stifle unlicensed P2P file sharing.[62] Many also object to uncontrolled remixes, mashups,[63] and other modifications of their creative product. But under present circumstances, authors and artists should settle for NUL compensation even if it means relinquishing creative control over noncommercial uses. In fact, as I will discuss below, a thriving and paying P2P regime might enable more authors and artists to receive a modest income from the use of their work than under the current oligopsonistic, copyright-industry-dominated system.

For their part, suppliers of goods and services subject to the NUL would, by definition, stand to benefit from increased sales due to P2P file swapping (since the NUL would be imposed only on goods and services the value of which is substantially enhanced by P2P file swapping). They would also avoid the costs of policing and of implementing standardized DRM-compliant technology. They could instead invest in improvements to P2P file sharing technologies that enhance consumer welfare.

Granted, suppliers of consumer electronics and Internet access have in the past strenuously opposed proposals to impose private copying levies on them.[64] But prior proposals have sought to tax a limited set or single sector of suppliers. The NUL, in contrast, would be imposed on all consumer goods and services the value of which is substantially enhanced by P2P file swapping. It would thus avoid putting suppliers of particular P2P related goods and services at a competitive disadvantage.

Finally, the NUL would enable consumers to enjoy the privilege of unconstrained noncommercial uses, free from the continued impediments of DRM control and threatened legal action. To be certain, consumers would not warmly embrace the additional costs for P2P related goods and services that suppliers would likely pass on. But the

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62. Some, like Janis Ian, argue that P2P file swapping benefits many artists. *See* Janis Ian, *The Internet Debacle — An Alternate View*, PERFORMING SONGWRITER MAG., May 2002, *available at* http://www.janisian.com/article-internet_debacle.html. Others, like Metallica, virulently oppose P2P file swapping. *See* Hamdani, *supra* note 30, at 905 n.12 (referring to Metallica's suit against Napster).

63. "Mashups" are songs created by digitally synchronizing instrumental tracks with vocal tracks from two or more existing songs. Mashup artists often choose source songs that are wildly disparate, adding to the creative effect.

64. *See Intel, Others to Oppose Copyright Tax*, SiliconValley.com, *at* http://www.siliconvalley.com/mld/siliconvalley/news/editorial/5109624.htm (Feb. 5, 2003) (reporting that manufacturers of personal computers and computer components sharply criticized a German patent office recommendation that personal computer makers pay copyright holders twelve euros ($13.06) for every system sold to compensate for the unauthorized copying of movies and other digital programming).

proper point of comparison for consumers is not necessarily an unhindered, costless P2P file sharing universe. Despite the technological vulnerability of DRM controls, P2P file sharers face the real prospect that copyright industries will cast aside public relations costs, bare their claws, and inflict considerable damage on unlicensed P2P file sharing networks. Especially before the recent spate of RIAA lawsuits against individual file swappers, the status quo looked quite rosy for millions of KaZaA users. But concerted copyright industry sabotage, lawsuits against P2P network suppliers, well-publicized civil damage awards against and criminal prosecutions of individual file swappers, or even widespread consumer electronics industry adoption of DRM compliant hardware might render KaZaA and its counterparts unavailable or unappealing for most people.[65]

III. PROPRIETARIAN COPYRIGHT: RHETORIC AND FUNCTION

A. Rhetoric

> "WE DON'T WANT TO SHUT DOWN INNOVATION. WE JUST WANT TO PROTECT PRIVATE PROPERTY FROM BEING PILLAGED."[66] JACK VALENTI, PRESIDENT, MOTION PICTURE ASSOCIATION OF AMERICA.

> "IT IS SIMPLY NOT FAIR TO TAKE SOMEONE ELSE'S MUSIC AND PUT IT ONLINE FOR FREE DISTRIBUTION. NO ONE WANTS THEIR PROPERTY TAKEN FROM THEM AND DISTRIBUTED WITHOUT THEIR PERMISSION."[67] HILARY ROSEN, PRESIDENT, RECORDING INDUSTRY ASSOCIATION OF AMERICA.

The copyright industries regularly employ the rhetoric of private property to support their lobbying efforts and litigation. But like copying levies and compulsory licenses (as well as many other facets of copyright law), the NUL reflects an important insight: copyright law does not and need not make creative expression the copyright holder's "property," certainly not in Blackstone's proverbial sense of "sole and despotic dominion . . . in total exclusion of the right of any other indi-

65. According to one recent survey, 68% of people between the ages of 12 and 22 who have downloaded music without payment from P2P file sharing networks said they said they would stop doing so if there was a "serious risk" of being fined or sued. *See* Lohr, *supra* note 13 (citing July 2003 survey by Forrester Research).

66. Edmund Sanders & Jube Shiver Jr., *Digital TV Copyright Concerns Tentatively Resolved by Group*, L.A. TIMES, Apr. 26, 2002, § 3, at 5 (quoting Jack Valenti's speech before a congressional committee, advocating requiring television manufacturers to incorporate broadcast flag technology to prevent consumer copying of television programs).

67. Doug Bedell, *Piracy Enforcement Flounders with Rise of MP3*, DALLAS MORNING NEWS, Aug. 11, 1999, at 1F.

vidual in the universe."[68] Rather, as the Supreme Court has repeatedly emphasized, copyright is a limited statutory prerogative designed to benefit the public by providing an economic incentive for the creation and distribution of original expression.[69]

Granted, copyright holders typically enjoy a broad, exclusive set of rights that shares many of the attributes commonly associated with "property." But that is largely due to more than a century of copyright industry lobbying for more expansive rights; copyright need not inherently assume that shape. To add some perspective, consider the first U.S. copyright statute. The Act of May 31, 1790 granted authors of maps, navigational charts, and books the exclusive right to "print, reprint, publish, or vend" for a once-renewable 14-year term.[70] That decidedly limited grant hardly exemplifies the copyright industries' current private property rhetoric. Under the 1790 Act, even during the short period that copyrights remained in force, others were free to use copyrighted works in a myriad of ways, including reciting books in public, making copies by hand, and making and publishing translations and abridgements.[71] The Act also pointedly circumscribed the universe of expression that could be subject to an author's exclusive rights. Under the 1790 Act, works authored by foreigners were ineligible for copyright. Nor did copyright extend to graphics, sheet music, newspapers, songs, or other types of creative works that were not enumerated in the statute. Finally, the Act conditioned copyright protection on compliance with several nontrivial procedural requirements.[72] As a result, only a small fraction of the books published in

68. 2 WILLIAM BLACKSTONE, COMMENTARIES 2. Scholars note that Blackstone himself must have recognized that description as hyperbole, even as applied to real property. *See, e.g.*, Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1362 n.237 (1993).

69. *See, e.g.*, Fogerty v. Fantasy, Inc., 510 U.S. 517, 526 (1994).

70. The copyright term could be renewed for one additional 14-year term only if the author was still alive and still a U.S. citizen or resident. Act of May 31, 1790, ch. 15, 1 Stat. 124.

71. *See* Stowe v. Thomas, 23 F. Cas. 201 (C.C.E.D. Pa. 1853) (No. 13,514) (translation not infringing); Folsom v. Marsh, 9 F. Cas. 342 (C.C.D. Mass. 1841) (No. 4,901) (defendants infringed because they directly copied significant portions of plaintiff's book rather than creating a bona fide abridgement).

72. A prospective copyright owner had to obtain a copyright registration prior to the work's publication by depositing a printed copy with the local district court. The owner was then required to publish a notice of that registration in a U.S. newspaper for at least four weeks and, within six months of publication, to deposit another printed copy with the Secretary of State. The registration and publication could also be effected by the "proprietor," i.e., a person to whom the author had transferred the right to publish the work. The author or proprietor also had to pay the district court a registration fee of 60 cents and deposit a copy with the Secretary of State within 6 months of publication. Act of May 31, 1790, §§ 3–4, 1 Stat. 124, 124; *see also* Wheaton v. Peters, 33 U.S. 591, 665–68 (1834) (stating that the 1790 Copyright Act required the author or copyright owner to comply with all four of the provisions as set out in sections 3 and 4 of the Copyright Act of 1790 in order to have a valid copyright).

the early United States enjoyed even the narrow protection afforded under the Act.[73]

Copyright, of course, need not remain within the narrow confines of that first statute. But the basic understanding that copyright is a circumscribed statutory prerogative continues to inform current law. As the Supreme Court firmly insists, copyrights are "monopoly privileges that . . . while 'intended to motivate . . . creative activity . . . by provision of a special reward,' are limited in nature and must ultimately serve the public good."[74] Despite the copyright industries' grandiose rhetoric, copyrights are not inherently "property." Nor is any unlicensed use of creative expression the theft of private property, especially if copyright owners receive compensation for that use.[75] The Noncommercial Use Levy fits well within copyright's fundamental parameters.

B. Function

Yet even if copyrights are not inherently "property," the question remains whether, as a matter of policy, copyrights should have property-like attributes. What, in other words, is the optimal scope of a copyright holder's rights? The answer to that question requires an understanding of how copyright operates to benefit the public.

Copyright law aims to solve a systemic market failure. The creation and dissemination of expression have characteristics of "public goods," like lighthouses and national defense. As compared with most tangible commodities, it is extremely costly for public good suppliers to prevent those who do not pay for those goods from enjoying their benefit. Likewise, those who would benefit are too numerous and too dispersed to agree on an enforceable scheme whereby all beneficiaries contribute to paying any supplier. As a result, like all public goods, creative expression will likely be undersupplied absent some legal regime for compensating its suppliers (or absent its supply by the government).

Copyright's current core — a bundle of exclusive rights in creative expression — is but one solution to this public goods problem. And it is a highly imperfect one at that. Copyright's exclusive rights

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73. Between 1790 and 1800 there were some 20,800 American imprints, but only 684 copyright registrations. William J. Maher, *Copyright Term, Retrospective Extension, and the Copyright Law of 1790 in Historical Context*, 49 J. COPYRIGHT SOC. OF THE U.S.A. 1021 (2002).

74. Fogerty v. Fantasy, Inc., 510 U.S. 517, 526 (1994), *quoting* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984).

75. For criticism of the rhetorical excess in labeling as "pirates" those who engage in noncommercial copying, see Jane C. Ginsburg, *How Copyright Got A Bad Name For Itself*, 26 COLUM. J.L. & ARTS 61, 63–64 (2002) (also criticizing the use of the term "sharing" as applied to P2P file sharing on the grounds that "sharing" connotes parting with something, not enabling others to make copies).

provide an economic incentive for the creation and dissemination of original expression. But copyright does so by allowing some copyright holders to reap supracompetitive rents, prices in excess of what they could earn in a truly competitive market (where the marginal cost of supplying a consumer with a copy of or access to an expressive work would not reflect the cost of creating the work in the first place).[76] That, in turn, results in "deadweight loss": some potential consumers and licensees who would have bought access to a copyrighted work at the competitive price will now be denied access.[77] Thus, absent perfect price discrimination that would ameliorate deadweight loss, proprietary copyright imposes costs and inefficiencies akin to those of monopolies.[78]

A proliferation of copyright holders' proprietary rights can also make it prohibitively expensive for prospective licensees to obtain all the permissions needed to use, modify, or distribute creative expression. Transaction costs are especially high with respect to motion pictures, sound recordings, and other expression that comprises a number of copyrighted works, each of which must be licensed. Such costs are further magnified in the area of Internet dissemination, where rightsholders assert overlapping claims about which rights are actually implicated by various uses.[79] Consider, for example, a web site that enables visitors to hear prerecorded songs.[80] Depending on how the site is configured, the site operator may have to obtain permissions or comply with complex compulsory licensing requirements for distributing copies of and publicly performing both sound recordings and underlying musical compositions. And the site operator may have to transact with different record labels, collective rights organizations, or other parties to clear each right for each type of work.

The transaction cost barrier that arises from the proliferation of needed licenses exemplifies the "tragedy of the anticommons," identi-

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76. For further discussion of the variable extent of copyright holders' ability to charge supracompetitive prices, see NEIL WEINSTOCK NETANEL, COPYRIGHT'S PARADOX: PROPERTY IN EXPRESSION/FREEDOM OF EXPRESSION (Oxford U. Press forthcoming 2004).

77. *See* Yochai Benkler, *An Unhurried View of Private Ordering in Information Transactions*, 53 VAND. L. REV. 2063, 2071 (2000).

78. As Richard Epstein points out, in this context "the concepts of 'property right' and 'legal monopoly' . . . are different terms with different connotations for the same legal institution." Richard A. Epstein*, The Dubious Constitutionality of the Copyright Term Extension Act*, 36 LOY. L.A. L. REV. 123, 126 (2002).

79. Mark Lemley was one of the first scholars to highlight this problem. *See* Mark A. Lemley, *Dealing With Overlapping Copyrights on the Internet*, 22 U. DAYTON L. REV. 547 (1997); *see also* R. Anthony Reese, *Copyright and Internet Music Transmissions: Existing Law, Major Controversies, Possible Solutions*, 55 U. MIAMI L. REV. 237 (2001).

80. For helpful explication of the complex matrix of rights implicated in online music, see Lydia Pallas Loren, *Untangling the Web of Music Copyrights*, 53 CASE W. RES. L. REV. 673 (2003); Reese, *supra* note 79.

fied by Michael Heller and others.[81] When a resource is subject to too many property rights held by too many parties, the resource will tend to be under-exploited, if used at all. That phenomenon arises on occasion with respect to tangible property. It is a common and serious impediment to the exploitation of copyright-protected works, and has been cited as a major hurdle to licensed online distribution of music and film.[82]

Proprietary control also means that copyright holders may simply veto uses or distributors they do not like or that might threaten the copyright holders' prevailing business models or undermine product development and merchandizing opportunities. In some instances, closest to the core of what we generally think of as "censorship,"[83] the copyright holder suppresses speech to avoid criticism or because he opposes the speaker's political or cultural message. In others, the copyright holder acts entirely from commercial motives. In yet others, the copyright holder's motives are probably mixed. Consider, for example, the Margaret Mitchell Estate's recent effort to block publication of an acerbic sequel designed to "explode" *Gone With the Wind*'s racially stereotyped, romantic portrait of the antebellum South.[84] Or Disney studios' infringement action against a counterculture comic book that disparaged Disney's all-American "world of scrubbed faces, bright smiles and happy endings" by depicting Mickey Mouse engaged in various illicit activities.[85] Whatever the copyright holder's motive, the result is the suppression of creative, oppositional, and critical uses of highly salient existing expression.[86]

Nor may copyright's costs be properly assessed without taking account of copyright industries' market structure. In several areas, including sound recording and motion picture production, a small number of firms holding vast inventories of copyrighted works enjoy oligopolist and oligopsonistic dominance of their sectors. As commentators and, in egregious cases, courts and antitrust authorities have noted, that top-heavy structure exacerbates copyright's censorial effect and raises entry barriers to prospective new distributors and

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81. Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998); *see also* James M. Buchanan & Yong J. Yoon, *Symmetric Tragedies: Commons and Anti-Commons*, 43 J.L. & ECON. 1 (2000); Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCI. 698 (1998).

82. Amy Harmon, *Copyright Hurdles Confront Selling of Music on the Internet*, N.Y. TIMES, Sept. 23, 2002, at C1; Stefanie Olsen, *Licensing Labyrinth: Studio Copyright Battles Worthy of Hollywood Script*, CNET News.com, *at* http://news.com.com/2009-1023-979754.html (Jan. 13, 2003).

83. *See* Frederick Schauer, *The Ontology of Censorship*, *in* CENSORSHIP AND SILENCING: PRACTICES OF CULTURAL REGULATION 147 (Robert C. Post ed., 1998).

84. *See* Suntrust Bank v. Houghton Mifflin Co., 252 F.3d 1165 (11th Cir. 2001) (vacating a preliminary injunction against publication of the sequel on grounds of fair use).

85. Walt Disney Prods. v. Air Pirates, 581 F.2d 751 (9th Cir. 1978).

86. *See generally* NETANEL, *supra* note 76.

speakers.[87] Indeed, copyright industry efforts to quash, rather than license, P2P file sharing appear to be driven by a desire to extend into the digital marketplace the dominance that a handful of firms currently enjoy over hard copy distribution.

Exceptions and limitations to copyright holders' exclusive rights, like fair use and copyright's limited term, are designed to temper the untoward effects of proprietary copyrights.[88] Private copying levies, compulsory licenses, and my proposed NUL do that and more. They also constitute alternative, non-proprietary mechanisms for accomplishing copyright's central mission: providing an economic incentive for suppliers of creative expression. Like proprietary rights, these alternatives are an imperfect solution to the market failure/public goods problem that copyright law is designed to address. It is fair to say that there is no optimal across-the-board solution.[89] Choosing the "second best" mechanism requires comparing costs and benefits given the relevant copyright industry structure, the economics of producing the type of creative expression in question, and the available technologies for producing and distributing that expression.[90]

There may be reasons for preferring exclusive rights in many instances. But we should not reflexively defer to proprietary entitlements, certainly not the expansive bundle that the Copyright Act currently accords. Rather, as with any property system, we need to determine whether the costs of maintaining a proprietary copyright

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87. *See infra* note 240; *see also* Roger Noll, *Napster's Copyright Abuse Defense* (2003), *at* http://www.utexas.edu/law/news/colloquium/papers/Nollpaper.doc (last visited Oct. 18, 2003); Randal C. Picker, *Copyright as Entry Policy: The Case of Digital Distribution*, 47 ANTITRUST BULL. 423 (2002), *available at* http://www.law.uchicago.edu/Lawecon/WkngPprs_176-200/197.rcp.digital.pdf.

88. *See* Landes & Posner, *supra* note 9.

89. *Cf.* RICHARD A. EPSTEIN, INTO THE FRYING PAN: STANDING AND PRIVITY UNDER THE TELECOMMUNICATIONS ACT OF 1996 AND BEYOND (John M. Olin L. & Econ. Working Paper No. 174 (2d Series), 2002), *available at* http://papers.ssrn.com/sol3/delivery.cfm/SSRN_ID362620_code021216570.pdf?abstractid=362620 (noting that telecommunications, as a network industry, can never fit the model of an unregulated competitive market).

90. For an illuminating example of such a comparative assessment, see PETER ECKERSLEY, VIRTUAL MARKETS FOR VIRTUAL GOODS: COPYRIGHT THROUGH THE LOOKING GLASS (IPRIA Working Paper 02/03, 2003), *at* http://www.cs.mu.oz.au/~pde/writing/virtualmarkets.pdf. For a basic introduction to the Theory of the Second Best, see Richard S. Markovits, *Second-Best Theory and Law & Economics: An Introduction*, 73 CHI.-KENT L. REV. 3 (1998). For a detailed application of second-best theory and "third-best distortion-analysis" to intellectual property, presenting a much broader, "macro" perspective than I put forth here, see Richard S. Markovits, *On the Economic Efficiency of Using Law to Increase Research and Development: A Critique of Various Tax, Antitrust, Intellectual Property, and Tort Law Rules and Policy Proposals*, 39 HARV. J. ON LEGIS. 63, 113–19 (2002) (suggesting that, "from the perspective of allocative efficiency, we may already have too much R&D and artistic creation of certain types" and thus that more expansive intellectual property rights are probably unwarranted).

exceed its benefits and, more precisely, whether alternative mechanisms might attain equal or greater benefit at lesser cost.[91]

In that regard, P2P technology calls into question the continued necessity, desirability, and viability of proprietary copyright as applied to online distribution. First, proprietary copyright yields lesser benefits in the P2P arena. Proprietary copyright arose in an age in which copyright holders had to administer, operate, and finance a costly system of hard copy distribution. An exclusive right to exploit creative works helped to secure a reasonable rate of return on that substantial investment. But P2P networks disseminate expression without any need for copyright-holder-operated and financed distribution.[92] Indeed, it is P2P users and the providers of network infrastructure, services, and devices, not copyright holders, who supply the public good of distributing original expression over P2P networks.

Of course, as economic analysts point out, a proprietary copyright does not serve merely to provide an incentive for the supply of public goods. Rather, like all property rights, proprietary copyright is said to optimize uses of existing property.[93] Copyright facilitates markets in

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91. Numerous scholars have noted the costs of maintaining property systems and the need to assess costs versus benefits in determining a property system's efficacy. *See, e.g.*, Yochai Benkler, *Some Economics of Wireless Communications*, 16 HARV. J.L. & TECH. 25 (2002); Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315 (1993); Charlotte Hess & Elinor Ostrom, *Ideas, Artifacts, and Facilities: Information as a Common-Pool Resource*, 66 LAW & CONTEMP. PROBS. 111 (2003). Economic analysts have also argued that property regimes emerge when the net benefits of such regimes exceed the net benefits of nonproperty resource allocation. The seminal work is Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 347–57 (1967). On the need to assess the costs of maintaining a property system in the intellectual property context, see Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1732 (2000); Landes & Posner, *supra* note 9, at 266–68; Peter S. Menell, *An Analysis of the Scope of Copyright Protection for Application Programs*, 41 STAN. L. REV. 1045, 1065 (1989); Margaret J. Radin, *Property Evolving in Cyberspace*, 15 J.L. & COM. 509, 516 (1996); *see also* Abraham Bell & Gideon Parchomovsky, *Pliability Rules*, 101 MICH. L. REV. 1, 39–53 (2002) (demonstrating that mixed property and liability rules are ubiquitous in intellectual property as well as other property regimes in order to serve efficiency as well as fairness objectives).

92. For this point I draw upon Raymond S. Ku, *The Creative Destruction of Copyright: Napster and the New Economics of Digital Technology*, 69 U. CHI. L. REV. 263 (2002), and MARK S. NADEL, QUESTIONING THE ECONOMIC JUSTIFICATION FOR (AND THUS THE CONSTITUTIONALITY OF) COPYRIGHT LAW'S PROHIBITION AGAINST UNAUTHORIZED COPYING: SEC. 106, (Social Science Research Network Electronic Library, 2003), *at* http://papers.ssrn.com/sol3/delivery.cfm/SSRN_ID322120_code020808560.pdf?abstractid=322120 (last updated Aug. 14, 2003).

93. *See* William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 U. CHI. L. REV. 471, 484 (2003) (viewing copyright as a vehicle for ameliorating congestion externalities); *see also* Bell & Parchomovsky, *supra* note 91, at 24 ("Strong, undivided, and sharply defined property rights not only facilitate contracting but also 'encourage individual investment, planning and effort' by giving actors 'a clearer sense of what they are getting.'") (quoting Carol M. Rose, *The Shadow of the Cathedral*, 106 YALE L.J. 2175, 2187 (1997)).

existing works and in current uses of those works.[94] By according a defined set of exclusive, transferable rights, proprietary copyright enables transactions between copyright holders and prospective licensees. It also supports market pricing, portfolio management, consumer payment in amounts that comport with consumers' valuation, and producer supply and development of existing works in line with consumer demand.

That is the theory. In reality, as we have seen, a proliferation of copyrights and the divisibility of copyright into multiple sub-rights have led to substantial transaction cost barriers to copyright licensing, especially in the digital arena. In addition, P2P networks may provide nonproperty substitutes — possibly even more efficient substitutes — for achieving the benefits of a proprietary copyright. As Yochai Benkler has demonstrated, for example, in many cases numerous volunteers collaborating through P2P networks produce informational and expressive goods more efficiently than do proprietary regimes and hierarchical firms.[95] The NUL might be another such instance. Using digital tracking and metering technology, the levy regime could be structured to allocate payments to producers of original expression in a way that reflects consumers' valuation of works and uses. The NUL would also eliminate the need for licensing that has stymied Internet dissemination and could employ various proxies to ensure that high-volume file sharers pay a much larger portion of the levy than consumers who engage in little or no file sharing.

Applying proprietary copyright to P2P file swapping would not only yield questionable benefits relative to the NUL, it would also involve considerable costs.[96] As I have discussed, these include the deadweight loss inherent in any proprietary copyright regime. They also include licensing and enforcement costs, which are high for copyright relative to tangible property in any circumstance and are especially acute when copyright is extended to the digital network and P2P arenas.[97]

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94. *See* Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283 (1996) (discussing "neoclassicist" copyright economics).

95. *See* Yochai Benkler, *Coase's Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369 (2002). Hierarchical decision making within firms is another instance in which the transaction costs of a property regime militate towards a nonproperty system for allocating resources. *See* Ronald Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937). *But see* Sanford J. Grossman & Oliver D. Hart, *The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*, 84 J. POL. ECON. 691 (1986) (demonstrating that ownership of assets within a single integrated firm can impose costs, particularly agency costs, as well as benefits).

96. Some argue that digital technology makes possible near perfect price discrimination, which would greatly ameliorate some (but not all) of these costs because then all would have access to copyright-protected expression at the amount by which they value that access. But as I show in Part VII, the notion that copyright holders would or could engage in such near-perfect price discrimination is little more than a pipe dream.

97. *See* ROBSON & SKAPERDAS, *supra* note 9.

In the hard copy world, proprietary copyright's costs are most likely necessary and warranted to secure copyright's benefits. That world presents a clear need to protect copyright industry investment in expensive production and distribution. And there, copyright policing and enforcement is primarily targeted at large-scale commercial infringers. But digital technology and P2P networks bring a very different calculus, which calls into question the efficiency and efficacy of extending proprietary copyright into the P2P arena.

In that regard, the extra, nontraditional measures needed to enforce copyright holder control in the face of P2P file sharing bring their own added costs. Primary among those measures is the deployment of DRM controls on access and use.[98] Even if not a hopeless proposition, it is at best extremely costly to design and implement reasonably effective and tamper-proof DRM systems. And in order for a DRM system to be reasonably effective, our computers and other consumer electronics goods would have to incorporate DRM compliant technology. That means, in essence, that those goods would have to be functionally degraded to diminish their capacity to enable consumers to share and modify digital content. Mandated DRM compliant technology, in other words, would impose significant costs in the form of impeded technological innovation and consumer welfare.

And there are additional costs unique to (or at least exacerbated by) applying proprietary copyright in the P2P universe. These entail ISP and other third party overdeterrence, the impairment of personal privacy, and the suppression of P2P users' speech and creativity. They also include the costs of heightened conflict between law and social norm, between imposing onerous penalties on file swappers and the widespread intuition that noncommercial unlicensed file swapping is at the very most a minor infraction.

In sum, the considerable private and social costs of applying proprietary copyright to P2P file sharing must be compared with those of implementing and administering the NUL, or alternative mechanisms for fostering the supply of creative expression suited to audience demand. To that end, Part IV briefly describes the current compulsory licenses and private copying levies that might serve as useful precedent for the NUL. Part V then spells out the NUL in more detail and Part VI considers NUL costs. Part VII assesses the costs and benefits of three proffered alternatives: digital abandon, digital lock-up, and government subsidies for authors.

98. *See* ECKERSLEY, *supra* note 90, at 31–34.

IV. COMPULSORY LICENSES AND PRIVATE COPYING LEVIES

Regimes that provide for compulsory licenses for various distributors of copyright-protected material and that impose levies on private copying equipment and media have long occupied a middle ground between *gratis* uses of copyright-protected works and copyright holders' proprietary control. For reasons I will discuss presently, current regimes would not apply to P2P file swapping. But compulsory licenses and private copying levies may provide useful precedent for the NUL. At the least, their presence within the copyright laws of many countries, including those of the United States, dispels the notion that copyright law is inherently a proprietary copyright regime.

A. Compulsory Licenses

The United States Copyright Act enables various entities to distribute copyright-protected material without copyright holder permission so long as the distributor pays the statutory fee. With various conditions and qualifications, the Act's compulsory license provisions give record labels (and others) the right to produce and distribute cover recordings of previously recorded nondramatic musical works (including the right to digitally deliver copies of such works),[99] cable and satellite TV operators the right to transmit off-air broadcasts,[100] public broadcasters the right to broadcast various types of works,[101] and webcasters the right to transmit sound recordings.[102] In addition, although not subject to statutory fees, ASCAP and BMI licenses to retailers and radio stations for the public performance of musical works are subject to antitrust decrees providing that any user may obtain a license and petition a judge to set a "reasonable fee."[103] Other countries have similar compulsory and regulated licenses in various

99. *See* 17 U.S.C. § 115 (2000). The Copyright Act terms copies of musical works "phonorecords." Hence digital delivery is referred to as "digital phonorecord delivery." *Id*. § 115(c)(3)(A).

100. *See id*. §§ 111, 119, 122 (regulating cable operators and satellite carriers).

101. *See id*. § 118.

102. *See id*. § 114(d)(2).

103. *See* Michael A. Einhorn, *Intellectual Property and Antitrust: Music Performing Rights in Broadcasting*, 24 COLUM.-VLA J.L. & ARTS 349 (2001) (discussing Rate Court provisions in ASCAP and BMI antitrust consent decrees). In any such proceeding, ASCAP or BMI, as the case may be, bears the burden of establishing the reasonableness of its proposed fee. The ASCAP and BMI antitrust consent decrees have been modified a number of times. For the most recent versions, see Second Amended Final Judgment, United States v. Am. Soc'y of Composers, Authors & Publishers, No. 41-1395, 2001 WL 1589999 (S.D.N.Y. 2001), *available at* http://www.usdoj.gov/atr/cases/f6300/6396.pdf (last visited Oct. 10, 2003); United States v. BMI, 1996-1 TRADE CASES (CCH) 71, 378 (S.D.N.Y. 1994).

areas.[104] As of yet, however, no country provides for a compulsory license for Internet Service Providers or other entities that would allow individuals freely to engage in P2P file sharing.

B. Private Copying Levies

Many countries, including Canada and most of Europe, allow individuals to freely make private copies, in return for which levies are imposed on private copying equipment and media.[105] Private copying levy proceeds are typically paid to a central office and then divided among rights-holders' collecting societies pursuant to legislated or negotiated schedules. In turn, the collecting societies disburse the proceeds following a sampling procedure designed to determine the likely level of private copying for each work.

Germany's levy provisions are among the most comprehensive.[106] They make personal copying noninfringing, but impose a levy on the sale of audio and video recording equipment, as well as recording media such as blank tapes and cassettes.[107] Likewise, they impose a levy on copying equipment (including photocopiers, scanners and, recently, CD burners), and on certain operators of such equipment (principally those using photocopiers), including universities, libraries, and copy shops.[108] German (and French) officials have also proposed imposing a levy on general purpose home computers, but this has proven highly controversial.[109]

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104. *See, e.g.*, Adolf Dietz**,** *Germany*, *in* 2 INTERNATIONAL COPYRIGHT LAW AND PRACTICE §§ 5[1], 8[2][e] (Paul E. Geller & Melville B. Nimmer eds., 2002); Ysolde Gendreau, *Canada, in* 1 INTERNATIONAL COPYRIGHT LAW AND PRACTICE § 8[2][e] (Paul E. Geller & Melville B. Nimmer eds., 2002); Lionel Bently, *United Kingdom, in* 2 INTERNATIONAL COPYRIGHT LAW AND PRACTICE, *supra,* § 8[2][e].

105. For a detailed description of private copying levy provisions of European Union countries, see P. BERNT HUGENHOLTZ ET AL., THE FUTURE OF LEVIES IN A DIGITAL ENVIRONMENT 10–31 (Institute for Information Law, March 2003), *available at* http://www.ivir.nl/publications/other/DRM%20Levies%20Final%20Report.pdf. For a brief description of Canada's provisions, see Gendreau, *supra* note 104, § 8[2][f][ii].

106. *See* Reinhold Kreile, *Collection and Distribution of the Statutory Remuneration for Private Copying with Respect to Recorders and Blank Cassettes in Germany*, 23 INT'L REV. INDUS. PROP. & COPYRIGHT L. 449, 449 (1992).

107. *See* Copyright Act of September 9, 1965, § 54 (1965) (F.R.G.); *see also* Dietz, *supra* note 104, § 8[2][a].

108. *See* Copyright Act of September 9, 1965, *supra* note 107, § 54a.

109. In February 2003, a mediator in Germany's patent office recommended that personal computer makers pay copyright holders 12 euros ($13.06) for every system sold to compensate for the unauthorized copying of movies and other digital programming. Manufacturers of personal computers and computer components swiftly criticized the recommendation. *See Intel, Others to Oppose Copyright Tax*, SiliconValley.com, *at* http://www.siliconvalley.com /mld/siliconvalley/news/editorial/5109624.htm (Feb. 5, 2003); *see also* Dietz, *supra* note 104, § 8[2][a][ii], citing a July 2000 German Federal Government proposal along similar lines. Greece did impose a 2% levy on personal computers, but abolished the levy as part of its legislation implementing the European Union's 2001 Copyright Directive. *See* HUGENHOLTZ ET AL., *supra* note 105, at 30. For citation and further descrip-

A private copying levy is found in U.S. law as well, but it is far less extensive than that of other countries. In its 1984 decision, *Sony Corp. of America v. Universal City Studios*,[110] the U.S. Supreme Court ruled that home video recording of television programs is non-infringing fair use. In *Sony*'s wake, Congress considered, but rejected legislation that would have imposed a levy on the sale of videocassette recorders.[111] At the same time, *Sony* left open whether home recording of music would also constitute fair use. Unlike home recording of TV programs, which, *Sony* emphasized, typically involves making a temporary copy to view at a more convenient time, music recording usually entails making a permanent copy for the user's collection. The music industry was willing to abide by the uncertainty about whether that distinction makes a difference so long as home recording equipment enabled consumers only to make imperfect copies of commercial recordings. But that changed with the advent of digital audio cassette recorders, which were capable of making perfect copies that might supplant CD sales. With that development, the record labels lobbied Congress to take action by banning the manufacture and import of digital recorders.[112]

Ultimately, the record labels and consumer equipment manufacturers hammered out a compromise, which was codified in the Audio Home Recording Act of 1992.[113] The AHRA imposes a levy on consumer devices primarily designed to make digital recordings of music for private use and on blank media on which such recordings are stored.[114] In return for the levy (and for requiring manufacturers of digital audio tape recorders to incorporate technology preventing serial digital copying), the Act prohibits suits against consumers for noncommercial copying of music using digital or analog equipment designed for that purpose.[115]

The AHRA might serve as useful precedent for the NUL, but its levy provisions have largely remained a dead letter because the market for digital cassette recorders and other single-purpose devices for digitally recording music never developed. Nor would the Act immunize all who engage in P2P file swapping. The Act applies only to

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tion of pertinent provisions of the Copyright Directive, see *infra* notes 118–22 and accompanying text.

110. 464 U.S. 417 (1984).

111. *See* H.R. 1030, 98th Cong. (1983).

112. *See* H.R. REP. No. 102-873(II), 102d Cong., 2d Sess. 2 (1992) (noting music industry concerns that digital audio tapes could enable perfect copies that would greatly decrease consumer demand for commercial prerecorded music); *see also* Jane C. Ginsburg, *Copyright and Control Over New Technologies of Dissemination*, 101 COLUM. L. REV. 1613, 1628 (2001) (describing background to enactment of the Audio Home Recording Act of 1992).

113. 17 U.S.C. §§ 1001–1010 (1992).

114. *See id*. §§ 1003–1007 (1992).

115. *See id*. § 1008 (1992).

music, not video or text files. In addition, as courts have suggested, the AHRA might not immunize home audio taping via general purpose computers and other devices not designed primarily to record music.[116] Further, the Act's immunization for private copying would not extend to remixing or making files available for download to others on a P2P network.[117]

The same is true with respect to the laws of the European Union. In its May 22, 2001 Directive on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society,[118] the E.U. endorsed the extension of the private copying levies in the digital sphere. The Directive authorizes EU member states to allow private, non-commercial copying in "any medium" so long as "rightholders receive fair compensation."[119] So far, so good. But the Directive also countenances copyright holders' employment of DRM technology and online "click-wrap" contract to control access to and uses of works, including copyright holders' use of those tools to prevent unlicensed private copying.[120] In addition, the Directive's provi-

116. A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1024–25 (9th Cir. 2001) (holding that the AHRA's immunization of the home copying of music "does not cover the downloading of MP3 files to computer hard drives").

117. *See, e.g.*, *In re* Aimster Copyright Litig., 252 F. Supp. 2d 634 (N.D. Ill. 2002) (issuing preliminary injunction against P2P file sharing service and holding that the AHRA's immunization of consumer music copying does not extend to making music files available for others to copy on a P2P network).

118. Council Directive 2001/29/EC, 2001 O.J. (L167) 10. [hereinafter EU Copyright Directive].

119. EU Copyright Directive, *supra* note 118, at Art. 5.2(b). The Directive provides:

> [m]ember States may provide for exceptions or limitations to the reproduction right provided for in Article 2 in the following cases: . . . (b) in respect of reproductions on any medium made by a natural person for private use and for ends that are neither directly nor indirectly commercial, on condition that the rightholders receive fair compensation which takes account of the application or non-application of technological measures referred to in Article 6 to the work or subject-matter concerned.

Id.

120. As European commentators have bitterly lamented, the EU Copyright Directive is far from a paradigm of clarity. *See*, *e.g.*, P. Bernt Hugenholtz, *Why the Copyright Directive Is Unimportant, and Possibly Invalid*, 22 EUR. INTELL. PROP. REV. 499, 501 (2000). In particular, it inartfully attempts to balance the European tradition of allowing private copying with the rightholders' interest in using technology and contract to prevent unlicensed digital copying. Article 5.2(b) provides that when a country does impose a private copying levy, "fair compensation" must "[take] account of the application or non-application of technological measures" to control access. Whether this means that the levy should be greater to account for an additional rightholder prerogative (that of controlling access in addition to copying) or less to reflect the inability of users to make private copies is unclear. In addition, the Directive generally requires EU member states to take appropriate measures to ensure that copyright holders tailor DRM controls to enable users to benefit from limitations and exceptions to copyright holder rights. But the Directive provides only that EU member states *may* take such measures with respect to private copying on media other than paper and provides that member states shall not abrogate DRM controls for works or subject matter made available to the public on agreed contractual terms via an Internet site. EU Copyright Directive, *supra* note 118, at Art. 4. For further discussion on the tension between

sion allowing private, non-commercial copying is an exception only to the exclusive right of reproduction. It does not encompass making works available to the public by way of on-demand transmission or distribution of copies.[121]

The NUL, as I will presently delineate, would be far more comprehensive than current private copying levies.[122] It would allow private digital and nondigital copying of all types of communicative expression. It would also permit individuals' noncommercial remixing and dissemination of existing works through P2P networks. In return, it would impose a levy on a far broader range of goods and services than is imposed under current private copy levy regimes.

V. A NONCOMMERCIAL USE LEVY

The increasingly bitter standoff between the copyright industry on the one hand, and the telecommunications and consumer electronics industries and new media enterprises on the other, has spawned a number of suggestions for allowing unhindered P2P file swapping while compensating copyright holders with proceeds of some sort of compulsory license or levy. Proponents have included such disparate voices as FCC Chairman Michael Powell,[123] telecommunications gi-

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private copying and DRM in the EU Copyright Directive, see Alvise Maria Casellati, *The Evolution of Article 6.4 of the European Information Society Copyright Directive*, 24 COLUM.-VLA J.L. & ARTS 369 (2001).

121. The EU Copyright Directive requires that copyright owners have the exclusive right to authorize or prohibit any communication to the public of their works, including making their works available to the public in such a way that members of the public may access those works from a place and at a time individually chosen by them. EU Copyright Directive, *supra* note 118, at Art. 3.1. It also requires that copyright owners have the exclusive right to authorize or prohibit the distribution of copies to the public by sale or otherwise. EU Copyright Directive, *supra* note 118, at Art. 4.1.

122. Canada seems to come the closest to a system of levies that would allow for compensating P2P file swapping, at least of music. Canada's Federal Court of Appeal recently upheld a decision of the Canadian Copyright Board that persons who post music on websites (but not ISPs) must pay a royalty in an amount to be determined by the Board. Society of Composers, Authors and Music Publishers of Canada v. Canadian Ass'n of Internet Providers, 2002 FCA 166 (2002). In addition, a Canadian collecting society that administers reproduction rights in musical works has proposed to Canada's Copyright Board a tariff for a levy on operators of electronic networks (which appears to include ISPs) on which copyrighted music is distributed. The proposed levy would be a monthly royalty "the highest of 0.65% of its gross revenues or 10¢ per month per customer." Statement of Proposed Royalties to Be Collected by SODRAC for the Reproduction, in Canada, of Musical Works in the Exploitation of an Electronic Network for the Years 2001 and 2002, Supp. C. Gaz. Pt. I, at 4 (May 13, 2000) (Can.). For further discussion of levies and rights in music transmission in several jurisdictions, see Daniel J. Gervais, *Transmissions of Music on the Internet: An Analysis of the Copyright Laws of Canada, France, Germany, Japan, the United Kingdom, and the United States*, 34 VAND. J. TRANSNAT'L L. 1363 (2001).

123. *See* Lawrence Lessig, *Who's Holding Back Broadband?*, WASH. POST, Jan. 8, 2002, at A17 (quoting FCC Chairman Michael Powell as suggesting that a compulsory license to use copyright-protected content might be necessary to further broadband).

ant Verizon Communications,[124] and various representatives of the P2P and technology communities.[125] Similarly, the NUL would establish a free flowing but paying P2P regime. It would promote the benefits of P2P self-expression while still remunerating authors (and their assignees).

This Part fleshes out my NUL proposal in some detail. My aim is to provide a blueprint for how the NUL regime might actually work.[126]

First, a basic principle: To the extent possible, a levy regime should aim to yield the *purported* benefits of proprietary copyright without imposing its costs. It should provide adequate economic incentives for the creation and dissemination of original expression. It should also serve as a vehicle for efficient resource allocation, including, most importantly, a mechanism, akin to the pricing system, for seamlessly informing authors and publishers of audience tastes and interests. Ideally, therefore, the NUL should be structured such that each copyright owner receives payment commensurate with consumer demand for the copyright owner's works. In addition, each consumer should pay only for what that consumer values in amounts commensurate with his or her valuation. Finally, the regime should be technology neutral. It should impose payment obligations and provide for use privileges irrespective of the technology and media used for file sharing.

The NUL does not fully achieve those ideals. It strays, to one degree or another, because of the usual policy constraints: technological limitations, distributional goals, and overriding efficiency considerations.[127] But those ideals do serve as guideposts for my proposal. And,

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124. In the words of Verizon Vice President and Associate General Counsel, Sarah Deutsch, "Companies like Verizon would want increased access to content. We've proposed a compulsory license [for] both video and music as a way to compensate the content owner and legitimize the file-sharing and other activities that are occurring today that are very difficult to stop." Declan McCullagh, *Verizon's Copyright Campaign*, CNET News.com, *at* http://news.com.com/2008-1082-955417.html (Aug. 22, 2002); *see also* Jefferson Graham, *Kazaa, Verizon Propose to Pay Artists Directly*, USAToday.com, *at* http://www.usatoday.com/life/cyber/tech/2002/05/14/music-kazaa.htm (May 13, 2002) (reporting that an "unlikely alliance" of Verizon and P2P file swapping service KaZaA jointly proposed that an Internet use fee be imposed on computer manufacturers, blank CD makers, ISPs, and P2P software developers).

125. *See*, *e.g.*, Steven M. Cherry, *Getting Copyright Right*, IEEE Spectrum Online, at http://www.spectrum.ieee.org/WEBONLY/publicfeature/feb02/copyr.html (last visited Oct. 23, 2003); Letter from Philip S. Corwin on behalf of Sharman Networks to Sen. Joseph R. Biden, Jr. (Feb. 26, 2002), *available at* http://www.ipuf.org/ipuf/BidenReportLetterBA.htm (arguing in favor of legislation that would establish an "Intellectual Property Use Fee"); Serguei Osokine, *A Quick Case for Intellectual Property Use Fee (IPUF)*, IPUF.org, *available at* http://www.ipuf.org/ipuf/ipuf.htm (Mar. 3, 2002) (The author is a Gnutella software developer).

126. Terry Fisher presents an alternative blueprint for a levy regime that, among other differences with my proposal, would encompass commercial as well as noncommercial uses. *See* FISHER, *supra* note 5.

127. The need to satisfy various interest groups might be another constraint.

on balance, the NUL may actually come closer to realizing them than does proprietary copyright.

A. Noncommercial Use Privilege

1. Privileged Uses

a. Copying and Distribution

Under the NUL regime, individuals would enjoy a privilege to engage in the noncommercial copying in digital format and noncommercial distribution over digital networks of most types of copyright-protected content. The NUL regime need not replace existing user privileges to use copyright-protected content. For example, private photocopying for purposes of research would presumably continue to be a fair use in most cases, and noncommercial copying of music on cassette recorders would continue to be privileged under the Audio Home Recording Act.

My proposal is limited to digital copying and online distribution for two reasons. First, I aim to address only the problem of individuals' noncommercial file sharing, and that project is already highly ambitious without tacking on the complex array of rights, exceptions, and industry arrangements that comprise today's copyright law. Second, from a pragmatic perspective, only digital copying, file sharing, and distribution would lend themselves to the tracking and metering that, as I detail below, are an integral part of the NUL regime.

b. Streaming

At the same time, the NUL privilege should extend to digital distribution not only via file transfers but also individuals' noncommercial streaming. At some point, P2P file sharing may largely entail streaming user-selected music, video, or text files as opposed to making files available for download. As telecommunications and digital storage technology evolve, it might be more efficient for works to be stored in a central location for user viewing or listening than for each user to store copies on his or her computer. Or, it may be that network participants effectively divvy up the storage costs, each storing a given type or number of works that are then made available for others to view or hear without requiring download. Next generation portable devices, like MP3 player/mobile phones, might also be capable of ordering user-selected streams from remote locations, rather than having to store thousands of files in multi-gigabyte memory. The NUL privilege should cover noncommercial P2P file sharing over digital

networks regardless of whether the files are transferred for user download or streamed for user access.

Similarly, the NUL privilege might also apply to noncommercial webcasting: streaming of content selected by the streamer rather than the recipient. Using free software, such as SHOUTcast, individuals can create personal online "radio" stations, transmitting their music selections to anyone on the Internet who cares to listen.[128] Such individual webcasting is unlikely to garner enough listeners to have anywhere near the economic impact of file sharing. But it does implicate a complex array of current public performance rights for both sound recordings and musical works, along with existing compulsory licenses for webcasters and public broadcasting entities.[129] To avoid conflict with those compulsory license regimes, the NUL privilege, if extended to individual webcasting, should apply only to individual webcasters who neither earn revenue nor solicit donations from the public.

c. Derivative Creations

Finally, the NUL privilege would also extend to individuals' noncommercial remixes, adaptations, and modifications of copyright-protected works as long as the derivative creator identifies the underlying work and indicates that it has been modified without the author's consent.[130] To include modified versions of existing works goes far beyond existing levy regimes. But it embraces speech that is among the most creative and vital of P2P communication. It would encompass expression ranging from fan fiction (such as stories that build upon episodes and characters of television series) to remixes of popular songs (some of which have achieved widespread popularity and critical acclaim).[131] As such, allowing noncommercial derivative

128. *See* SHOUTcast, *at* http://www.shoutcast.com, (last visited October 16, 2003) making available the enabling software without charge and maintains a list of individuals' webcasted "radio" stations; *see also* Jonathan Zittrain, *What the Publisher Can Teach the Patient: Intellectual Property and Privacy in an Era of Trusted Privication*, 52 STAN. L. REV. 1201, 1207 (2000) (describing SHOUTcast).

129. *See* 17 U.S.C. §§ 114(d)(2), 118 (2003). The Digital Performance Right in Sound Recordings Act of 1995, which first created an exclusive right to effect the digital performance of sound records, accorded nonsubscription, noninteractive webcasters an exemption from that right. *See* 17 U.S.C. § 114(d)(1)(A)(i) (1995). That exemption was eliminated in 1998 by the Digital Millennium Copyright Act. *See* 17 U.S.C. §§ 1201–1205 (Supp. IV 1998).

130. The derivative creator would be required to do so both as part of the work's digital "copyright management information" within the meaning of Section 1202 of the Copyright Act, and in a manner that is perceptible to a reader, listener, or viewer. *See* 17 U.S.C. § 1202(c) (2003).

131. *See, e.g.*, Neil Strauss, *Spreading by the Web, Pop's Bootleg Remix*, N.Y. TIMES, May 9, 2002, at A1; Rebecca Tushnet, *Legal Fictions: Copyright, Fan Fiction, and a New Common Law*, 17 LOY. L.A. ENT. L. REV. 651 (1997); Deborah Tussey, *From Fan Sites to Filesharing: Personal Use in Cyberspace*, 35 GA. L. REV. 1129 (2001).

creations would be an important part of the NUL regime, even if it implicates a broader array of creator and copyright holder rights and interests than merely a privilege to engage in copying.

The derivative creations privilege would be tailored to minimize (though not eliminate) the harm to copyright holders and authors of underlying works in a number of ways. First, the requirement that the creator of a modified work clearly identify it as such would prevent confusion regarding which is the "authentic," copyright-holder-authorized version. It would also ameliorate the harm to the author's personal interest in controlling the manner in which her work is communicated to the public.[132] Second, the holder of the copyright in the underlying work would receive compensation for every use of the derivative author's modified version.[133] As discussed below, that would be accomplished by the requirement that, in order to enjoy the NUL privilege, the modified version must retain the digital tag identifying the underlying work.[134] Finally, the NUL privilege for derivative creations would be strictly limited to noncommercial uses. In that regard, a derivative creator would not receive a share of NUL proceeds for uses of the modified version unless she obtained a license from the copyright holder (or unless otherwise privileged to create and disseminate the modified version under traditional copyright law).[135] Given these restrictions, the NUL privilege would not enable

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132. *See* Guy Pessach, *The Author's Moral Right of Integrity in Cyberspace — A Normative Framework*, IIC — INT'L REV. OF INDUST. PROP. & COPYRIGHT L. (forthcoming 2003) (contending that proper labeling of secondary, derivative works would adequately protect authors' personal interests while enabling a wide range of valuable digitized creative activity). The author's personal interest in preventing unapproved modifications of the author's work lies at the heart of the Continental European doctrine of the moral right of integrity. *See* Neil Weinstock Netanel, *Alienability Restrictions and the Enhancement of Author Autonomy in United States and Continental Copyright Law*, 12 CARDOZO ARTS & ENT. L.J. 1, 37–45 (1994).

133. This, too, would not entirely substitute for the creative control that is quite important for some authors. *See* Pamela Samuelson & Robert J. Glushko, *Intellectual Property Rights for Digital Library and Hypertext Publishing Systems*, 6 HARV. J.L. & TECH. 237, 256–57 (1993) (noting that a proposal to enable authors to receive royalties from the use of hypertext derivative creations based on their work would be "little consolation" to authors who view any tampering with their work as a personal affront). But the trade-off is that it would enable a wealth of P2P-based derivative creation and self-expression.

134. In many cases, users' creation and sharing of derivative versions will also spur demand for the underlying work. *See, e.g.*, Geoff Keighley, *Game Development à la Mod: Hacker Minh Le's Counter-Strike Is the Stuff of Media Execs' Dreams — An Over-the-Transom Blockbuster*, BUSINESS 2.0, Oct. 2002, at 66–67 (reporting that certain computer game producers encourage fans to produce and disseminate their own modified versions, or "mods," because the modified versions enhance demand for the originals).

135. In that event, the derivative licensee and the holder of the copyright in the underlying work would have to agree how to divide between them any NUL proceeds resulting from uses of the derivative work. In those cases there would have to be a mechanism for fingerprinting the derivative work to differentiate it from the underlying work. As Terry Fisher rightly points out, this Article does not set forth a detailed mechanism for licensing and tracking multiple, derivative-upon-derivative works. Interested readers should examine his discussion of that problem. *See* FISHER, *supra* note 5.

market actors to put out unlicensed competing versions (although those versions might sometimes be privileged fair use).

2. Protected Privilege

Users should enjoy the actual right and ability to engage in privileged P2P file sharing, not merely a formal right that digital content providers could readily elide or circumscribe. To that end, the user privilege would be protected by law. It could not be waived by a shrink-wrap or other mass-market license.[136] Nor would digital content providers be entitled to employ technological DRM controls to block the privileged uses or to sabotage P2P networks by flooding them with computer viruses or deceptive files.[137] (Or at the very least, it would be legal for users to circumvent DRM controls and for suppliers to distribute circumvention tools needed to engage in privileged uses.) The EU Copyright Directive and the DMCA both apparently allow technology and contract to supplant statutory limitations on copyright holders' proprietary control.[138] Given the ease of implementing DRM controls and mass-market licenses in the digital network environment, and given current legal prohibitions on DRM circumvention, the NUL user privilege might be eviscerated if made only a default rule. The likely result — a result that should be avoided — would be a return to the wasteful battle over enforcement

136. This would likely require an explicit provision of the Copyright Act preempting state contract law on this point. *See* Bowers v. Baystate Techs., Inc., 302 F.3d 1334 (Fed. Cir. 2002) (holding that shrink-wrap license forbidding reverse engineering of computer program was not preempted by federal copyright law); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996) (holding that a shrink-wrap license protecting nonoriginal, and thus noncopyrightable expression, was not preempted by federal copyright law).

137. *Cf.* Dan L. Burk & Julie E. Cohen, *Fair Use Infrastructure for Rights Management Systems*, 15 HARV. J.L. & TECH. 41 (2001) (comparing technological and institutional arrangements for integrating fair use into DRM).

138. On the EU Copyright Directive, see *supra* note 120. The DMCA provides that nothing in its anti-circumvention provisions "shall affect rights, remedies, limitations or defenses to copyright infringement, including fair use, under this title." 17 U.S.C. § 1201(c)(1) (2001). However, that clause appears, and has thus far been interpreted by courts, to apply only to traditional copyright actions, not to actions for violation of the DMCA anti-circumvention provisions. *See, e.g.*, Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001) (holding that distribution of software enabling the circumvention of encryption designed to control access and copying of films stored on DVDs contravenes the DMCA even if user copying would constitute fair use); Sony Computer Ent. of Am., Inc. v. GameMasters, Inc., 87 F. Supp. 2d 976 (N.D. Cal. 1999) (holding that copyright holder demonstrated a strong likelihood of success on its claim that defendant's sale of a video game enhancer violated the DMCA's anti-trafficking provisions even if the enhancer did not give rise to traditional copyright infringement); *see also* Nimmer, *supra* note 18, at 214 (noting that the DMCA's fair use savings clause appears to apply only to traditional copyright actions). *But see* Jane C. Ginsburg, *Copyright Legislation for the "Digital Millennium"*, 23 COLUM.-VLA J.L. & ARTS 137, 151–52 (1999) (raising the possibility that under appropriate circumstances, such as where encryption protects an entirely public domain work, courts might and ought to apply the fair use defense to the use of a circumvention device to gain access).

of proprietary, DRM-based controls that characterizes the current, pre-NUL status quo.

3. Excluded Content

The NUL user privilege would apply only to most, but not all types of copyright-protected content. For example, while the privilege would generally encompass communicative expression, including movies, music, text, and graphics, it would not extend to the P2P copying and sharing of computer programs.[139] Although computer programs constitute a "literary work" under copyright law and have been held by some courts in some contexts to constitute "speech" for First Amendment purposes, their primary purpose is to serve as a tool.[140] Accordingly, their unlicensed P2P distribution does not have the same import for self-expression as the trading and remixing of works of popular culture. In addition, because computer programs are tools, the economics of creating, marketing, and using them is fundamentally different than that pertaining to most cultural works.[141] Unlike most cultural works, computer programs tend to be subject to ongoing refinements, updates, and modifications. And a computer program's value typically derives largely from complementary software or hardware and may reflect the contributions of creators of various components, including off-the-shelf building blocks incorporated into many different programs.[142] For those reasons, it would be exceedingly difficult to use a statistical sample of computer software downloads or uses to gauge the proper amount of levy proceeds to allocate to a software producer.

At least in principle, the user privilege should also be limited to expression that the copyright holder has previously released to the public, whether online or offline. Copyright doctrine rightly extends special solicitude for unpublished works. To do so serves authors' interest in privacy and creative control (at least in determining when a

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139. The NUL would extend to the characters, audiovisual works, graphics, storylines, and other expressive elements in computer games.

140. *See* Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2359–61 (1994) (indicating that although computer programs are ostensibly protected as literary works, courts have effectively accorded them a *quasi-sui generis* protection that better comports with their functional nature).

141. For a more detailed discussion of why computer software would not lend itself to a "virtual market," such as the one I envision, see ECKERSLEY, *supra* note 90, at 16–18.

142. *But see* Mark A. Lemley & David O'Brien, *Encouraging Software Reuse*, 49 STAN. L. REV. 255 (1997) (noting legal and cultural obstacles to creating a market in off-the-shelf computer software components, despite the efficiency benefits that such a market would bring). In addition, computer programs, as tools, are far more susceptible to consumer lock-in and network effects than is communicative expression. *See* CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES 103–225 (1999) (discussing lock-in, network effects, and complementary goods).

work is to be released to the public).[143] In addition, and more broadly, certain authors and copyright holders have a personal and economic interest in making works available to live audiences, for example, in a concert hall or movie theater, without making copies or Internet transmissions of the work (or performance) available to the public. Certainly with respect to works that have not been released at all and, somewhat less certainly with respect to works released only in performances to live audiences, the copyright holder's interest in controlling the timing of release should trump the P2P file swapper's interest in gaining access, unless the unlicensed publication and distribution of the work meets the requirements for fair use.

Nevertheless, within the context of the NUL regime, it would probably make little practical sense to provide that the noncommercial sharing of works that have been released without copyright holder consent constitutes a copyright infringement. P2P file sharers will often be unaware that a work widely available on P2P networks has been released to the public without the copyright owner's permission. Further, to impose strict liability on users and third party liability on ISPs and P2P networks would give rise to many of the burdensome enforcement costs discussed above. For that reason (although I think it a close call), I would propose that only persons who actually release a copyrighted work for unauthorized P2P file sharing without the copyright owner's consent should be liable for copyright infringement. That would include, for example, those who make and post online bootleg recordings, or copy, post, or distribute pre-release copies of motion pictures without copyright holder permission.[144] And, to provide an incentive to mitigate the harm to copyright owners, even those persons should face reduced damages if they properly encode the file they release so that the NUL tracking mechanism can meter uses of the work for the copyright owner's account.

4. "Noncommercial" Use

As with the Audio Home Recording Act, privileged uses would have to be "noncommercial."[145] Commercial exploiters of copyright-protected works should either obtain a license or qualify for fair use or some other exception to copyright holders' exclusive rights. By "noncommercial," I mean that the individual is not selling copies of, access to, or advertising in connection with the copyright-protected work or

143. *See* Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539 (1985).

144. *See* Simon Byers et al., *Analysis of Security Vulnerabilities in the Movie Production and Distribution Process*, *at* http://lorrie.cranor.org/pubs/drm03-tr.pdf (Sept. 13, 2003) (showing multiple points where industry insiders leak digital copies of movies for unlicensed Internet distribution).

145. 17 U.S.C. § 1008 (2000).

any modification of the work. Contrary to some current law,[146] an individual's receipt of other works in digital format over P2P file swapping networks — the essence of P2P file sharing — would not render a use "commercial."

Significantly, enterprises that supply goods or services used in P2P file swapping would also benefit from the privilege. Courts have held some such suppliers, including Napster, contributorily or vicariously liable for P2P participants' copyright infringements.[147] But that rule would no longer apply under the NUL regime. Because noncommercial P2P file sharing would not infringe the copyrights of swapped works, suppliers would not be contributorily or vicariously liable for such uses.

But that does not mean that P2P enterprises would necessarily get away scot-free. As I will now discuss, commercial suppliers of P2P software and services, like suppliers of other P2P-related items, would have to pay the NUL.

B. Imposing the NUL

The NUL would be levied upon commercial providers of all consumer products and services whose value is substantially enhanced (as determined by the Copyright Office) by P2P file sharing. In addition to commercial suppliers of P2P software and services, the NUL would be imposed on ISPs, computer hardware manufacturers, manufacturers of consumer electronic devices (including CD burners, MP3 players, and digital video recorders) used to copy, store, perform, or transmit digital files, and manufacturers of storage media. As technology evolves, the NUL might also extend to new products and services. For example, if, as some commentators predict, wireless communications "commons" based on spread spectrum or Wi-Fi technology supplant proprietary ISP-operated networks, the NUL might be imposed on consumers' wireless communications equipment.[148] The levy

146. *See*, *e.g.*, A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1015 (9th Cir. 2001) (stating that personal uses are "commercial," and thus disfavored for fair use, whenever users "get for free something they would ordinarily have to buy"); *see also* No Electronic Theft Act, Pub. L. No. 105-147, 111 Stat. 2678 (1997) (changing the definition of "financial gain," a prerequisite for criminal penalties for willful copyright infringement, from "for profit" to include the "receipt, or expectation of receipt, of anything of value, including the receipt of other copyrighted works").

147. *See A&M Records*, 239 F.3d 1004; *In re* Aimster Copyright Litig., 252 F. Supp. 2d 634 (N.D. Ill. 2002).

148. *See* Nicholas Negroponte, *Being Wireless*, WIRED, Oct. 2002, at 116 (predicting that micro-operators of Wi-Fi networks will soon replace large wired and wireless telephone companies); *see also* Yochai Benkler, *Overcoming Agoraphobia: Building the Commons of the Digitally Networked Environment,* 11 HARV. J.L. & TECH. 287 (1998) (discussing possibilities for a telecommunications commons employing spread spectrum technology); NATIONAL ACADEMY OF SCIENCES, BROADBAND: BRINGING HOME THE BITS 143–44 (2002) (describing WLAN and other broadband mobile technologies that take advantage of

might also extend to stereo systems, now in the prototype stage, that can download music from the Internet directly, without need of a personal computer.[149]

The Copyright Office would rely on market data and objective criteria to determine whether the value of a particular consumer product or service is "substantially enhanced" by P2P file swapping. The term "substantially enhanced" would be defined by law as a set threshold percentage of total retail value. As I explain in Part VI, that threshold percentage should be set quite low. Suppliers would pay differential levies, in amounts reflecting, at least in part, the Copyright Office finding of how much the value of each product and service is enhanced by P2P file swapping. A P2P-related consumer good or service should be exempt only if the levy on that item would be so small as not to be worth the costs of administration. In that way, the levy would be spread over virtually all P2P-related goods and services rather than targeting just a few. But at the same time, goods and services, like CD burners and MP3 players, that derive a very substantial part of their value from privileged file sharing would typically bear a proportionally larger levy than devices used primarily for other purposes.

C. Determining the NUL Amount

1. Process

The amount of the NUL would be determined (and periodically adjusted) through negotiations between associations representing the industries upon which the levy is imposed and associations representing holders of rights in different categories of works. In fact, the NUL would effectively consist of various sub-levies due from different levy payers to different rights-holders. Absent agreement, the amounts would be set (and periodically adjusted) in mandatory arbitration before a Copyright Office tribunal, roughly parallel to the arbitration proceedings regarding levies and compulsory licenses under existing copyright law. Since the negotiations would be conducted under shadow of mandatory arbitration, the criteria that the tribunal must use for determining the NUL amounts would sharply focus the negotiations.

The Copyright Act's current system for mandatory arbitration for compulsory licenses and levies entails the establishment of ad hoc

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unlicensed spectrum as presenting an "interesting possibility" for bottom-up, small operator high-speed communications networks).

149. *See* Arik Hesseldahl, *Digital Music Without a PC*, Forbes.com, *at* http://www.forbes.com/2003/10/22/cx_ah_1022tentech.html (Oct. 22, 2003) (describing DRM-compatible prototype developed by Sharp, Pioneer, and Kenwood joint venture).

panels, called Copyright Arbitration Royalty Panels ("CARPs"). The CARP process has been the subject of widespread criticism.[150] Indeed, if pending legislation is enacted, the CARPs will be replaced by proceedings before a panel of three full-time "copyright royalty judges" holding collective expertise in copyright law, arbitration, and economics.[151] Especially given the NUL's wide scope, my NUL proposal would require that the current scheme be substantially revamped, along the lines of the proposed legislation, to make the arbitration proceedings more efficient, predictable, and professional. Further details of such improvements is beyond the scope of this Article, but I will focus on one factor that is critical both for the character and the substantive outcome of the arbitration proceedings. That factor is the criteria the tribunal must employ to determine the NUL amounts.

2. Criteria

The Copyright Act sets out two distinct standards for CARPs to determine the amount of compulsory licenses provided for under the Act. For most compulsory licenses, including compulsory licenses for cable and satellite retransmissions and certain satellite digital audio radio services,[152] the CARP must follow a multi-factor social utility standard designed to maximize the availability of creative works to the public. In setting the compulsory license rate, the CARP must seek to assure copyright holders a fair return and compulsory licensees a fair income under prevailing economic conditions. In so doing, it must assess the relative roles of the copyright holders and licensees in making the copyrighted works available to the public in light of their respective creative contribution, technological contribution, capital investment, cost, and risk.

More recently, however, Congress has veered away from that broad fair return/fair income standard to one designed to mimic market bargains. The Copyright Act provides for a compulsory license for certain transmissions of sound recordings via Internet radio, or "web-

150. Criticism centers on the high cost of CARP proceedings (due in part from the fact that the parties must pay the arbitrators' hourly fees) and on the fact that CARP arbitrators are chosen ad hoc and often have no expertise in copyright law, leading to a lack of predictability of results. In Congressional hearings on the CARP structure and process, the Copyright Office has recommended that the process be revamped. *See Copyright Arbitration Royalty Panel (CARP) Structure and Process: Hearing Before the Subcomm. on Courts, the Internet, and Intell. Prop. of the House Comm. on the Judiciary*, 107th Cong. 71 (2002) (Statement of Marybeth Peters, Register of Copyrights), *available at* http://commdocs.house.gov/committees/judiciary/hju80194.000/hju80194_0.htm.

151. Copyright Royalty and Distribution Reform Act of 2003, H.R. 1417, 108th Cong. (2003). The proposed legislation was approved by the House Judiciary Committee on September 24, 2003, and reported to the House for vote. *See House Judiciary Committee Approves Bill on Copyright Royalty Distribution Reform*, 66 BNA PATENT, TRADEMARK & COPYRIGHT J. 576 (2003).

152. *See* 17 U.S.C. § 801(b)(1) (2001).

casting." The webcasting provisions generally require CARPs to set a rate and terms that "would have been negotiated in the marketplace between a willing buyer and a willing seller."[153]

I propose that, in principle, the fair return/fair income standard be applied to determine the amount of the NUL. The market bargain standard requires that the panel hypothesize about the rate to which the parties would agree if there were a market for the license in question.[154] It is both highly speculative and inapt for calculating the NUL. Applying the fair return/fair income standard better reflects the substantial noncopyright holder contribution and capital investment manifest in P2P file sharing systems and networks. It also expresses the intuition that copyright holders only have a right to remuneration for noncommercial P2P file swapping; they do not have a proprietary right to refuse to grant permission for such activity or the prerogative to reap the entire consumer surplus from that file swapping. The rationale for this is simple. The NUL would not serve merely to overcome transaction cost barriers to voluntary licensing of noncommercial P2P file swapping, although that is one of its advantages. Rather the levy is meant to occupy a middle ground. It is a compromise between the position that noncommercial, personal uses should be the prerogative of the individual and the position that the law should guarantee that both copyright holders' exclusive rights and practical ability to enforce those rights extend to P2P noncommercial uses.

At the same time, applying the fair return/fair income standard to the realm of diverse and rapidly developing P2P technology and use could prove no less unwieldy than the willing buyer/willing seller standard. Giving the arbitration board no more guidance than a set of multiple, open-ended factors might well yield highly indeterminate and controversial results, greatly increasing the costs of administering the NUL. Accordingly, I propose that the Copyright Office tribunal use a more precise and readily calculable proxy for the fair return standard. As I will presently enumerate, at least for the next five years, the tribunal should set the NUL in amounts designed to compensate copyright holders for their "adjusted net revenues actually supplanted by P2P file sharing." While certainly far from a mechani-

153. 17 U.S.C. § 114(f)(2)(B) (2000). For application of that standard, see Rates and Terms for Eligible Nonsubscription Transmissions and the Making of Ephemeral Reproductions, 37 C.F.R. § 261 (2003). The proposed Internet Radio Fairness Act, H.R. 5285, 107th Cong. (2002), would eliminate the willing buyer/willing seller standard and replace it with the fair return/fair income standard generally applicable to compulsory licenses under the Copyright Act, as set forth in § 801(b)(1) of the Copyright Act.

154. *See, e.g.*, In the Matter of Rate Setting for Digital Performance Right in Sound Recordings and Ephemeral Reproductions, Docket No. 2000-9, CARP DTRA 1&2, Interim Public Version at 21–25 (Feb. 20, 2002) (United States Copyright Office, Report of the Copyright Arbitration Royalty Panel), *available at* http://www.copyright.gov/carp/webcasting_rates.pdf (discussing hypothetical market for webcaster licenses).

cal calculation,[155] that formula would be considerably easier to administer than the current Copyright Act standards for compulsory licenses.

The problem with employing this lost revenues metric indefinitely is that no one can predict how online distribution and P2P file sharing will evolve over time. Even five years hence, digital distribution markets and technologies might have changed so radically or so fully replaced existing copyright markets and distribution regimes that it no longer makes sense to use supplanted revenues from pre-P2P distribution as the baseline for determining a fair return to copyright holders for NUL-privileged P2P file sharing. In that event, the tribunal should adopt a new, readily calculable formula, designed to insure that both copyright holders and providers of P2P-related products and services receive a fair return on their respective investments and contributions to the creation and dissemination of creative expression.

What do I mean by copyright holders' "adjusted net revenues actually supplanted by P2P file sharing?" The baseline for calculation would be copyright industry revenues from sales of hard copies, like CDs and DVDs, and consumer ordered broadcasts, principally cable television pay-per-view. The NUL privilege would also supplant sales from licensed online distribution sites like Apple Computer's iTunes. But at least as of this writing, licensed online distribution represents only a miniscule fraction of copyright industry revenues.[156] Moreover, consumer demand for online distribution owes much of its force to unlicensed P2P file sharing networks and the investment and innovation of P2P-related service, software, and device suppliers, not the copyright industries. So following the fair return calculus as set forth in the Copyright Act, the NUL amount attributable to online distribution would be reduced to account for the creative contribution and investment of P2P suppliers. For that reason, my discussion of how the NUL would be calculated will focus almost entirely on supplanted revenues from hard copy sales and pay-per-view.

Current copyright industry revenues would represent the NUL tribunal's point of departure, but in calculating the NUL amount, the tribunal would make a number of significant deductions from those

155. *See, e.g.*, Stan Liebowitz, *Policing Pirates in the Networked Age*, Cato Policy Analysis No. 438, at 11–14 (May 15, 2002), *available at* http://www.cato.org/pubs/pas/pa438.pdf (describing conflicting expert testimony in the Napster litigation).

156. At this point, Apple's iTunes is by far the most successful licensed online distribution venture. It announced on October 20, 2003 that, in its first six months of service, approximately 14 million songs were purchased for download at 99 cents per song. Press Release, Apple Computer, One Million Copies of iTunes for Windows Software Downloaded in Three and a Half Days (Oct. 20, 2003), *available at* http://www.apple.com/pr/library/2003/oct/20itunes.html. Even those results — a dramatic success compared to other licensed online ventures — amount to only about one-fifth of one percent of gross revenues from the sales of prerecorded CDs in the United States for the same period.

figures. First, the tribunal would need to assess sales and market survey data regarding how much P2P file sharing actually supplants pre-digital markets. At this point, P2P file sharing's likely impact on hard copy markets remains uncertain.[157] While NUL-privileged file sharing would almost certainly impair hard copy and pay-per-view revenues, it does seem that the copyright industries' doomsday scenarios are overblown.

P2P's greatest impact will likely be on sales of prerecorded music. But the best preliminary empirical data suggests that file swapping will supplant no more than 20 to 25 percent of CD sales, at least for the near future.[158] Several factors support this conclusion. Most basically, despite the record industry's sometimes grandiose rhetoric, files swapped without payment hardly represent a one-to-one substitute for CD purchases. Those who currently exchange and download music at its zero marginal cost through KaZaA and other such services could be expected to buy only a fraction of that music if they had to pay for it. Moreover, some studies even suggest that, in discovering new songs, musicians, and genres, music file swappers are more likely to *increase* their CD spending than those who do not swap files.[159] Apparently, there is a continuing demand among many consumers for prerecorded CDs conveniently packaged with an album cover, liner notes, and lyrics. And, as some have already discovered, record labels can fuel that demand by adding merchandise, fan club membership, and concert promotions to the package.[160]

Nor would P2P file sharing substantially supplant other copyright industry revenues. Indeed, it might even enhance some revenues. As some copyright holders have discovered, file trading can spur demand for live public performances, broadcasts, webcasts, merchandising, and commercial licensees.[161] Even P2P streaming should not signifi-

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157. Indeed, Forrester Research recently concluded that there is no evidence of decreased CD buying among frequent digital music consumers. *See Forrester Sees $2 Billion Digital Music Market By 2007*, SiliconValley.com, *at* http://www.siliconvalley.com/mld/siliconvalley/news/editorial/3856253.htm (Aug. 13, 2002).

158. *See* Stan J. Liebowitz, Will MP3 Downloads Annihilate the Record Industry? The Evidence So Far (June 2003), *at* http://wwwpub.utdallas.edu/~liebowit/knowledge_goods/records.pdf (basing conclusions on an empirical study of the past 30 years of recorded music sales). For an analysis of the studies submitted by party experts in the Napster litigation, see Liebowitz, *Policing Pirates in the Networked Age*, *supra* note 155. Given bandwidth and digital storage constraints, P2P file sharing should supplant even less of movie rentals and DVD sales, at least in the short term.

159. *See* Alex Daniels, *Digital Rights Put to Test*, TechNews.com, *at* http://www.washingtonpost.com/ac2/wp-dyn/A56664-2002Jun4 (June 4, 2002) (reporting Jupiter Media Metrix survey finding that music listeners who had engaged in P2P file sharing were 75% more likely to increase their music spending than those who had not).

160. *See* Chris Nelson, *Trying to Sell CD's by Adding Extras*, N.Y. TIMES, Oct. 6, 2003, at C7 (reporting industry forays into bundling various goods with CDs, including video games, trading cards, films about the recording artists, and chances to meet the artists).

161. *See In a Spin*, THE ECONOMIST, Feb. 27, 2003, *at* 58 (reporting that record labels are considering increased participation touring, concerts, and sponsorship, which added about

cantly displace its copyright-licensed counterparts: broadcasting and commercial webcasting. Most consumers will continue to want to listen to and view programming selected by mass media gatekeepers. After all, cultural expression is a quintessential "solidarity good."[162] As much as consumers value cultural expression for its own sake, they also want to share their experience with others and to be in the know about what others in a mass audience are experiencing.[163]

In addition, copyright holders should be compensated only for losses in net revenue directly attributable to the value of copyright-protected content embodied in the hard copy, not for gross retail revenue from hard copy sales per se. For example, roughly half the price that consumers pay for a CD is attributable to disc manufacture, packaging, distribution, retail costs, and retail mark-up.[164] That revenue should not be counted in compensating copyright holders for the use of their works.

Of course, to treat record labels and motion picture studios merely as copyright-holding content producers misses how those industries really operate and profit. The labels and studios act not merely as producers, but also hard copy distributors. Indeed, it is their control of distribution, through vertically integrated subsidiaries, that constitutes the core of their power and a key source of their revenue.[165] And in the hard copy world, those copyright industries rightly earn a distributor's premium on hard copy sales because their vast distribution networks are critical to getting hard copies to consumers.

But although hard copy sales are the initial baseline for setting the NUL, we should not assume that industry reliance on hard copy distribution will continue. Indeed, we should not countenance copyright industry reluctance to move to online dissemination. Accordingly, in assessing the NUL amount, we should presume, first, that a growing portion of hard copy sales would be supplanted by licensed online distribution even without P2P file sharing. As the copyright industries have belatedly recognized, there is considerable consumer demand for online distribution of content, most of it currently met by unlicensed

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40% to global sales of recorded music in 2001); *see also* Keighley, *supra* note 134 (some computer game manufacturers encourage users to make and distribute derivative versions because that drives sales of the original).

162. Cass Sunstein and Edna Ullman-Margalit label as "solidarity goods" those goods whose value increases as the number of people enjoying them increases. Cass R. Sunstein & Edna Ullman-Margalit, *Solidarity Goods*, 9 J. POL. PHIL. 129 (2001).

163. *See* Neil Weinstock Netanel, *Market Hierarchy and Copyright in Our System of Free Expression*, 53 VAND. L. REV. 1879, 1907–09 (2000).

164. *See* BENJAMIN M. COMPAINE & DOUGLAS GOMERY, WHO OWNS THE MEDIA?: COMPETITION AND CONCENTRATION IN THE MASS MEDIA INDUSTRY 326 (3d ed. 2000) (reproducing a table breaking down the costs involved in producing and distributing a CD).

165. *See id*. at 326–27 (record labels), 375–80 (motion picture studios).

P2P file sharing.[166] Second, we should presume that copyright industry profit margins from online distribution would be materially lower than from hard copy distribution. Given what appears to be the greater competitiveness of digital markets as compared to their brick-and-mortar counterparts, it is doubtful that the industries could command the same premium for online distribution.[167]

At bottom, there is no reason why the NUL should protect the industries' hard copy distribution premiums given the advent of online dissemination. The costs of online distribution are borne primarily by ISPs and their customers, not by copyright industries.[168] The NUL levy rate should thus reflect both the lower costs of online distribution and the lesser need for industry investment in infrastructure for physical distribution.

On the other hand, copyright industries' "adjusted net revenues" should continue to reflect the industries' role and investment in assembling, promoting, and marketing creative works. Given the intense competition for user attention on the Internet, those functions will be no less important for online distribution than for hard copy. But here too, a competitive digital market might enable copyright industries to reduce marketing costs and thus provide a lower baseline for calculating adjusted net revenues. Following Microsoft's recent use of KaZaA

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166. In the area of prerecorded music, for example, both P2P file sharing and licensed online distribution have unleashed an enormous, previously untapped demand for acquiring individual songs and creating personal song lists, rather than having to buy record label selected song bundles in the form of albums. But that is far from the only source of consumer demand for online distribution; early data from Apple Computer's iTunes online distribution site indicate that approximately half the downloads have been complete albums. *See* Charles Arthur, *Apple Plan to Roll Out Net Music in Europe Delayed*, THE INDEPENDENT (London), June 25, 2003, at 17 (reporting Apple statistics indicating that more than 46% of songs were downloaded as part of albums).

167. According to some studies and economic models, brick-and-mortar markets are characterized by greater price dispersion and price stickiness than online markets and thus are likely to yield larger profit margins. *See* Indrajit Sinha, *Cost Transparency: The Net's Threat to Prices and Brands*, HARV. BUS. REV., Mar. 2000, at 43. In addition, as in other areas, mature electronic markets for copyright-protected content would be expected to reduce information asymmetries for buyers by helping them to be better informed about prices. *See* Sanjay Gosain & Zoonky Lee, *The Internet and the Reshaping of the Music CD Market*, 11 ELECTRONIC MARKETS 140, 141–43 (2001) (noting that mature electronic markets for copyright-protected content would be expected to reduce information asymmetries for buyers by helping them to be better informed about prices). Studies of some online retail markets still show substantial price dispersion, reflecting a marked dominance of heavily branded retailers characteristic of winner-take-all markets. *See* Neil Weinstock Netanel, *Cyberspace 2.0*, 70 TEXAS L. REV. 447, 478–84 (2000) (discussing online markets). But since demand for music is centered around the recording artists, not the record label or other intermediary supplier, it is doubtful that online music distribution would fall into this category. Accordingly, for example, it is unlikely that the labels could sell online music with the same premium as in the hard copy world, where they typically sell CDs for more than double the price of what they charged for the same music on LPs and cassettes, both of which cost more to manufacture than CDs. *See* Harmon, *supra* note 59, at B1.

168. *See* Ku, *supra* note 92.

as a marketing portal,[169] for example, copyright industries might use P2P file swapping to promote their products. In so doing, they might realize considerable savings on the substantial sums they now expend on advertising and payola.[170]

Finally, copyright industries should not be entitled to the oligopoly rents they have sometimes been able to garner in offline markets and have sought to extend to the digital marketplace. The record and motion picture industries, in particular, have been the subject of ongoing antitrust investigations. The Federal Trade Commission recently found that over a three-year period, U.S. consumers paid as much as $480 million more than they should have for CDs and other music because of anticompetitive collusion among record labels.[171] Meanwhile, the Justice Department is conducting an antitrust probe of the record labels' and motion picture studios' online dissemination ventures.[172] The joint ventures have also been a target of private litigation.[173] As Judge Patel iterated in granting Napster's request for discovery on issues of record label antitrust violations and copyright misuse, "Even on the undeveloped record before the court, these joint ventures look bad, sound bad, and smell bad."[174] The "adjusted net

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169. *See* Amy Harmon, *Marketers Try to Turn Web Pirates Into Customers*, N.Y. TIMES, Nov. 4, 2002, at C1; Jon Healey, *Microsoft Using Kazaa as a Marketing Portal*, L.A. TIMES, Oct. 21, 2002, § 3, at 1. Peer networks also undermine the justification for paying for marketing out of copyright holders' supracompetitive rents. *See* Ku, *supra* note 92, at 315–17; NADEL, *supra* note 92. Audiences generally want to know what others whose opinions they value think of new music, books, and movies. Peer recommendations and metering technology can provide that information without the enormous sums that copyright industries now spend on marketing, promotion, and payola. *See* Benkler, *Coase's Penguin*, *supra* note 95, at 404–15.

170. *See* RICHARD E. CAVES, CREATIVE INDUSTRIES: CONTRACTS BETWEEN ART AND COMMERCE 286–96 (2000) (discussing payola in various industries); Ralph Blumenthal, *Charges of Payola Over Radio Music*, N.Y. TIMES, May 25, 2002, at B7.

171. *See* In the Matter of Time Warner Inc. et al., No. 971-0070 (May 10, 2000) (Statement of FTC Chairman Robert Pitofsky et al.), *available at* http://ftc.gov/os/2000/05/cdstatement.htm; Press Release, Federal Trade Commission, Record Companies Settle FTC Charges of Restraining Competition in the CD Music Market (May 10, 2000), *available at* http://www.ftc.gov/opa/2000/05/cdstatement.htm. In September 2002, the labels agreed to pay consumers $67.3 million in cash and donate $75.7 million worth of CDs to charities and schools in settlement of a lawsuit brought by 43 states alleging that the labels' "minimum advertised pricing" policy amounted to price-fixing in violation of antitrust law. *See* Lisa M. Bowman, *Labels Pay to Settle Price-Fixing Suit*, CNET News.com, *at* http://news.com.com/2100-1023-960183.html (Sept. 30, 2002).

172. *See* Matthew Fagin, Frank Pasquale & Kim Weatherall, *Beyond Napster: Using Antitrust Law to Advance and Enhance Online Music Distribution,* 8 B.U. J. SCI. & TECH. L. 451, 467–68 (2002); *see also* Sue Zeidler, *Justice Dept Probes Studios' Web-Video Ventures*, Yahoo! Technology, *at* http://in.tech.yahoo.com/011222/64/1bma4.html (Dec. 21, 2001). European Union competition authorities are also investigating the record labels' online joint ventures. *See* Matt Richtel, *Aggressive Strategy Brought On Inquiry of Recording Industry*, N.Y. TIMES, Oct. 22, 2001, at C10.

173. *See* Amy Harmon, *Movie Studios Provide Link For Internet Downloading*, N.Y. TIMES, Nov. 11, 2002, at C1; Anna Wilde Mathews, *Movie Web Site Names Studios In Antitrust Suit*, WALL ST. J., Sept. 24, 2002, at B1.

174. *In re* Napster, Inc. Copyright Litig., 191 F. Supp. 2d 1087, 1109 (N.D. Cal. 2002).

revenues" formula for determining the NUL should not reflect copyright industry revenues attributable to such anti-competitive practices.

In sum, remunerating authors and their assigns does not mean providing copyright industries with a hedge against technological change or a competitive market. Determining the NUL levy amount pursuant to a formula of adjusted net revenues would reflect that calculus. It would compensate copyright holders only for revenues actually supplanted by noncommercial P2P file sharing, not those that would ensue in any event from a partial transition from hard copy distribution to competitive digital dissemination.

Looking past the initial five-year period for a moment, the NUL would likely be increasingly based on a fair return for online distribution, rather than supplanted hard copy revenues. Some commentators have speculated that, absent unlicensed P2P file sharing, an online distribution market would yield greater revenues for copyright industries than hard copy markets, with increased sales volume making up for decreased profit margins.[175] If so, the NUL should be augmented accordingly, although still tempered, in accordance with the fair return/fair income calculus, by P2P suppliers' contributions to online distribution. Ultimately, the NUL tribunal would do well to set the NUL as a specified amount per NUL privileged use of a given type of work. That way, the total amount of the NUL pie for each category of copyrighted expression will grow (or shrink) as a function of consumer demand for that expression.

3. Distribution of NUL Proceeds

Levy distribution is no less important than determining the levy's amount. On a macro level, NUL distribution would be fairly straightforward. The holders of copyrights in each category of works, such as sound recordings, musical compositions, and motion pictures, would be entitled to the net adjusted revenues actually supplanted by the noncommercial P2P file sharing of works of that category. Following that basic allocation, the NUL would then require a micro distribution, a determination of the share of each copyright holder within each category. That distribution could also be straightforward in principle: NUL proceeds would be allocated among individual copyright holders

175. *See, e.g.*, Clay Shirky, *Where Napster is Taking the Publishing World*, 79 HARV. BUS. REV. 143, 148–49 (Feb. 2001) ("The restructuring of the music industry — away from per-unit pricing and toward subscription fees, advertising or sponsorship — will almost certainly increase total revenues. That is because the industry's current system of per-unit pricing for physical objects imposes large costs on producers and consumers. With a free-flowing electronic system, the huge percent demand for music will finally be released.").

in line with P2P file sharers' demand for their works.[176] But doing so would require a mechanism for measuring that demand.

a. Tracking P2P File Sharer Demand

One purported advantage of proprietary copyright is that when consumers must pay to access and use a work, the copyright holder's remuneration reflects the work's social value and thus gives copyright holders an incentive to produce more works that people want. In practice, ubiquitous transaction and enforcement costs and, as I will discuss below, significant barriers to price discrimination render proprietary copyright a highly imperfect mechanism for achieving that goal. Nevertheless, to the extent possible, the NUL should likewise tie copyright holder remuneration to aggregate private value, while avoiding the drawbacks of copyright holders' proprietary control.

Accordingly, NUL proceeds should be distributed to copyright holders in proportion to the number of noncommercial P2P downloads, streams, and subsequent uses of their respective works.[177] Subsequent uses, which might entail viewing or listening to a work or copying it onto an MP3 player or other portable device, should be given greater weight than initial downloads. Metering such uses would more accurately reflect each work's value to users than merely counting the number of downloads or even the number of hard copy purchases.[178] Certain types of works tend to be subject to more repeated viewing, reading, or listening than others, and such ongoing use is an important component of a work's value.[179] In addition, it appears that users often download works from P2P networks merely to determine whether they like the work, not because the user knows that she values the work in advance of downloading.[180]

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176. This is not the only plausible method. As some commentators have suggested, P2P users might also vote for which artists should receive the proceeds or allocate proceeds to intermediaries based on which artists those intermediaries represent. *See* ECKERSLEY, *supra* note 90, at 10–12; James Love, How Should Musicians Be Paid to Create Digital Works?, Presentation at Banff Centre New Media Institute Workshop, slides 47–51 (July 4, 2002), *available at* http://www.cptech.org/slides/banff-p2p-cl.ppt.

177. I refer here to the number of uses, not the number of bits that are used. Measuring bits would simply encourage copyright holders to create larger files.

178. For certain works, such as computer games, measuring the time a game is used would more accurately reflect consumer demand. Metering technology is already applied to measure the total time spent playing online multi-user games. *See* Keighley, *supra* note 134 (reporting that "[o]ver 1.7 million players spend more than 2.4 billion minutes a month in the [Counter-Strike multiplayer action] game").

179. For a rough measure of this, see Eric W. Rothenbuhler & John M. Streck, *The Economics of the Music Industry*, *in* MEDIA ECONOMICS; THEORY AND PRACTICE 199, 200, 202 (Alison Alexander et al., eds., 2d ed. 1998) (showing that consumers spend widely varied amounts of time per dollar on different types of media).

180. Of course, counting downloads, streams, or even repeated uses of downloaded files, does not necessarily measure a work's value to the consumer. Neither expressive works nor uses of those works are necessarily fungible. It may be that devotees of Harry Potter value

There exist a number of digital fingerprinting and sampling technologies capable of metering downloads, streams, and uses.[181] They are currently used by copyright holders seeking to track infringers, marketing firms seeking to identify which titles are most popular with file swappers, and ISPs seeking to conserve bandwidth by limiting file sharing. There is even an open-source meta-data service for tagging digital music files that might serve as a platform for NUL metering.[182] Such technologies rely on DRM encryption and smart software agents to identify files embodying copyright-protected works, track uses of personal computers and other devices, and transfer metering information to the location where use information is aggregated. Some such metering software would reside on ISP gateways to the Internet and some would reside on user devices.[183]

Metering all such uses could be costly. Moreover, metering subsequent uses of downloaded works on devices like MP3 players, which are not connected to the Internet (or wireless communications networks), might elide tracking, at least under current technology. But significant cost reductions, with a tolerable diminution in precision, could be obtained by representative statistical sampling of uses. And digital technology enables the use of a far more comprehensive sample than currently employed to measure such uses as television viewing and radio play of songs. All in all, digital tracking, metering, and sampling would enable a far more accurate measure of a copyright

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each read more than readers of a local newspaper or listeners to a popular song value their repeated uses, although each might access the work the same number of times. A copyright holder's perfect price discrimination would measure that value, but as I will discuss, such price discrimination can exist only in theory. All in all, metering downloads, streams, and uses would serve as a highly effective proxy for private valuation.

181. Possible technologies include variants of Relatable's TRM and Relatable Engine, Audible Magic's content-based identification technology, and Entriq's Media Authentication Network. *See* Relatable, http://www.relatable.com; Audible Magic, http://www.audiblemagic.com; Entriq, http://www.entriq.com; *see also* Evan Hansen, *EMI, Audible Magic Ink Anti-piracy Deal*, CNET News.com, *at* http://news.com.com/2100-1023-963756.html (Oct. 29, 2002). Metering of such subsequent uses as well as downloads and streams appears to be technologically feasible. *See* Cherry, *supra* note 125 (describing "RightsMarket" music-playing tracking software); Chris Oakes, *Word Docs with Ears*, Wired News, *at* http://www.wired.com/news/techology/1,1282,38516,00.html (Aug. 31, 2000) (noting that code in a word processed document or e-mail message can track subsequent uses of the file and report those uses over the Internet to another location); Brad King, *Songbird: Big Huff, Small Puff*, Wired News, *at* http://www.wired.com/news/mp3/0,1285,43687,00.html (May 10, 2001) (discussing file swapping tracking systems of varying effectiveness).

182. The service is called MusicBrainz. *See* Press Release. MusicBrainz, MusicBrainz Launches Open Source Music Recognition Service (Feb. 11, 2003), *available at* http://musicbrainz.org/news/pressreleases/20030211-1.html.

183. Audible Magic's fingerprinting software, for example, resides in a local network's router or gateway to the broader Internet. The software creates a copy of all the traffic flowing past, identifies those bits that employ FTP or the Gnutella technology, and then recreates those files to identify them. *See* John Borland, *Fingerprinting P2P Pirates*, CNET News.com, *at* http://news.com.com/2102-1023-985027.html (Feb. 20, 2003).

work's value to audiences than the current copyright regime, and would do so without requiring user payments per download or use.

b. Privacy

Of course, metering downloads and uses raises privacy and free speech concerns, especially if, as would seem to make the most sense, metering is undertaken by or on behalf of associations representing the copyright holders. But these concerns can be substantially ameliorated. Metering could be subjected to strict technological and legal guarantees against any tabulation or use of the information other than as an aggregate measure of all user downloads and uses of each work. There are already rough precedents for such guarantees in current laws prohibiting disclosures of electronic communications,[184] the viewing habits of cable subscribers,[185] telephone customer information,[186] and video rental records.[187]

c. Circumventing and Gaming the System

Importantly, so long as privacy protections are in place, NUL metering technology, as opposed to copyright holders' DRM encryption, should not be a target of widespread user resistance and circumvention. Many users would even welcome such metering since the only ramification of metering a user's uses is that the user's favorite authors and recording artists receive more money. If anything, in fact, since users bear no monetary cost for metered uses, some users and creators might try to game the system by artificially inflating download or use counts for a given work so that NUL metering tracks demand for the work that isn't really there. For instance, gamers could deploy a "ballot stuffing" computer program that plays the same song over and over again or political advocacy groups could produce "cheap" songs and ask members to download them so that the group can obtain funding.

There are a number of reasons why such efforts to game the system are unlikely to undermine the integrity of NUL metering. First, as in most contexts where large numbers of people are free to choose from among a myriad of options, NUL-privileged copying, listening and viewing can be expected to follow a power law distribution curve; a very large portion of the uses in which people choose to engage will

184. *See* Electronic Communications Privacy Act of 1986, 18 U.S.C. §§ 2701–09, 2711, 3121–26 (1994 & Supp. IV 1998).

185. *See* Cable Communications Policy Act of 1984, 47 U.S.C. § 551 (1994).

186. *See* Telecommunications Act of 1996, 47 U.S.C. § 222 (Supp. IV 1998).

187. *See* Video Privacy Protection Act of 1988, 18 U.S.C. § 2710 (1994).

involve a small minority of especially popular works.[188] Consequently, even in a worst-case scenario, it is extremely unlikely that gamers could divert more than a fraction of the revenue that would accrue to popular works. Rather, to the extent bad actors do succeed in gaming NUL metering, they would compete only with works that are middle to marginal in popularity. That situation would be far from optimal. But it does suggest that, even if gaming does occur, it would yield only modest payoffs and could be held to manageable proportions.

Second, there are various technological mechanisms for sharply reducing the payoff for deploying "ballot stuffing" computer programs and other such activity. For example, metering technology could track a small, constantly changing, random sample of uses. That way, the chances that any particular gamer's fictitious "use" would actually be counted would be remote, rendering the allocation of computer resources for attempted gaming costly as compared to its potential gain. While such sampling would also sharply reduce the chances that any given legitimate use would be counted, legitimate users would incur no cost to their use. They would view or listen to the works they like when it suited them. For them, the possible metering of their use for purposes of distributing NUL proceeds would simply be a byproduct of what they wish to do anyway. In contrast to the gamer, they would not be dissuaded from listening to a song they wish to hear or viewing a movie they wish to see because of the remote chance that their use would be metered.[189]

Third, I suspect that NUL fraud would be far more isolated than the widespread P2P evasion of proprietary copyright we see today and, in contrast to unlicensed P2P file sharing, would run sharply counter to widely-held social norms. As such, it would properly and efficiently be a target of criminal prosecution.

Finally, if dissidents and political activists actually were to create songs, movies, and other works and convince cohorts to download them, that would illustrate an advantage of the NUL, not a gaming of the system. From both a political and rational business perspective, dissident creators would do far better to invest in quality expression that might be convincing and appealing to others than to try to convince supporters to download cheap works that no one really wants to

188. *See* Clay Shirky, *Power Laws, Weblogs, and Inequality,* Shirky.com, *at* http://www.shirky.com/writings/powerlaw_weblog.html (Feb. 10, 2003) (contending that "power law distributions" are inevitable whenever many people may freely choose from among many options — as is the case with Internet users' choices regarding which weblogs to visit — because the early actors tend to influence those that choose later).

189. In addition, in some contexts, technology similar to that which Google uses to identify and prevent rigging search result rankings might be able to detect tampering. *See* Gwendolyn Mariano, *Google Protects its Search Results*, CNET News.com, *at* http://news.com.com/2100-1023-883558.html (Apr. 16, 2002) (describing Google's efforts to prevent search result manipulation).

see or hear.[190] And if dissident expression garners a significant enough following to earn the creator remuneration, then the NUL will have underwritten a broader spectrum of creators and fostered greater expressive diversity than under the current copyright regime. A similar point can be made with respect to independent writers, musicians, and filmmakers with devoted, but relatively small followings. Like all copyright holders, political activists and independent artists would be perfectly entitled to gain a share of NUL proceeds by advertising, providing free downloads and streams, and encouraging users to make and disseminate modified versions of their works. Indeed, the NUL regime would likely spawn numerous copyright holder sponsored sites designed for just those purposes.

d. Modified Versions of Existing Works

How would copyright holders be compensated for P2P uses of remixes, mashups, and other modified versions of existing copyright-protected works? As discussed above, noncommercial creators and P2P disseminators of such modified versions would be required to identify the author of the underlying work (as well as identify their version as an unauthorized modification) in perceivable form. They would also be required to leave intact the "copyright management information" embedded in the underlying work.[191] NUL metering technology would read that information, identifying the author and copyright owner of the work that has been modified. Accordingly, any use of the noncommercial modified version would be counted as a use of the underlying work for purposes of tabulating the copyright holder's share of NUL proceeds.[192]

Counting uses of the derivative creation as if they were uses of the underlying work might seem unfair. After all, some of the value of the modified version would presumably reside in the modifications, not merely the original. But in effect, holders of copyrights in works that others modify would earn a premium for relinquishing creative control. Accordingly, derivative creators who wish to receive a share of NUL proceeds would have to rely on traditional copyright law, just as they would if they wish to earn revenue from exploitation of their

190. *See* Lucas Gonze, *Gaming Compulsories*, O'Reilly Developer Weblogs, *at* http://www.oreillynet.com/pub/wlg/3801 (Sept. 25, 2003).

191. *See* 17 U.S.C. § 1202(c) (2003) (defining "copyright management information" as information identifying the work, its author and copyright owner, and other information).

192. As noted above, the creation and distribution of commercial modified versions — where the derivative creator wishes to earn revenue from distribution of the work — would not be privileged under the NUL regime. For those works, absent fair use or some other privilege under traditional copyright law, the creator would have to negotiate with the holder of the copyright in the underlying work for payment of a royalty or division of NUL proceeds.

derivative creation in some other venue. They would need to license that right from the owner of the copyright in the underlying work, unless the derivative creation constitutes a fair use or falls within some other privilege under the Copyright Act.

e. Revenue Redistribution

A final important question is to what extent, if any, should the NUL should be used to redistribute revenues from copyright industries (record labels, movie studios, book publishers, and the like) to creators. In some countries, equipment and media levies are used in part to subsidize authors unlikely to attract a significant paying audience.[193] Some commentators have advocated that such an approach be adopted in the United States as well.[194] Others have proposed that some portion of levy proceeds be distributed directly to authors and performers, sidestepping copyright industry intermediaries, who often hold the copyright in a work and pay authors what many deem to be meager royalties. In that regard, the recently enacted Small Webcaster Settlement Act directly allocates 45 percent of the proceeds from its statutory license payments to sound recording artists and five percent to nonfeatured performers,[195] rather than funneling that payment through record companies as is generally the case with respect to copyright and performers' royalties under current law.

Such proposals are well-meaning, but, on balance, should be rejected.[196] Levy proceeds would best be distributed in the manner that most closely reflects audience demand. They should also be paid to current copyright holders. While subsidizing certain forms of noncommercial authorship can be a salutary endeavor, using levy proceeds for that purpose would greatly complicate and raise the cost of administering levy distributions. It would also open the door to interest group rent-seeking at the legislative level.[197]

Distributing some proceeds directly to authors and performers rather than through copyright industry intermediaries also makes

193. *See* Glynn S. Lunney Jr., *The Death of Copyright: Digital Technology, Private Copying, and the Digital Millennium Copyright Act*, 87 VA. L. REV. 813, 915 (2001) (noting that a number of European countries set aside a certain portion of the levy funds for specified social and cultural purposes, including the funding of young or avant-garde artists).

194. *See, e.g.*, *id*. at 912 (characterizing the directing of incentives towards the "marginal, rather than non-marginal work" as a clear advantage of a levy-based approach).

195. Small Webcaster Settlement Act of 2002, Pub. L. 107-321 (2002) (distribution provisions codified at 17 U.S.C. § 114(g) (2003)). Similarly, the Audio Home Recording Act provides for direct distributions to performers, nonfeatured vocalists, and writers. Audio Home Recording Act of 1992, 17 U.S.C. § 1006(b) (2003).

196. I state this conclusion as a policy ideal. It may well be that including direct payments to authors would be necessary to obtain the political support required to enact a levy regime.

197. Copyright legislation is notorious for interest group rent-seeking and allocation. *See* JESSICA LITMAN, DIGITAL COPYRIGHT 35–63 (2001).

some sense in principle. P2P networks open opportunities for authors to distribute their works directly to audiences. And much of the cost of P2P distribution is borne by network participants, not record labels, book publishers, or other industry intermediaries.

That, emphatically, is not to say that intermediaries would descend into obsolescence in an age of P2P distribution. In addition to distributing records, for example, record labels discover artists who may have popular appeal, help assemble bands, package and market albums, and finance recording costs and concert tours.[198] Musicians and audiences would continue to have need for such services even if songs are primarily disseminated online instead of through CD sales.

Nevertheless, P2P dissemination does call into question the continuing dominance of traditional copyright industries. At the very least, it provides opportunities for authors and artists to reach a select audience and earn a modest income even if they are not among the select few chosen for mass-market stardom by copyright industry gatekeepers. And given their decreased dependency on copyright industry intermediaries for financing the significant costs of hard copy distribution, authors might be able to turn to a variety of third parties to provide publicity, editing, financing, and other such services.

But if authors in fact have less need for intermediaries in the P2P environment, then once P2P distribution reaches its full potential, authors will be in a far better bargaining position vis-à-vis record labels, book publishers, and other intermediaries than they are today. In that event, authors may well be able to retain copyright ownership over their works or at least bargain for greater royalties. Ultimately, it seems, strengthening paying P2P file sharing through the NUL regime would engender a market solution to what some perceive to be the industry's unfair exploitation of authors under current conditions.

VI. POSSIBLE CRITICISMS

Commentators raise a number of concerns about private-copying equipment and media levies. In this Part, I briefly review two principal concerns and consider their applicability to the NUL. They are, first, that levies cannot yield sufficient funds to compensate copyright holders without imposing unacceptable costs on consumers, and second, that levies inefficiently and inequitably require low-volume users of copyright-protected content to subsidize both copyright holders and high-volume users. I cannot, within the confines of this Article, address a third important area — how the NUL would operate in the

198. *See* Laura M. Holson, *Young Band, Derailed Dream*, N.Y. TIMES, Oct. 1, 2002, at E1.

international arena given the strictures of multilateral copyright treaties and diverse national copyright law and licensing regimes.[199]

A. Insufficient Funds

Commentators express doubt that private copying levies can generate sufficient funds to satisfy copyright holders without imposing price increases that consumers deem unacceptable. As Glynn Lunney notes, even Germany's relatively extensive system of levies yields less than three percent of the total licensing revenue collected by GEMA, Germany's principal collective rights organization for music performances and reproductions.[200] And as Jane Ginsburg emphasizes, that pricing quandary may be even more intractable if levies are applied to all kinds of works subject to P2P file sharing, not just music.[201]

The NUL would be applied to most kinds of works. It would, therefore, need to compensate many more categories of copyright holders than existing private copying levies. But it would also be imposed upon a far broader range of goods and services than existing private copying levies.

In principle, the NUL ought to be a reasonably acceptable compromise for both copyright holders on one side, and providers and consumers of P2P-related goods and services on the other. The NUL will compensate copyright holders for their revenues actually supplanted by P2P file sharing. It will tax only goods and services whose value is substantially enhanced by P2P file sharing, and, as discussed above, it will do so in proportion to the amount that value is enhanced, which is in turn a significant factor in the elasticity of consumer demand for each good and service. The consumer electronics and telecommunications industries, moreover, are several orders of magnitude larger than the copyright industries that would receive NUL proceeds.[202] So at the very least, it should not be outright implausible that a marginal tax on P2P-related consumer electronics and telecommuni-

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199. Very briefly with respect to U.S. obligations under intellectual property treaties: while that issue is complex, I believe that there is a colorable argument that the NUL would comport with those obligations, and in particular would fall within the scope of permissible limitations to copyright holder rights under Article 13 of TRIPS, given that the NUL would be limited to noncommercial uses and would provide a solution to the practical implausibility of enforcing proprietary copyrights in the global P2P arena. *But cf*. FISHER, *supra* note 5 (contending that his levy proposal, which would not be limited to noncommercial uses, would require treaty modifications).

200. *See* Lunney, *supra* note 193, at 855. *But see* Ku, *supra* note 92, at 313 (asserting that a 2% levy on consumer electronics sales would yield a significant amount of money, "equal to projected revenues for the entire digital downloading market under copyright in 2002").

201. *See* Ginsburg, *Copyright and Control Over New Technologies of Dissemination*, *supra* note 112, at 1643.

202. *See* Andrew Odlyzko, *Content is Not King*, 6 FIRST MONDAY 2, ¶¶ 9–13 (2001), *at* http://firstmonday.org/issues/issue6_2/odlyzko.

cations would yield ample funds to replace that fraction of copyright industry revenues supplanted by NUL-privileged file sharing.

To help give some sense of the plausibility of the NUL, I have calculated a rough estimate of the average percentage levy that would have to be imposed on P2P-related goods and services in order to yield an amount that could reasonably compensate copyright holders for the net adjusted revenues displaced by NUL-privileged P2P file sharing, at least in the near term.[203] The average NUL percentage is the quotient of total displaced revenues divided by total retail sales of P2P-related goods and services (with one adjustment discussed below). Tables 1 through 3 provide the relevant figures and calculations.

Table 1 estimates those revenues for principle areas of copyright industry business most likely to be harmed by untrammeled P2P file sharing in the near future: record and video sales, video rentals, video pay-per-view, and computer game sales. The Table first states the annual gross revenues for those businesses. It then deducts 50 percent, which is the ballpark figure attributable to hard copy distribution and retail mark-up.[204] Finally, it conservatively estimates that, for the next five years, the revenue displacement due to noncommercial P2P file sharing would be as high as 25 percent for music recordings and seven percent for video and computer games.[205] I have not deducted for other possible factors discussed above, including copyright industries' oligopoly rents and lower profit margins for online sales. Nor have I accounted for possible increases in revenues from some types

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203. Interested readers should also consider Terry Fisher's somewhat different calculation of the amount that copyright holders would have to be compensated. *See* FISHER, *supra* note 5.

204. On recorded music sales, see COMPAINE & GOMERY, *supra* note 164, at 326 (reproducing table showing 50% retail and distribution markup). Motion picture studio revenues from home video distribution vary from under 40% under revenue sharing arrangements for certain VHS and DVD rentals to over 60% for some DVD retail sales. *See id*., at 412 (revenue sharing), 419 (sell through); *see also* Thomas K. Arnold et al., *'Real Estate War' Leads to Rebirth of Sharing; Video Companies are Offering More Revenue-Sharing Plans to Independent Video Stores*, VIDEO STORE, Aug. 3. 2003, at 1 (describing revenue sharing terms recently offered to independent video stores); Susan King, *Movies: 'Spider-Man' Breaks Records on Home Front*, L.A. TIMES, Nov. 4, 2002, § 5, at 1 (reporting that the minimum advertised retail price for the DVD of the hit movie "Spider-Man" was $19.95, with wholesale prices for the industry as a whole ranging from some $14 to $18, not including volume discounts); *Tribbey's Spin; DVD Watch; DVD Releases*, VIDEO STORE, April 13, 2003, at 10 (reporting that the average suggested retail price for important theatrical releases for the first quarters of 2002 and 2003 was $27.53, despite a trend toward lower prices for DVDs overall).

205. The 25% figure is the ceiling for revenue displacement posited in Stan Liebowitz's study regarding sound recordings, which predicts a 20–25% loss in CD sales. *See* Liebowitz, Will MP3 Downloads Annihilate the Record Industry?, *supra* note 158, at 30. Given the substantial bandwith required for movie downloads, the amount of displacement for videos (and for computer games, which include video components) is likely to be far less. The 7% figure I have used is, therefore, likely to be high. Currently, according to BigChampagne, a firm that tracks P2P usage, some 74.4% of files traded on P2P networks are audio and only 3.4% video. Unpublished BigChampagne data, March 2003 (on file with author).

of exploitation — like concert promotions and merchandising — that P2P file sharing and remixing might engender.

Table 1: Net Adjusted Revenues Displaced by P2P
(Amounts in Billion Dollars)

REVENUE SOURCE	HARD COPY GROSS REVENUES (RETAIL)	REVENUES NET OF HARD COPY DISTRIBUTION	ANTICIPATED % LOSS FROM P2P FILE SHARING	ANTICIPATED LOSS FROM P2P FILE SHARING
Record Sales	$13.0[a]	$6.5	25%	$1.625
Video Sales	$12.3[b]	$6.15	7%	$0.43
Video Rentals	$10.0[c]	$5.0	7%	$0.35
Pay-per-view Movies	$1.5[d]	$0.75	7%	$0.0525
Computer Game Sales	$1.4[e]	$0.7	7%	$0.05
TOTAL	$38.2	$19.1	N/A	$2.51

a. *See* COMPAINE & GOMERY, *supra* note 164, at 324. I have used 1998 data for record sales to avoid any possibility that my baseline figures might reflect reduced sales from P2P file sharing. Compensation for supplanted record sales would be divided among owners of copyrights in the sound recordings (generally record labels), owners of copyrights in the musical compositions that are performed and recorded (generally songwriters and music publishers), and holders of the performers' rights (in the first instance the performers, but typically assigned to the record labels).

b. Telephone Interview with Tom Adams, Adams Media Research (April 2, 2003) (conveying results of industry research). The figure is for DVD and VHS sales combined. *See generally* Adams Media Research, *at* http://www.adamsmediaresearch.com.

c. *Id*. The figure is for DVD and VHS rentals combined.

d. *See* Jon Lafayette, *Tyson Fight Leads Big PPV Jump to $2.5B,* CABLE WORLD, February 17, 2003, at 7 (reporting 2002 pay-per-view movies revenues of $1.5 billion).

e. Interactive Digital Software Association, Industry Sales and Economic Data (2002), *at* http://www.idsa.com/industrysales.html (last visted Oct. 31, 2003). The figure represents computer games as opposed to console games. The former are far more vulnerable to P2P file sharing than the latter. Further, it is difficult to assess exactly how much P2P file sharing has harmed computer game sales. In 2002 sales of computer and video game software exceeded 2001 sales by 8% (although, of course, sales might have increased even more if not for file swapping). *Id*. Indeed, competition from surging game sales is often cited as a possible explanation for declining CD sales. *See* Benny Evangelista, *RIAA Warns 204 More People It Plans to Sue*, S.F. CHRONICLE, Oct. 18, 2003, at B1 (reporting views of recording industry critics).

Table 2 sets forth 2002 gross sales figures for residential ISP Internet access service, home computers, free-standing CD burners, MP3 players, flash memory headphones, and blank digital recording media. The sales of each of those items can fairly be attributed to a significant, albeit varying, degree to P2P file swapping. Table 2 also includes gross sales for VCRs and DVD players. These items do not currently play a significant role in P2P file swapping. But they serve as a rough proxy for digital video recorders, such as the ReplayTV

4000, which will likely replace VCRs and nonrecording DVD players in the near future and which could readily be used to share video files.[206]

Table 2: Annual Retail Sales of P2P-Related Service and Equipment

SERVICE OR PRODUCT	ANNUAL SALES ESTIMATE (2002) (IN BILLION DOLLARS)
Home Computers	$19.16[f]
Free-Standing CD Burners	$0.70[g]
MP3 Players	$0.35[h]
Flash Memory Headphones	$0.20[i]
DVD players	$2.51[k]
VCRs	$2.09[l]
Blank CD-Rs	$0.43[m]
Blank DVD-Rs	$0.10[n]
Broadband Internet Residential Service	$8.12[p]
Dial-up Internet Residential Service	$12.86[q]
Total	$46.52

f. According to Computer Industry Almanac, as of 2002, yearly sales of personal computers in the United States totaled over forty million units. Press Release, Computer Industry Almanac, Inc., Worldwide Cumulative PC Sales Exceed 1 Billion (Feb. 28, 2003), *available at* http://www.c-I-a.com/pr0203.htm. Some 50.4% of personal computers in the United States are used in homes. Press Release, Computer Industry Almanac, Inc., PCs-In-Use Surpassed 600M, Over 45% of Worldwide PCs Are in Homes (Mar. 11, 2002), *available at* http://www.c-I-a.com/pr0302.htm. As of June 2002, the average retail sales price of a desktop personal computer was $801 and of a notebook $1,548. John G. Spooner, *PC Sales See a Ray of Light*, CNET News.com, *at* http://news.com.com/2100-1001-948115.html (Aug. 2, 2002) (reporting NPDTechworld market analysis). The percentage of notebook sales out of total PC sales has grown steadily in recent years, reaching 54% of U.S. retail PC sales

(table continued next page)

206. *See* Digital Entertainment Group, *DVD Highlights*, DVDinformation.com, *at* http://www.dvdinformation.com/highlights/index.html (last visited Oct. 31, 2003) (citing prediction of industry analyst, In-Stat/MDR, that by 2006, DVD recorders will replace DVD players as consumers' technology of choice, reaching 32 million units sold at an average price of less than $400). Digital Entertainment Group is an umbrella organization for major consumer electronics manufacturers and the video divisions of prominent film studios and music labels.

dollars in May 2003, up from less than 25% in January 2000. Notebooks also accounted for over 40% of unit sales in May 2003. Press Release, NPD Group Inc., Historic Firsts: Notebooks Outsell Desktops and LCD Monitors Unit Sales Surpass CRT Monitors According to The NPD Group (July 1, 2003) *available at* http://www.npd.com/press/releases/press_030701.htm. Given that businesses probably buy a higher percentage of notebooks than consumers, I have conservatively estimated that notebooks accounted for 20% of unit sales of computers sold to consumers in 2002.

g. Devin Leonard, *This is War*, FORTUNE, May 27, 2002, at 83 (I have only the 2001 figure for CD burner sales).

h. U.S. sales of MP3 players totaled 1.7 million units in 2002. Press Release, Consumer Electronics Ass'n, 2003 U.S. Sales of Consumer Electronics to Hit New Record, Kissing $100 Billion, Says CEA (Jan. 7, 2003), *available at* http://www.ce.org/press_room/ press_release_detail.asp?id=10138. The average price of an MP3 player in 2001, the latest year for which I have figures, was $204. *Notebook*, CONSUMER ELECTRONICS, Feb. 12, 2001, at 41.

i. Consumer Electronics Ass'n, *Internet-era Digital Recording*, Digital America, *at* http://www.ce.org/publications/books_references/digital_america/audio/internet_digital_recording.asp (last visited Oct. 31, 2003) (reporting that 2002 factory sales of flash memory stereo headphones totaled $205 million).

k. Unit sales of stand-alone DVD players totaled 17.6 million units in 2002. The average wholesale price per unit was $130. Consumer Electronics Ass'n, 2003 U.S. Sales of Consumer Electronics to Hit New Record, *supra* note h. I have conservatively added a 10% mark-up for retail.

l. *U.S. Census Bureau Daily Features For June 6–7*, U.S. NEWSWIRE, June 6, 2002 (reporting United States Census data detailing $2.3 billion in domestic VCR sales in 2001); *see also* Consumer Electronics Association, *VCRs Face Digital Recording Future*, Digital America, *at* http://www.ce.org/publications/books_references/digital_america/video/vcrs.asp (last visited Oct. 31 2003) (showing 9% decline in VCR sales to dealers from 2001 to 2002).

m. Telephone Interview with Dick Kelly, Cambridge Associates Corporation (Apr. 2, 2003) (conveying results of industry research showing 2002 sales of 2.05 billion recordable CDs at an average per unit price of $0.21).

n. *Id*. (conveying results of industry research showing 2002 sales of 28 million recordable DVDs at an average per unit price of $3.50).

p. Adams, *supra* Tbl. 2 note b (conveying results of industry research). According to a government survey, 53.9 million households had Internet access as of September 2001. *See* U.S. DEP'T OF COMM., ECONOMICS AND STATISTICS ADMIN., NAT'L TELECOMM. AND INFO. ADMIN., A NATION ONLINE: HOW AMERICANS ARE EXPANDING THEIR USE OF THE INTERNET 3 (Feb. 2002), *available at* http://www.ntia.doc.gov/ntiahome/dn/anationonline2.pdf [hereinafter A NATION ONLINE]. Of these, approximately 20% (or 10.78 million) had broadband Internet connections and the remainder had dial-up. Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Third Report, CC Docket 98-146, at 28 (FCC Feb. 6, 2002), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-33A1.pdf [hereinafter FCC Third Report]. The FCC has since reported a 27% increase in broadband Internet connections for the first half of 2002. Press Release, FCC, Federal Communications Commission Releases Data on High-Speed Services for Internet Access (Dec. 17, 2002), *available at* http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCCState_Link/IAD/hspd1202.pdf.

q. Adams, *supra* Tbl. 1 note b.

Table 3 then provides the rough estimate for the average NUL that would have to be imposed on P2P-related goods and services to compensate the copyright holders for the lost revenue from P2P file sharing shown in Table 1, a total of $2.51 billion. In calculating the average NUL, I have made one adjustment: I have assumed a yearly $50 per student charge for university-sponsored Internet access. College students are the heaviest users of P2P file sharing networks,[207] and the figures for residential Internet access in Table 2 do not reflect university-provided Internet access. The student charge would help defray the cost of compensating copyright holders and would thus reduce the amount that the NUL would have to raise. At bottom, given my rough, though plausible, estimates, an average levy of some four percent of the retail prices for P2P-related goods and services would be sufficient to compensate copyright holders.

Table 3: Rough Estimate of Average NUL Percentage

SOURCE	AMOUNT (IN BILLION DOLLARS)
Required Compensation	$2.51
College Students Internet Access	($0.62)
Total NUL Amount	$1.89
Average NUL on P2P Goods & Services	4.06%

In reality, the NUL imposed on any given item would vary, depending largely on the extent to which P2P file swapping enhances

207. As reported in a recent survey, "[c]ollege Internet users are twice as likely to have ever downloaded music files when compared to all Internet users (60% of college Internet users have done so, compared to 28% overall). And, college Internet users are three times as likely to download music on any given day (14%, compared to 4% of the overall population of Internet users)." Steve Jones et al., *The Internet Goes to College: How Students are Living in the Future with Today's Technology*, PEW INTERNET AND AMERICAN LIFE PROJECT (Sept. 15, 2002), *available at* http://www.pewinternet.org/reports/pdfs/PIP_College_Report.pdf. According to the survey: "College students also lead other Internet users in file sharing of all kinds. Forty-four percent of college Internet users report sharing files from their own computers while 26% of the overall population of Internet users has shared files. The sharing of files other than music is also greater among college Internet users — 52% of them have downloaded files other than music while 41% of the overall population of Internet users reported doing so." *Id*. at 7.

As of 1999, there were 14.5 million students enrolled in degree-granting institutions of higher education in the United States. *See* NATIONAL CENTER FOR EDUCATIONAL STATISTICS, DIGEST OF EDUCATIONAL STATISTICS, 2000, *available at* http://nces.ed.gov/pubs2001/digest/ch3.asp (last visited Oct. 11, 2003). Eighty-five percent of students aged 18 to 24 use the Internet. *See* A NATION ONLINE, *supra* Tbl. 2 note p, at 43. I assume that almost all of those student Internet users have Internet access through their college or university. *See* Hiawatha Bray, *Internet Visionary Hopes His Plan Has the E-Touch*, BOSTON GLOBE, July 23, 2001, at A8 (noting that "nearly every American college provides a free link to the Internet"); *see also* Barnaby J. Feder, *I.B.M. to Run a Venture to Rent Films Over the Web*, N.Y. TIMES, Sept. 9, 2002, at C6 (reporting that MovieLink and I.B.M. see a multi-billion dollar market for online distribution of films, based on estimates that thirteen million households and ten million college dorm rooms have a broadband connection).

that item's value. The average figure I've computed, some four percent of retail sales, might seem high for many items. Compare, for example, the Audio Home Recording Act ("AHRA"), which imposes a levy of three percent of the manufacturer's price on digital recording equipment and two percent on recording media. And even the AHRA levy exceeds the razor thin profit margins that manufacturers must endure on most consumer electronics devices.[208] On the other hand, compulsory license royalty rates recently negotiated for the digital transmission of sound recordings range from seven to twelve percent of the transmitter's gross revenue.[209]

Moreover, sales of some items in Table 2, notably MP3 players, CD burners, and residential broadband Internet service, are still far from market saturation. In particular, residential broadband use increased a startling 48 percent in 2002 and is expected to continue to increase significantly in coming years.[210] As sales for those items increase, the average levy percentage required for an annual $2.51 bil-

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208. *See* Irene M. Kunii et al., *Can Sony Regain the Magic?*, BUSINESS WEEK, Mar. 11, 2002, at 72 (reporting that Sony's operating profit margins on electronics products fell to 1% in 2001, down from 10% in 1991); *see also* EACEM's Comments on the Commission's Green Paper on Liability for Defective Products COM(1999) 396 (Nov. 1999), at 6, *available at* http://europa.eu.int/comm/internal_market/en/goods/liability/027.pdf (last visited Oct. 10, 2003) (stating that profit margins of European consumer electronics manufacturers are at most 3%).

209. Digital cable and satellite radio operators recently agreed to pay royalties of 7% (increasing to 7.25% in 2004) of their gross revenues from residential services for the statutory license to digitally transmit sound recordings for their subscription services in operation on or before July 31, 1998. *See* Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings by Preexisting Subscription Services, 68 Fed. Reg. 4744 (Jan. 30, 2003) (reflecting proposed settlement). Pursuant to a settlement negotiated in accordance with the Small Webcaster Settlement Act of 2002, Pub. L. 107-322, 116 Stat. 2780, signed into law on December 4, 2002, small commercial webcasters and the recording industry agreed on a rate for the webcasters' digital performance of sound recordings of 8% of the webcasters' gross revenue or 5% of their expenses, whichever is greater. These rates cover the period from Oct. 28, 1998 through Dec. 31, 2002. For the years 2003 and 2004, small webcasters will owe 10% of their first $250,000 in gross revenue and 12% of any gross revenue above $250,000 during the applicable year, or 7% of expenses during the year, whichever is greater. *See* Notification of Agreement Under the Small Webcaster Settlement Act of 2002, 67 Fed. Reg. 78510, 78511 (Dec. 24, 2002). Webcasters must also pay license fees for publicly performing the musical compositions featured in the sound recordings. Pursuant to its Experimental License Agreement for Internet Sites & Services, ASCAP gives webcasters a choice of three possible rate schemes. The simplest provides for a royalty rate of 1.615% of adjusted gross revenue, plus 0.048 cents per Internet session. *See* The ASCAP Experimental License Agreement for Internet Sites & Services — Release 4.0, *available at* http://www.ascap.com/weblicense/ascap.pdf (last visited Oct. 10, 2003).

210. There were some 10.78 million residential broadband subscribers in 2001. *See* FCC Third Report, *supra* Tbl. 2 note p, at 28. By the last quarter of 2002, that number had reached 15.6 million. Press Release, Leichtman Research Group, Broadband Internet Tops 15.6 Million in the U.S. (Nov. 7, 2002), *available at* http://www.leichtmanresearch.com/press/1107release.pdf. All indications are that American consumers have a strong pent-up demand for high-speed Internet service. *See* FCC Third Report, *supra* Tbl. 2 note p, at 28 (predicting that residential high-speed service subscribership will increase from 1.9 million at the beginning of 2000 to 40 million at the end of 2005).

lion yield will decline.[211] On the other hand, as P2P technology improves and P2P usage deepens, more copyright industry revenues for more types of copyright-protected works will likely be displaced. Accordingly, it is too soon to tell where the equilibrium NUL percentage will lie.

Ultimately, the political plausibility of my estimated NUL "tax" will depend in large part on whether the levy (plus NUL-regime administrative costs) will be more or less expensive for suppliers than implementing DRM-compliant technology and policing users on behalf of copyright holders.[212] It will also depend on consumers' elasticity of demand for NUL-surcharged goods and services, which will in turn be partly a function of the value consumers place on the user privilege provided under the NUL regime. Certainly, consumers would get much more from the NUL than the AHRA. The NUL would allow consumers to distribute, modify, stream, and make unlimited copies of all types of cultural expression; the AHRA gives users a privilege only to copy music and subjects that privilege to serial copying limitations.

At a minimum, my figures suggest that the NUL could quite plausibly substitute for lost copyright industry revenues from unhindered, noncommercial P2P file sharing. Together with commercial licensing and offline sources of copyright holder revenue, the NUL would supply ample funding for the creation of original expression. In fact, within the limits of power law distribution, the levy would provide funds for a wider spectrum of authors than under the current copyright industry star-system. At the same time, the NUL would greatly broaden public access to existing expression, eliminating much of the deadweight loss associated with proprietary copyright.

B. Cross-subsidization

Commentators contend that levies require low-volume users and nonusers of copyrighted material to subsidize high-volume users. I may use my computer hard drive, CD burner, and blank CDs entirely

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211. I have also excluded sales of computers and Internet service to businesses on the assumption that employers will generally seek to prevent employees from using work time to engage in P2P file swapping. However, a considerable amount of P2P file swapping currently takes place in workplaces nonetheless. *See* Anna Wilde Mathews, *Movie, Music Firms Protect Rights*, WALL ST. J., Oct. 24, 2002, at B2 (reporting copyright industry plans to send a letter to 1,000 large corporations warning them to halt P2P file swapping at their workplaces and stating that "piracy of music, movies, and other creative works is taking place at a surprisingly large number of companies").

212. *See* Dina Bass, *PC, Consumer-Electronics Makers Balk at Piracy Control Demands*, detnews.com, *at* http://www.detnews.com/2002/technology/0208/22/technology/568051.htm (Aug. 22, 2002) (reporting consumer electronics manufacturers' claims that adding DRM-compliant software and chips to their products would add hundreds of millions of dollars to manufacturing costs).

to store my own work. It is arguably unfair to require that I pay a levy on that equipment and media so that others can reproduce copyright-protected material and copyright holders can receive compensation.[213] Such a levy, commentators contend, is also inefficient.[214] It increases a product's price (or, if the manufacturer refrains from passing on the cost to the consumer, reduces the manufacturer's net profit) in a manner that may be incommensurate with the use of the product to reproduce copyright-protected material. As such, it may impose an innovation-impeding tax on certain digital technologies. Consumers and manufacturers at the margin may decide to switch to other products that do not bear the levy.[215]

There are four principle responses to these concerns:

1. Putting the cross-subsidization problem in perspective: On average consumers will benefit from the NUL regime. Taxes on commodities, such as luxury, sales, and value-added taxes, represent a dollar for dollar reduction in consumer surplus. And when the tax-imposed additional cost induces marginal consumers to refrain from purchasing commodities that they otherwise would have purchased, the tax imposes a deadweight loss. The NUL would operate like a commodity tax, but with a significant difference: NUL-paying consumers would, on average, reap enhanced value from the P2P-related products and services that are subject to the NUL "tax." Without the NUL, consumers might ultimately be prevented from using their Internet access, computers, and other devices to swap copyright-protected files.[216] With the NUL, consumers will enjoy a privilege to use those services and products for P2P file sharing. Granted, consumers will have to pay more for levy-bearing services and products for which the supplier passes on the cost of the levy. But the levy costs will be at least partly offset — and, as I will presently argue, likely will be more than offset — by the enhanced value of the P2P-related services and products for the average consumer. So at the very least, unlike commodity taxes, the NUL represents a less than dollar for dollar reduction in total overall consumer surplus, thus redicing societal deadweight loss.

Moreover, the NUL is structured so that consumers on the whole are likely to pay less for the privilege to engage in P2P file sharing than they would under a proprietary copyright regime. Proprietary copyright aspires to transfer to copyright holders as much consumer

213. *See* Ginsburg, *Copyright and Control Over New Technologies of Dissemination*, *supra* note 112, at 1644; Lunney, *supra* note 193, at 856.

214. *See* HUGENHOLTZ ET AL., *supra* note 105, at 40; Lunney, *supra* note 193, at 856–67.

215. *See* Arthur J. Cockfield, *Designing Tax Policy for the Digital Biosphere: How the Internet is Changing Tax Laws*, 34 CONN. L. REV. 333, 342–43 (2002).

216. This depends on whether copyright industries succeed in imposing substantial legal and law-backed technological impediments to unlicensed P2P file sharing.

surplus as possible for P2P file sharing. Indeed, as I discuss in Part VII, in the digital arena proprietary copyright aspires to a regime of perfect price discrimination, in which copyright holders capture all consumer surplus (but eliminate deadweight loss). Under the NUL, in contrast, copyright holders garner only a "fair return" for the use of their works in P2P file sharing. Accordingly, almost by definition, some share of consumer surplus will remain with consumers.[217]

The same result would obtain when, as I've proposed for the first five years of the NUL regime, the copyright holders' adjusted net revenues actually displaced by P2P file sharing are used as a proxy for fair return. Most likely, the value consumers as a whole would place on the privilege to engage in P2P file sharing — giving them the freedom to copy and transport songs, movies, pictures, and texts on any digital device, swap them with friends, organize, remix, and modify them, and the ready availability of virtually any conceivable work that has ever been recorded and released to the public in digital format — would considerably exceed copyright holders' adjusted net revenues actually displaced by file sharing.[218] Moreover, to the extent that a portion of P2P file sharing does not displace copyright holder revenues, the entire consumer surplus from that portion would effectively remain with consumers, because that non-displacing file sharing would not be reflected in the determination of the NUL amount.[219] Under the NUL, in short, consumers will compensate copyright holders for lost revenues but will retain much, if not most, of the consumer surplus from NUL-privileged P2P file sharing.

2. Consumer behavior and valuation are partly endogenous. Even if consumers on the whole are better off with the NUL than they would be under a proprietary copyright regime, it may be that some

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217. That is except for the unlikely event that the Copyright Office tribunal determines that a "fair return" equals the transfer to copyright owners of substantially all consumer surplus from NUL privileged uses.

218. Consider CD sales. As a rough estimate of what consumers would pay under the NUL, the copyright holder's adjusted net revenue from the sale of single CD would amount to at most $5, calculated by subtracting from the CD's $15 retail price: (1) retail mark-up and distribution costs; (2) record label premium on its hard copy distribution network; (3) record label oligopoly rents; and (4) other items. The consumer value of unhindered P2P file sharing would likely greatly exceed $5. To provide a rough parameter of that consumer value, consider Apple Computer's iTunes, a licensed online music distribution service. Apple charges 99 cents to download a song, or what would amount to about $12 for a 12-track CD, and each song comes with restrictions on copying, sharing, portability, and remixing. In addition, Apple's repertoire is limited to some 400,000 songs, far less than the number available on KaZaA. iTunes is probably overpriced for what it offers. But, as of October 2003, it had reported sales of some 14 million songs in the six months since its inception. *See supra* note 156.

219. For purposes of illustration assume, for example, that P2P file sharing does not displace any copyright holder revenues from hard copy distribution. In that event, the NUL would be zero, but users would be free to engage in P2P file sharing, retaining the entire consumer surplus of that activity.

consumers (those who engage in relatively little or no P2P file sharing) will have to subsidize high-volume users. The low-volume user subsidy problem is somewhat overstated, however. For one, many low-volume users will happily pay a surcharge for the possibility of unlimited file sharing even if they don't actually engage in much file sharing. After all, consumers regularly buy computers with far more memory and processing capacity than they actually use. The NUL privilege is much akin to computing capacity. Under a DRM-backed, proprietary copyright regime, computers, in effect, would be functionally degraded to make unlicensed file swapping and remixing impossible. Under the NUL, that computer capacity would be preserved.

Further, imposing the levy will encourage some low-volume users to become high-volume users. If paying an extra $35 for a personal computer enables me legally to use it to trade music and video files, I will be more likely to use the computer for that purpose and I might find that I enjoy doing so. Put differently, under a proprietary copyright regime, I must pay a supracompetitive price for getting access to and using creative works, and, as a result, will enjoy fewer works than I would in a competitive market and will place a lesser value on computers and other devices used for viewing and listening to those works. Under the levy regime, I would pay a blanket fee up front, but then would have access to an unlimited array of works at their zero marginal cost.[220] It is not readily apparent that the proprietary regime is more equitable and more efficient than the levy regime, especially when one considers that consumer behavior may be partly endogenous to the prevailing regime. In fact, experience and market research show that information product consumers tend to prefer flat rates over differential unit pricing, even if that might mean paying somewhat more overall.[221]

3. Ramsey taxation. The inefficiencies of imposing a levy on particular goods and services can be mitigated by applying well-established precepts of so-called Ramsey or "optimal" taxation.[222]

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220. *See* Lichtman & Landes, *supra* note 49, at 113.

221. *See* Peter C. Fishburn et al., *Fixed-Fee Versus Unit Pricing for Information Goods: Competition, Equilibria, and Price Wars*, *in* INTERNET PUBLISHING AND BEYOND: THE ECONOMICS OF DIGITAL INFORMATION AND INTELLECTUAL PROPERTY 167, 168–73 (Brian Kahin & Hal R. Varian eds., 2000); Andrew Odlyzko, *Internet Pricing and the History of Communications*, 36 COMPUTER NETWORKS 493 (2001); Clay Shirky, *The Case Against Micropayments*, The O'Reilly Network, *at* http://www.oreillynet.com/pub/a/p2p/2000/12/19/micropayments.html (Dec. 19, 2000).

222. The seminal work is Frank P. Ramsey, *A Contribution to the Theory of Taxation*, 37 ECON. J. 47 (1927). *See also* William Baumol, *Ramsey Pricing*, *in* 4 THE NEW PALGRAVE: A DICTIONARY OF ECONOMICS 49 (John Eatwell et al. eds., 1987); JOSEPH E. STIGLITZ, ECONOMICS OF THE PUBLIC SECTOR 402–06 (1986). For an intriguing application to intellectual property, see Ian Ayres & Paul Klemperer, *Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-*

Importantly, however, Ramsey taxation as applied to the NUL might exacerbate the perceived inequity of cross-subsidization in order to minimize inefficiency.

Differential taxes on commodities can cause inefficient distortions in consumers' behavior: Some consumers will refrain from purchasing a taxed good they would otherwise want because they value the good less than the increased price resulting from the tax. Ramsey taxation is designed to reduce the efficiency loss from such distortions by setting tax rates on different commodities such that each commodity faces the same percentage reduction in demand.[223]

On a very basic level, that means that, as a general rule, imposing some tax on a broad range of goods that could serve as possible consumer substitutes for one another will reduce distortion in consumer purchases among those goods. As applied to the NUL, the more P2P-related goods and services are subject to the levy, the less the levy's distortive effect on any one of those products and services. We might use different devices to swap files: I might use my computer, you your cell phone, Jack his ReplayTV, Sally her personal digital assistant, and so on. If only ReplayTVs were subject to the levy, Jack might switch to another product. But so long as each good bears a levy in the correct proportional amount, the increased price will not drive any of us to purchase a file-swapping substitute.

This suggests, first, that the Copyright Office should set a low threshold for determining whether the value of a good or service is substantially enhanced by P2P file sharing and thus whether that good or service should be subject to the levy. But what should be the amount of the levy imposed on each P2P-related good or service? In order to minimize efficiency loss, our goal must be to set levy rates such that the percentage reduction in demand for each good or service is the same. That means, as the Ramsey taxation model posits, that the levy rate should be inversely proportional to the elasticity of demand for each commodity.[224] In other words, the less elastic (or price-sensitive) the demand for a good, the higher the rate at which it can be taxed.

This tenet of Ramsey taxation runs at least partly contrary to the equity intuition that low-volume P2P file sharers should not have to subsidize high-volume users or copyright holders. If we are to design the NUL entirely along the lines of Ramsey taxation, we would im-

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Injunctive Remedies, 97 MICH. L. REV. 985, 990–93 (1999) (applying Ramsey pricing to optimizing the length and scope of patent protection).

223. *See* STIGLITZ, *supra* note 222, at 404.

224. *See id.* Of course, elasticity of demand for any given commodity will depend in part on the size of the tax levied on other commodities that can serve as reasonable substitutes. *See* David A. Weisbach, *Line Drawing, Doctrine, and Efficiency in the Tax Law*, 84 CORNELL L. REV. 1627, 1658–59 (1999). Accordingly, the levy rate for each item must take into account the levy rate on other, related items.

pose a levy at a high rate on goods for which consumer demand is relatively inelastic regardless of whether the inelasticity of demand results from the usefulness of the good for P2P file sharing. Certainly, the more a good can be used for P2P file sharing, the greater its value for consumers and the less elastic the demand for the good in the face of a surcharge that appropriates some of the good's additional value resulting from its P2P file sharing capability. But, like personal computers, Internet access, and cell phones, most P2P-related goods and services will be used only partly for P2P file sharing. As a result, it may be that consumer demand for some goods is relatively inelastic in large part because consumers value their usefulness for non-P2P functions. A substantial levy on such goods could appropriate greater consumer surplus without affecting purchasing behavior. The Copyright Office would have to balance that efficiency gain against the inequity of imposing the levy on consumers who value a good principally for its non-P2P file sharing functions.

At the same time, the broad scope of the NUL privilege would ameliorate that efficiency/equity tension to some extent. As more uses of more types of copyright-protected works are privileged, the cross-subsidization among users will decrease, because more users will engage in P2P file sharing of one sort or another. Sally might swap primarily music, Fred short stories and newspaper articles, Tom movies, and Jennifer computer games. If only music swapping is privileged, then Fred, Tom, and Jennifer subsidize Sally when they pay the NUL surcharge on their purchase of a computer. But since all are privileged for their preferred use under the NUL, each user's subsidy to the others is, to one degree or another, offset by the others.

4. Designing the NUL to lessen cross-subsidization. If the Copyright Office chooses to do so (in the face of countervailing efficiencies from Ramsey taxation), the NUL could be imposed selectively in a number of ways that would significantly mitigate the non-user and low-volume-user cross-subsidy. For example, many businesses are likely to discourage or forbid employees from devoting work time to engaging in P2P file swapping. To that end, as I've posited, the NUL would be imposed only on residential Internet access and home computers. The problem of arbitrage — businesses buying cheap, levy-free computers and reselling them for residential use — could be addressed by imposing the levy on all computers, but providing a rebate to any business that certifies that (1) its computers are used entirely for business purposes, and (2) the business enforces a policy forbidding employees from using the computers for NUL-privileged file sharing. To reduce fraud and make the rebate more easily administrable, businesses would make that certification as part of their federal tax return and would have to declare each computer as

a business expense or depreciable capital asset. A business' misrepresentation with respect to its business use or its policy forbidding NUL-privileged file sharing would subject it to liability for tax fraud as well as copyright infringement. The rebate would be paid as a tax credit, and the Treasury would be reimbursed from the NUL fund. The same procedure could apply to other goods and services subject to the levy.

In addition, the types of equipment or service that a person uses may often serve as a proxy for his ability to engage in, and thus his valuation of, file trading. The speed and character of Internet connection provides a good example. Although file compression technology has greatly reduced the time needed to download files, high-speed access is still a significant advantage for downloading music files and a virtual necessity for downloading movie files. So not surprisingly, according to a recent survey, half of all broadband subscribers, but only a quarter of dial-up subscribers, have downloaded music files, and some 15 percent of broadband subscribers, but essentially no dial-up subscribers, have downloaded movie files.[225] Broadband Internet also typically allows the subscriber to be online constantly without taking up a phone line. This characteristic is highly conducive to subscribers who wish their collections of music or movie files to be continually accessible to others on their P2P network.[226]

The Copyright Office could thus significantly ameliorate the non-user cross-subsidy problem by imposing a higher levy on faster Internet connections, both as between broadband and dial-up and as among different tiers of broadband.[227] Similarly, computers and other devices might be levied proportionately to their microprocessor speed and

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225. John B. Horrigan & Lee Rainie, *The Broadband Difference: How Online Americans' Behavior Changes With High-Speed Internet Connections at Home* 29, Pew Internet and American Life Project 2002, *at* http://www.pewinternet.org/reports/pdfs/PIP_Broadband_Report.pdf (last vistited Oct. 31, 2003). Industry analysts report a similar phenomenon in Europe, where more than 75% of broadband subscribers use P2P services at least once a month. *See* Jane Wakefield, *File-Sharing Dilemma for Broadband Firms*, BBC News World Edition, Feb. 11, 2003, *available at* http://news.bbc.co.uk/2/hi/technology/2745445.stm (reporting results of Jupiter Research study).

226. Jane Black, *Will Cable Unplug the File Swappers?*, Business Week Online, *at* http://www.businessweek.com/print/technology/content/jun2002/tc20020612_1108.htm?mainwindow (June 12, 2002) (discussing tiering plans based on speed and bandwidth usage and noting that the new pricing models could raise costs for P2P file sharing).

227. Even if ISPs are required to pay a fixed user surcharge or percentage of gross revenue for the NUL, they might find it profitable and attractive to consumers to price discriminate in passing on their levy costs. For example, ISPs could establish a lower price tier for those who promise to refrain from NUL-privileged file sharing or simply charge a premium for bandwidth use over a certain threshold as a proxy for file sharing. ISPs already offer different tiers of service at differential pricing. They typically price high-speed Internet access, or "broadband," at $44 per month and dial-up access, or "narrowband," at $20 per month. *See* Mark Kersey, *AOL Time Warner is at a Crossroads*, ISP-Planet, *at* http://www.isp-planet.com/research/2002/ars_020130.html (Jan. 20, 2003). ISPs are also poised to break high-speed access into various tiers, charging the most for the highest speed. *See id.*; Black, *supra* note 226.

digital storage capacity. That also could serve as a rough proxy for use in P2P file sharing.[228] The bottom line is that a purchaser of a low-end computer with a dial-up modem and no CD burner would pay little or no levy.[229]

VII. ALTERNATIVES

In this Part, I consider three alternative proposals for addressing the conflict between copyright holders and P2P file sharers. The first, what I term "digital abandon," argues that noncommercial personal uses should be free from both copyright holder control and government imposed levies to compensate copyright owners. The second, what I term, "digital lock-up," attempts to rehabilitate proprietary copyright. It argues that, armed with DRM enabling them to exert hermetic proprietary control over their work, copyright holders would engage in highly refined price discrimination. As a result, each person would be able to use copyright-protected expression by paying a charge — or micro-charge — equal to the amount at which he or she values that use. The third argues for a system of government rewards. Under this regime, like the NUL, all would be free to use copyright-protected works. But in contrast to the NUL, authors would be paid out of general tax revenues rather than a levy imposed on P2P-related goods and services.

A. Digital Abandon

Some commentators contend that digital abandon would greatly benefit all but entrenched copyright industries.[230] They emphasize that our use of existing expression is a social good, whether seen in market

228. Depending on the mix of NUL privileged file sharing and how it impacts different copyright industries, cross-subsidization could also be lessened by imposing different levies on those P2P services that use protocols like eDonkey that are more conducive to trading the large files embodying movies, and on those using protocols like Fast Track that better lend themselves to sharing the small files containing music and text. For a discussion of the different use of those services and protocols in various regions, see Sandvine Incorporated, Regional Characteristics of P2P; File Sharing as a Multi-Application, Multi-National Phenomenon (Oct. 2003), *at* www.sandvine.co.uk/solutions/pdfs/Euro_Filesharing_DiffUnique.pdf.

229. Such arrangements would roughly parallel the compromise embodied in the Audio Home Recording Act. Under the AHRA, a levy was imposed only on digital recording equipment and media, which provided the most ready vehicle for consumers to make copies that could supplant purchases of record labels' prerecorded music. But home copying was allowed on analog as well as digital systems.

230. In describing the position favoring digital abandon, I extract and synthesize arguments variously (and cogently) expressed by several commentators, including Raymond Ku, Jessica Litman, Glynn Lunney, and Mark Nadel. These commentators view levies as a second-best alternative to voluntary compensation schemes. *See* Ku, *supra* note 92; LITMAN, supra note 197, at 151–86; Lunney, *supra* note 193; NADEL, *supra* note 92.

terms as the satisfaction of consumer wants or in liberal democratic terms as an instance of personal liberty, self-definition, and self-expression. And they argue that the extension of copyright — and content providers' technological control — into personal free use zones has no justification. Copyright, they posit, operates primarily to protect traditional content distributors — record labels, book publishers, and movie studios — far more than creators. That protection might have been warranted in the brick-and-mortar world, when content distribution required massive investments in money and labor. But peer-to-peer networks, they maintain, render middleman-content-distributors, and thus copyright, obsolete. In the digital universe, in fact, copyright serves as a vehicle for media conglomerates to entrench their market position and expressive power. The copyright industries have employed copyright infringement litigation to stifle peer-to-peer networks and dry up financing for new media enterprises that threaten industry dominance.[231] Copyright also distorts our expressive universe by rewarding marketing muscle rather than spurring creation. Digital abandon, the commentators maintain, would beneficially undermine copyright industry entrenchment and distortion without unduly reducing incentives for authors.

Beyond that, proponents of digital abandon would likely regard the NUL as an unnecessary tax on users. Under a regime of digital abandon, they contend, much expression would be created and disseminated for free. In their view, in fact, such a regime could also provide authors with economic incentives from audience tipping and other sources that do not require copyright protection.

Proponents of digital abandon make cogent arguments. But as I have discussed elsewhere, they overstate their case.[232] Like much of today's Internet, a copyright-free realm of digital abandon would undoubtedly be populated with a plethora of volunteer expression. But many expressive works — full-length motion pictures, novels, investigative journalism, and others — require a sufficiently material commitment of time and money such that far fewer would be created without some mechanism for compensating authors.[233] Of equal, related importance is copyright's structural role in our system of free expression.[234] Copyright underwrites a sector of professional, market-

231. For a discussion of this phenomenon from the viewpoint of a scholar who does not advocate digital abandon, see PICKER, *supra* note 87, at 423. Jane Ginsburg discusses previous instances in which copyright owners have sought to eliminate a new kind of dissemination, but denies that this is the case with P2P dissemination. *See* Ginsburg, *Copyright and Control Over New Technologies of Dissemination*, *supra* note 112, at 1613.

232. *See* NETANEL, *supra* note 76.

233. Jane Ginsburg has aptly called such works "sustained works of authorship." Jane C. Ginsburg, *Putting Cars on the "Information Superhighway": Authors, Exploiters, and Copyright in Cyberspace*, 95 COLUM. L. REV. 1466, 1499 (1995).

234. *See* Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L. J. 283, 352–63 (1996).

supported authors and publishing enterprises that serves as the cornerstone for a robust, independent press. It helps them garner the wherewithal they need to stand up to government officials, corporations, political parties, and other centers of state and private power. Historically, copyright served to liberate authors from heavy-handed aristocratic patronage by providing them with a potential livelihood from paying audiences. In a liberal democratic society that rightly places a premium on free speech and free press, there remain substantial benefits to funding the creation and dissemination of many expressive works, and to funding them from sources other than state subsidy, corporate munificence, and party patronage.[235]

Advocates of unhindered peer-to-peer file sharing do consider some intriguing alternative mechanisms for compensating creators. These range from voluntary audience tipping, to giving away expression to spur demand for related goods, to product placement advertising. I cannot elaborate upon or fully assess these various alternatives here. It does seem that the proffered alternatives would not be fully effective, complete, or desirable. Online tipping and other forms of voluntary payment, initially much touted, have yet to yield meaningful remuneration.[236] Giving away expression to promote sales of related goods is suited only to a narrow class of creations, like complementary software products or, perhaps, distributing free music to spur demand for live performances. Heavy reliance on product placement advertising is likely to entail what many would see as undesirable, advertiser-driven distortions of creative expression.[237] Accordingly, at least for the foreseeable future, compensating creators through the NUL would seem to provide significant benefits over relying entirely on alternative payment mechanisms and authors' non-compensatory incentives to create.

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235. *See* Neil Weinstock Netanel, *The Commercial Mass Media's Continuing Fourth Estate Role, in* THE COMMODIFICATION OF INFORMATION 317 (Niva Elkin-Koren & Neil Weinstock Netanel eds. 2002).

236. *See* Chris Kelsey, *Bandwidth: Passing the Virtual Hat*, ONSTAGE, Dec 1, 2001, *available at* http://onstagemag.com/ar/performance_bandwidth_passing_virtual (discussing limitations of current online tipping services); Janet Kornblum, *Ain't Too Proud to Beg on the Net*, USA TODAY, Jan. 8, 2002, at D3, *available at* http://www.usatoday.com/life/cyber/tech/2002/01/08/usat-tipjar.htm (offering a somewhat more optimistic view of the potential for online tipping, but still reporting that online tips for authors have been extremely modest thus far); *see also* ECKERSLEY, *supra* note 90, at 4–5 (expressing skepticism about the viability of voluntary payment systems despite some isolated successes).

237. A seminal work on the untoward influence of advertising on our system of free expression is C. EDWIN BAKER, ADVERTISING AND A DEMOCRATIC PRESS (1994). For discussion and criticism of product placement, see Mark Crispin Miller, *Hollywood: The Ad*, ATLANTIC MONTHLY, Apr. 1990, at 41, 42, 49; Steven L. Snyder, Note, *Movies and Product Placement: Is Hollywood Turning Films into Commercial Speech?*, 1992 U. ILL. L. REV. 301 (discussing product placement in novels, records, and television, in addition to movies).

B. Digital Lock-up

Digital lock-up seems to stand at the opposite end of the spectrum from digital abandon. Yet some commentators maintain that copyright holders' hermetic control would actually enable copyright industries to distribute their vast content inventories without burdening speech.[238] In this view, copyright holders armed with digital control would have every incentive to make their works widely available to all audiences and potential speakers. Copyright holders could do so through differential pricing, charging each user just what she is willing to pay for her desired use, whether it be downloading, a one-time listen or read, or incorporating the work into new expression. Moreover, market pricing would signal consumer demand, and thus induce content producers to tailor content and content delivery mechanisms to the full spectrum of consumer tastes. Accordingly, these commentators contend, copyright holder control would both bolster and refine copyright incentives, without relying upon untested alternative compensation schemes and while allowing for widespread public access to existing expression.

Proponents of digital lock-up put forth some intriguing theoretical insights. But in practice, the notion that under a regime of digital lock-up copyright holders would engage in near-perfect price discrimination such that all would have access to the full gamut of copyright industry repertoire is little more than a pipe dream. For one, copyright industries have repeatedly exhibited a path-dependent resistance to licensing or engaging in new technological methods of exploitation that might endanger their traditional profit centers.[239] Indeed, they have a long history of seeking to reap monopoly rents through anti-competitive collusion, blocking new entrants, and paying off gatekeepers for consumer attention.[240] In the multimedia and Internet

238. Here I cull from and synthesize various leading arguments in support of this copyright maximalist (or "optimist") position. As with my Digital Abandon discussion, I gloss over the commentators' qualifications and reservations from that position. *See, e.g.*, GOLDSTEIN, *supra* note 8 (favoring a broad copyright that encompasses all consumer uses of copyrighted expression, but opposing copyright enforcement through DRM); Tom W. Bell, *Escape from Copyright: Market Success vs. Statutory Failure in the Protection of Expressive Works*, 69 U. CIN. L. REV. 741 (2001) (proposing that content providers be entitled to opt out of copyright law, including fair use and other limitations, in favor of common law rights and DRM); Tom W. Bell, *Fair Use vs. Fared Use: The Impact of Automated Rights Management on Copyright's Fair Use Doctrine*, 76 N.C. L. REV. 557 (1998); Liebowitz, *Policing Pirates in the Networked Age*, *supra* note 155, at 16–19; R. Polk Wagner, *Information Wants to be Free; Intellectual Property and the Mythologies of Control*, 103 COLUM. L. REV. 995 (2003).

239. LESSIG, *supra* note 4, at 89–93 (discussing firms' path dependence).

240. The industry's anticompetitive behavior has continued in the digital arena. *See* Jon Healey, *Net Services Want Better License Deals From Labels*, L.A. TIMES, August 5, 2002, § 3, at 5 (detailing independent online music service claims that labels systematically favor their own online services and reporting Justice Department antitrust investigations of those practices); Anna Wilde Mathews, *U.S. Probes Movie-Industry Ventures for Possible Anti-*

contexts, copyright industries have also engaged in protracted cross-sectoral turf battles, leaving would-be licensees with the highly complex, costly task of seeking multiple, overlapping permissions.[241] This institutional conservatism and balkanization does not inspire confidence that, if only given control, the industries would make their full store of cultural expression readily available at reasonable prices. While industry-licensed online distribution sites, like iTunes and MovieLink, are certainly steps in the right direction, they still come with far less content and far greater restrictions, both for end-user consumers and those who would remix and modify songs and movies, than P2P networks.[242]

In addition, advocates of digital lock-up hold a Panglossian view of digital technology's capacity to support access-enhancing price discrimination. The advocates' vision of individualized price discrimination is predicated on the assumption that digital technology can accurately predict consumer valuations by compiling and analyzing user profiles based on individuals' past uses and purchases. But such "Consumer Relationship Management" systems are intrinsically limited; they cannot determine the reasons for past purchases or tease out quirks and changes in a consumer's preferences.[243] Nor is individualized analysis likely to be commercially or politically tenable. Internet user surveys and, recently, voter referenda show considerable public opposition to suppliers' collection of data about individuals' reading, listening, and viewing habits.[244]

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trust Problems on Web, WALL ST. J., Dec. 2, 2001, at A6. For an historical overview, see Lauren J. Katunich, Comment, *Time to Quit Paying the Payola Piper: Why Music Industry Abuse Demands a Complete System Overhaul*, 22 LOY. L.A. ENT. L. REV. 643 (2002); Simon H. Rifkind, *Music Copyright and Antitrust: A Turbulent Courtship*, 4 CARDOZO ARTS & ENT. L.J. 1 (1985).

241. Mark A. Lemley, *Dealing with Overlapping Copyrights on the Internet*, 22 DAYTON L. REV. 547 (1997); R. Anthony Reese, *Copyright and Internet Music Transmissions: Existing Law, Major Controversies, Possible Solutions*, 55 U. MIAMI L. REV. 237 (2001); *see also* Jim Hu, *Listen.com Inks Another Broadband Deal*, CNET News.com, *at* http://news.com.com/2100-1023-956498.html (Sept. 4, 2002) (citing complexity of clearing multiple rights as a barrier to licensed digital distribution of music).

242. *See supra* note 59.

243. For a discussion of the limitations of digital technology-based systems in determining individual preferences, see Robert A. Hillman & Jeffrey J. Rachlinski, *Standard-Form Contracting in the Electronic Age*, 77 N.Y.U. L. REV. 429, 472 (2002); Dan Hunter, *Philippic.com*, 90 CAL. L. REV. 611, 627–36 (2002) (reviewing CASS SUNSTEIN, REPUBLIC.COM (2001)).

244. For a discussion of public apprehension regarding perceived invasions of privacy through data collection regarding individuals' Internet use, see Jerry Kang, *Information Privacy in Cyberspace Transactions*, 50 STAN. L. REV. 1193, 1196–97 (1998) (describing survey results). *See also Bank Privacy Measure Fails*, GrandForksHerald.com, *at* http://www.grandforks.com/mld/grandforks/3450535.htm (June 12, 2002) (reporting North Dakota voters' repeal of finance industry-backed legislation that had allowed financial institutions to sell customer data to outside companies without getting the customer's written permission).

Finally, price discrimination faces material cost and institutional obstacles. Determining user valuations, setting differential pricing, designing product and distribution systems to enable differential pricing, and creating and enforcing prohibitions against consumer arbitrage require considerable information, labor, and financial and organizational resources.[245] Not surprisingly, therefore, copyright industries resist providing no-cost or reduced-price licenses for non-profit, non-commercial, and educational uses.[246] Mid-level decision makers in copyright industry firms often apparently prefer to deny a low-price license outright — or simply to ignore such licensing requests — than to devote the time required for individualized treatment or to risk a supervisor's wrath for having granted a discount from standard pricing. This resistance arises partly from the vagaries of decision making in a large organization. But it may also make perfect economic sense for the copyright industry firm; at some point the costs of setting and administering differential pricing outweigh the revenues the firm can expect to reap from such a regime.[247]

To some extent, digital technology might lower the costs and institutional barriers to price discrimination, at least with respect to end users of expressive works. But where the consumer is a speaker who wishes to build upon, reformulate, or otherwise incorporate existing expression into new speech, copyright holders will generally want to engage in a costly, individualized, non-automated assessment of what price to charge. Moreover, copyright holders are often unwilling to license controversial and critical expression at any reasonable price.[248] Thus, even if individualized price discrimination through digital tech-

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245. *See* Benkler, *supra* note 77, at 272–73 (contending that information and implementation costs will always leave price discrimination imperfect); Michael J. Meurer, *Copyright Law and Price Discrimination*, 23 CARDOZO L. REV. 55, 101–02 (2001) (discussing costs of implementing price discrimination).

246. There is a wealth of anecdotal evidence, backed by this author's own experience, to support this point. *See, e.g.*, John Borland, *Webcasters, Labels Appeal Net Radio Fees*, CNET News.com, at http://news.com.com/2100-1023-948834.html (Aug. 7, 2002) (reporting that record labels have shown no licensing flexibility towards hobbyist and independent webcasters who will be forced to go offline if required to pay the $.07 per song statutory license rate set by the Librarian of Congress). The labels ultimately agreed to a reduced rate for "small webcasters" under the shadow of legislation that might have exempted them entirely. *Id*.

247. *See* Benkler, *supra* note 77, at 272–73.

248. The Margaret Mitchell Estate's recent lawsuit against a parodic sequel of *Gone With the Wind* from the slaves' viewpoint is a poignant recent example. *See* Suntrust Bank v. Houghton Mifflin Co., 268 F.3d 1257 (11th Cir. 2001) (overturning a preliminary injunction against publication of the sequel on grounds of fair use); David D. Kirkpatrick, *A Writer's Tough Lesson in Birthin' a Parody*, N.Y. TIMES, Apr. 26, 2001, at E1 (reporting the history of Mitchell Estate efforts to prevent unflattering or controversial treatments of the classic Civil War saga); *see also* Worldwide Church of God v. Phila. Church of God, Inc., 227 F.3d 1110 (9th Cir. 2000) (church suppressing use of racist tract written by its founder but since repudiated by the church); Houghton Mifflin Co. v. Noram Publ'g. Co., Inc, 28 F. Supp. 676 (S.D.N.Y. 1939) (authorized publisher of English translation of *Mein Kampf* suppressing unauthorized, critical translation).

nology is technically and politically feasible, it is unlikely to induce copyright holders to license remixing, fan edits and sequels, or other speech that recasts existing expression in a light that conflicts with the copyright holder's views or repertoire management.

In sum, even if it is feasible in light of enforcement costs, digital lock-up would seem to fortify copyright industries against competing distributors and speakers far more than to reconstitute the expressive benefits of peer-to-peer exchange. A regime of digital lock-up might give copyright industries sufficient confidence to make their works available online. But this regime would largely replicate the structure of the pre-Internet mass media. It would be bereft of much of the user choice and bottom-up reassembly, reconfiguration, and redefinition of popular culture that so profoundly enriches peer-to-peer network communication today.

C. Government Rewards

If we are to institute a comprehensive levy to fund noncommercial uses, why not simply pay for copyright holder compensation out of general tax revenues? Various government rewards and subsidies have long provided significant support for both inventive and artistic activity. Proposals to replace intellectual property with a system of government rewards have been the subject of scholarly and policymaker attention since the mid-nineteenth century. Recent economic analysis has brought renewed interest to this possibility.[249] While the focus has been on patent, scholars have also considered the possibility that government rewards might provide an adequate incentive for the creation and dissemination of expression, while avoiding the deadweight loss and other costs attendant to proprietary copyright.[250]

Scholars have not presented a detailed proposal for government rewards to authors in lieu of copyright. But we can imagine that it could take much the same form as the NUL, except that authors would receive payments from an entity funded by general tax revenues rather than levies imposed on selected services and devices. As under the NUL regime, payment distributions could reflect each work's aggre-

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249. *See, e.g.*, Michael Abramowicz, *Perfecting Patent Prizes,* 56 VAND. L. REV. 115 (2003); Steve P. Calandrillo, *An Economic Analysis of Property Rights in Information: Justifications and Problems of Exclusive Rights, Incentives to Generate Information, and the Alternative of a Government-Run Reward System*, 9 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 301 (1998); Nancy Gallini & Suzanne Scotchmer, *Intellectual Property: When is it the Best Incentive System?,* in INNOVATION POLICY AND THE ECONOMY 2 (Adam B. Jaffe et al. eds, 2002); Steven Shavell & Tanguy van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J. L. & ECON. 525 (2001).

250. *See, e.g.*, Arnold Plant, *The Economic Aspects of Copyright in Books*, 1 ECONOMICA 167, 193 (1934); Michael Polanvyi, *Patent Reform*, 11 REV. ECON. STUD. 61, 65 (1944). For further brief discussion of the advantages and drawbacks of funding creative expression from general tax revenues, see ECKERSLEY, *supra* note 90, at 14–16; FISHER, *supra* note 5.

gate private value, based on a calculation of the work's popularity, as reported by tracking and metering uses and downloads. Likewise, a government reward regime could permit free copying, distribution, and, with some possible limitations, modifications of expressive works.

A government rewards regime would have some advantages over the NUL. First, it would obviate the need to determine which P2P file-swapping related services and devices should be subject to the levy and what should be the amount of the levy imposed on each service and device. Second, it would avoid imposing a potentially innovation-inhibiting tax on new technologies for delivering and improving P2P communication and private copying. Third, a government rewards regime could be funded by a progressive income tax rather than a regressive "sales tax" on goods and services.

On the other hand, as scholars have noted, a system of government rewards would have a number of potential drawbacks. First, commentators question whether the public would support sufficient funding for government rewards from general tax revenues.[251] Funding government rewards from general tax revenues might well be a bargain. If properly tailored, it would dramatically lower the price for access to and uses of expression and inventions, while still providing enough to give authors and inventors an incentive to create them. Nevertheless, even if economically rational, raising taxes is rarely a winning campaign plank. Of course, consumers wouldn't welcome paying a levy on P2P file-sharing related devices and services either. But consumers are more likely to see a more direct nexus between their use of such devices and services and the swapping of copyright-protected material.

Which leads to the second point; funding author payments from general tax revenues raises the issue of inequitable cross-subsidization, possibly to an even greater degree than the NUL. Taxpayer funded government rewards schemes spread the cost of author payments among a far greater population. Thus, while each person's share of that cost will be less under a government rewards scheme, it is likely that many more people who never engage in file sharing and never copy copyright-protected works will have to pay.

Of course, an argument for government rewards is that all of society benefits from both the creation of original expression and the greater creativity, knowledge, diversity of expression, and cultural involvement that P2P file sharing engenders. After all, both the creation of original expression and cheap public access to that expression mean more dissemination of information, ideas, and opinion, and greater possibilities for further creative expression that builds upon

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251. *See, e.g.*, FISHER, *supra* note 5.

existing works. As a member of a liberal democratic polity, I benefit from those goods, regardless of whether I directly consume copyright-protected material. For that reason, perhaps, both the initial creation of sustained works of authorship and subsequent P2P file sharing *should* be cross-subsidized, and cross-subsidized by the entire citizenry.[252]

There is much to that argument. Yet nevertheless, even if P2P file sharing has social value, it also has substantial private value specific to those who participate in it. And while a strong argument can be made that we shouldn't distinguish between types of expression in assessing expression's social value, it *is* hard to justify taxpayer-funded government subsidies for television sitcoms and popular songs that might find sufficient financial support in the market even without such subsidies. Accordingly, government funds would probably be better spent subsidizing noncommercial expression and high-speed Internet access, as is currently the case. The latter would indirectly support P2P file sharing but would underwrite many other communicative activities as well.

Finally, government rewards for authorship raise the specter of untoward government influence on authors' speech. In theory, a rewards system could be established with safeguards to prevent such influence. The law could require that rewards be disbursed strictly in accordance with neutral and objective criteria, such as data on user access and downloads. In addition, the disbursing body could be an independent and free-standing agency, insulated from political meddling.

However, past experience demonstrates that even in democratic states and even under conditions designed to insure expressive independence, public funding brings a degree of government interference.[253] A reward for authorship program funded by the citizenry as a whole, rather than by those who are likely to copy, distribute, and modify copyright-protected works, would suffer from similar vulnerability. It would inevitably be open — perhaps rightly so — to public scrutiny and debate, with the attendant possibility of government officials' involvement in selecting which types of speech will and will not be funded. In contrast, since the NUL would be funded by users, not the public fisc, it would be an important step removed from political oversight and interference. The distribution of NUL levies would be seen more in market terms rather than as an expression of political values and priorities. As such, elected officials would likely feel less temptation and less need to meddle in its particulars.

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252. To some extent public libraries serve a similar function. They spread the cost of acquiring and maintaining copies and providing access over the entire citizenry. *See* R. Anthony Reese, *The First Sale Doctrine in the Era of Digital Networks*, 44 B.C. L. REV. 577, 588–89 (2003).

253. *See* Netanel, *supra* note 235.

Ultimately, therefore, despite the advantages of a government rewards system, the NUL would likely be both politically more tenable and more desirable.

VIII. CONCLUSION

In China, where reportedly more than 90 percent of movies, music, and software are illegal copies, authorities have begun to go to extraordinary lengths to prevent unlicensed copying and distribution. In addition to draconian criminal penalties for illicit distribution, movie preview audiences are now subjected to security measures even more intrusive than those instituted in our post-September 11th airports.[254] Movie patrons have identity card numbers inscribed on their tickets and are videotaped as they enter the theater. Before taking their seats, they must deposit all cell phones, watches, car keys, and pens, and pass through a metal detector. Before watching the movie, they must sit through a lecture about the evils of illegal copying.

Copyright industries would institute digital parallels to maintain proprietary control of their content in the face of unlicensed P2P file swapping.[255] The social costs of such a regime would far outweigh its benefits. At bottom, unlike the commercial piracy so prevalent in China, the noncommercial sharing and reworking of cultural expression in P2P networks is a phenomenon to be celebrated, not repressed. It is fundamentally speech, not theft. The key is to find a means to compensate authors and copyright holders efficiently, without impeding P2P file sharers' expressive activity.

To that end, my proposal for a Noncommercial Use Levy navigates between the twin shoals of "digital abandon" — the massive unauthorized personal copying and dissemination of copyrighted works — and "digital lock-up" — copyright industries' hermetic control over every use of, and access to those works in digital format. My proposal would give individuals the unhindered right to engage in the noncommercial copying, exchange, and modification of much copyright-protected expression. But to the extent ISPs and consumer electronics manufacturers pass on levy costs to their customers, it would effectively require that individuals pay for that right, albeit less than they would likely have to pay under a proprietary copyright regime. My proposal would deny copyright holders proprietary control over

254. *See* Joseph Kahn, *The Pinch of Piracy Wakes China Up on Copyright Issue*, *It's More Than a Trade Dispute When the Victims Are Chinese*, N.Y. TIMES, Nov. 1, 2002, at C1.

255. Indeed, the industries have not limited themselves to digital parallels. The movie industry has recently produced "anti-piracy" trailers for showing in movie theaters in the United States and abroad. *See* Lorenza Munoz, *Anti-Piracy Swords Drawn in Theaters: A New Trailer Says Film Theft Harms Lower-Rung Industry Workers*, L.A. TIMES, Mar. 3, 2003, § 5, at 1.

noncommercial file sharing and remixing, but it would entitle them to compensation for those uses.[256]

P2P file sharing is yet another instance in which copyright holders' proprietary control should give way to a right of compensation. Copyright law — a legal regime designed to provide economic incentives for the creation and distribution of original expression — is broad enough to encompass both. The Noncommercial Use Levy would be an important mechanism for ensuring that authors and copyright holders continue to receive adequate remuneration for the creation of "sustained works of authorship."[257] No less importantly, it would accord noncommercial users an unhindered entitlement to copy, share, and modify the music, movies, stories, and art that populate our culture.

256. To paraphrase Free Software Movement founder Richard Stallman's colorful distinction, the NUL would allow free use, in the sense of free (unbounded) speech, but not in the sense of free (*gratis*) beer.

257. *See* Ginsburg, *Putting Cars on the "Information Superhighway"*, *supra* note 233, at 1499.