

# DRM AS AN ENABLER OF BUSINESS MODELS: ISPs AS DIGITAL RETAILERS

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## I. THE QUEST FOR BETTER BUSINESS MODELS

Better business models are the Holy Grail of the digital age. Even Alex Doonesbury has joined the quest.<sup>1</sup> Alex is the daughter of Mike Doonesbury in Garry Trudeau’s syndicated comic strip, so her search can take as long as Trudeau likes. Things are more urgent for those in the real world, especially for those in the entertainment industry. Unauthorized digital

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1. Garry Trudeau, *Doonesbury*, SAN FRANCISCO CHRONICLE, Jan. 19, 2003, at Sunday Comics 1.

reproduction and distribution have shattered traditional music industry business models and are on the verge of doing the same to movie industry models. The question is what, specifically, can be done about it. This is a difficult question to answer.

Proof that the question is difficult (if proof be necessary) can be found in the pages of the nation's leading business periodical, *The Wall Street Journal*. In an editorial triggered by a U.S. Naval Academy investigation of midshipmen suspected of downloading MP3 files, *The Wall Street Journal* recently advised the record industry, quite unhelpfully, that it needs a new business model.<sup>2</sup> This particular editorial criticized the record industry as one "still wedded to an LP-era business model." It was also dismissive of "MusicNet" and "pressplay," the record industry's maiden tests of new models based on digital distribution.<sup>3</sup>

*The Wall Street Journal* did not, however, offer an alternative business model it would find praiseworthy. Therein lies the rub. It is one thing to say a new model is necessary. It is quite another to suggest how that model might work. A general description of how a new model may work is not enough, and *The Wall Street Journal* failed to provide even that. The devil is in the details.

Keeping in mind that seemingly attractive concepts are often undone by their necessary details, I nevertheless suggest a business model that has promise: Internet service providers (ISPs) should become digital retailers for digital works of all kinds—music, movies, television programs, photographs, books, periodicals, and software. Under this model, ISPs would license digital works from their copyright owners at wholesale prices set by the owners. ISPs would then sell the digital works to their subscribers at retail prices set by the ISPs.<sup>4</sup>

Many groups would benefit from this model. ISPs would embrace this model because of its potential for great profit. Consumers would embrace this model because it gives them the choice and convenience they crave despite making them pay for digital works. Moreover, digital middlemen—website operators, peer-to-peer (P2P) networks, newsgroup and chat room hosts, Internet search engines, and online radio and television stations—could serve as promoters and distributors without fear of direct, contributory, or vicarious copyright liability. Computer and consumer electronics manufacturers and software companies would be able to invent and innovate to the best of their abilities without regulation of their prod-

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2. *Face the (Digital) Music*, WALL ST. J., Dec. 2, 2002, at A18, available at <http://www.freerepublic.com/focus/news/799006/posts> (last visited May 3, 2003).

3. *Id.*

4. See *infra* Part III.A (giving a more detailed description of this model).

ucts' designs. And although copyright owners would lose the right to prevent the unauthorized digital redistribution of their works, they would gain the ability to set their own wholesale prices in the form of royalties paid by ISPs.

Digital Rights Management technology (DRM) makes this business model possible. DRM encompasses a variety of technologies used to identify digitized works<sup>5</sup> and to control their use.<sup>6</sup> Although *The Wall Street Journal* did not offer the record industry any suggestions for a new business model, others have offered suggestions. All of these suggested business models exhibit some DRM features.<sup>7</sup> Thus, DRM appears to be at the foundation of whatever business models will actually succeed in the digital age. Part II begins by describing a variety of these DRM-based business models. Some are being used already.<sup>8</sup> Others have been proposed but are not yet being used.<sup>9</sup> These models employ several different DRM technologies imposing a wide range of controls, from none to extensive, over the design of equipment used by consumers and the ways in which consumers may use the works they acquire. In a table, I place these models along this spectrum of control so that their relationship to each other can be seen.<sup>10</sup> I then describe the "ISPs as Digital Retailers" model and place it along the spectrum of control so it too can be seen in relation to others.<sup>11</sup> Following this, I specifically compare the Digital Retailers model to the "Tax and Royalty System," another promising and practical model that has attracted some attention and support.<sup>12</sup> I conclude that the Digital Retailers model satisfies more objectives than the Tax and Royalty System.<sup>13</sup> Finally, I acknowledge that the Digital Retailers model is not problem-free and identify several problems that would need to be solved in order for the Digital Retailers model to be successful.<sup>14</sup>

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5. See, e.g., 17 U.S.C. § 1202(c) (2000) (defining "copyright management information"); WIPO Copyright Treaty, Dec. 20, 1996, art. 12(2) (defining "rights management information"), available at <http://www.wipo.int/clea/docs/en/wo/wo033en.htm>.

6. See, e.g., 17 U.S.C. § 1201(a)(3)(B) (2000) (defining technical measures that "effectively control[] access to a work"); 17 U.S.C. § 1201(b) (2000) (prohibiting in most cases technology that circumvents access controls on a copyrighted work); WIPO Copyright Treaty, *supra* note 5 (defining "rights management information").

7. See *infra* Part II.D.

8. See *infra* Parts II.C and II.D.2.

9. See *infra* Parts II.B and II.D.1.

10. See *infra* Part II.D.2.

11. See *infra* Parts III.A and III.B.

12. See *infra* Part III.B.

13. See *infra* Part III.C.

14. See *infra* Part III.D.

## II. DRM-BASED BUSINESS MODELS

### A. The Role of Control

DRM's ability to give copyright owners the ability to control the use of their works is both the beauty of DRM (from the point of view of copyright owners) and its bane (from the point of view of many consumers and technology companies). As a result, it is useful to begin with a few words about the role of control by copyright owners and technology companies.

Copyright owners value control over their works because unauthorized copying and redistribution destroys their ability to market their works in two ways. First, the copyright industry's business models envision selling multiple copies of a work at per copy prices that are a fraction of the cost of producing those works. Uncontrolled copying and redistribution destroys this plan because unauthorized digital copies displace sales and performances. Second, unauthorized copying and redistribution of copyrighted works prevents copyright owners from changing the price of their works over time in ways they hope will maximize their incomes.

The marketing section of every thorough business plan depends on pricing strategies. Ideally, copyright owners should charge higher prices to those customers who value the sellers' goods and are best able to afford higher prices. Similarly, owners should charge lower prices to customers who do not value their goods as much or are less able to afford them. Economists refer to this as "price discrimination." A successful business model should not force copyright owners to charge the same price to all buyers because the owners will lose the ability to maximize profits through price discrimination.<sup>15</sup>

Some have argued that copyright owners do not have the ability to engage in perfect price discrimination.<sup>16</sup> But successful business plans do not require perfect price discrimination. Copyright owners only need the ability to price discriminate a little, as in these familiar examples:

- Hardcover books come out before and cost more than paperback reprints.
- Most movies come out in theaters before they are available to rent on DVDs and videocassettes. Movie theater tickets cost more than rentals; rentals cost more than viewing movies on pay-TV; and viewing movies

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15. *See, e.g., ProCD v. Zeidenberg*, 86 F.3d 1447, 1449-50 (7th Cir. 1996) (explaining price discrimination).

16. Neil Weinstock Netanel, *Impose a Noncommercial Use Levy to Allow Free P2P File-Swapping and Remixing* 19-20 (Nov. 2002) (unpublished manuscript, available at [http://www.utexas.edu/law/faculty/nnetanel/Levies\\_chapter.pdf](http://www.utexas.edu/law/faculty/nnetanel/Levies_chapter.pdf)).

on pay-TV generally costs more than watching movies on advertiser-supported TV.

- Buying a DVD or videocassette costs more than renting one.
- New albums by musical artists cost more than “greatest hits” compilations; these compilations cost more than multi-artist albums compiled by theme.
- Full-featured versions of computer software cost more than “lite” versions; and “lite” versions cost more than “trial” versions.

In other words, business plans for the marketing of copyrighted works are based on the ability to do sequential but separate releases of those works. In entertainment businesses, the sequence of releases for successful works spans a long time. Copyright owners seek control over the use of their works because uncontrolled copying and redistribution of works interferes with the success of long-term sequential release.

Technology companies have similar concerns, but not to the same degree, because for them design innovations are central to their business plans. They fear that legal regulation of their products’ features would interfere with product innovation, and thus interfere with their business plans. For example:

- Computers running text-only DOS operating systems were perfectly adequate for word processing and spreadsheets. If legal regulation had prohibited the implementation of graphical user interfaces on the grounds that such interfaces could be used to infringe photograph copyrights or display pornography, the computer and software industries may have been frozen at their pre-Windows and pre-Macintosh stages of development.
- Personal computers were widely used in business and by consumers before PCs could be used to access the Internet. If legal regulation had prohibited the use of telephone modems on the grounds that modems can be used to infringe copyrights or transmit pornography, email would not be available today to businesses or consumers.

Therefore, the basic tension between the copyright and technology industries is the tension between the degree of control copyright owners would like to have over their works and the extent to which technology companies should legally be required to facilitate and respect that control. Because control is so central to the significance of DRM, this article next describes several digital business models that exhibit a different degree of control over a phenomenal range. On one end of this spectrum, the “anti-

copyright”<sup>17</sup> models advocate almost no control over the distribution of copyrighted works. On the other extreme, the “beyond-copyright”<sup>18</sup> models give owners even more control over copying and distribution than granted by copyright protection. The “copyright-based”<sup>19</sup> models occupy the middle of this spectrum of control.

## B. The “Anticopyright” Model

The anticopyright model would eliminate copyright entirely in the online digital domain.<sup>20</sup> DRM may play a role in this model, but only to identify authors whom audiences may choose to compensate with “tips.”<sup>21</sup> No one seems to have suggested that eliminating copyright and replacing it with tips would actually succeed in providing a living wage for anyone, and the current online tip-systems have so far given musicians only modest compensation.<sup>22</sup>

## C. The “Beyond-Copyright” Models

At the other extreme from the anticopyright model are two models that would provide even more protection than current copyright laws.

The first beyond-copyright model allows publishers to use DRM to control access to works, even those in the public domain, to prevent their unauthorized copying and distribution. Although I could find no commentary on this first model, the technology needed for the model seems to exist. Passwords would control access to works, and encryption and watermarks<sup>23</sup> would prevent unauthorized uses. Under this model, circumvention would be a punishable offense, but everyone would be free to digitize and distribute their own versions of works in the public domain, at their own expense, without liability. This model, however, would prevent anyone other than the publisher from copying existing digital versions. In other words, the model would prevent users from free riding on a pub-

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17. See *infra* Part II.B.

18. See *infra* Part II.C.

19. See *infra* Part II.D.

20. See, e.g., Mark S. Nadel, Questioning the Economic Justification for Copyright 3 (Feb. 21, 2003) (unpublished manuscript, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=322120](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=322120)); Netanel, *supra* note 16, at 17.

21. See, e.g., TipJar LLC, *Internet Treasury Home Page* (website allowing online tipping of recording artists), at [www.tipjar.com](http://www.tipjar.com) (last visited Mar. 20, 2003); Musiclink, *Give It. Get It. Not For Profit* (same), at [www.fairtunes.com](http://www.fairtunes.com) (last visited Mar. 20, 2003).

22. See, e.g., Chris Kelsey, *Bandwidth: Passing the Virtual Hat*, Onstage (Dec. 1, 2001), at [http://onstagemag.com/ar/performance\\_bandwidth\\_passing\\_virtual](http://onstagemag.com/ar/performance_bandwidth_passing_virtual) (quoting a band member saying that “Nobody every contributed” a tip through the voluntary payment systems until “someone gave us a contribution through Fairtunes . . . [of] \$300!”).

23. See *infra* Part III.A.2 (describing watermark technology).

lisher's investment in digitizing a work—even a work in the public domain.

The second beyond-copyright business model does not go quite as far. Companies practicing this model would use DRM to control access to public domain materials, but would not control copying or redistribution of these works. For example, Westlaw and LEXIS distribute digital versions of public domain works to subscribers, unencrypted, with copying and redistribution controlled, if at all, merely by contract. The United States government also uses this model in its pay-per-page PACER system for the digital distribution of federal court judicial decisions.<sup>24</sup>

#### D. Copyright-Based Models

Between the anticopyright and beyond-copyright models are two sets of copyright-based models. Both sets of models seek to extend existing copyright law into the digital domain. One set would impose statutory licenses that authorize digital uses of copyrighted works. The other set would give copyright owners discretion over licensing terms and control over unauthorized uses of their works.

##### 1. Statutory License Models

Two statutory license models have been proposed, one by Neil Netanel<sup>25</sup> and the other by William (Terry) Fisher.<sup>26</sup> Because both would require amendments to the Copyright Act, neither has yet been put into practice.

Professor Netanel has proposed a “Noncommercial Use Levy.”<sup>27</sup> This model permits noncommercial copying, distribution, performance, and adaptation of copyrighted works in return for levies paid by the providers of products and services whose value is enhanced by file swapping.<sup>28</sup> A statutory license would allocate these collected levies among the categories of copyright owners (record companies, movie producers, book publishers, and so forth), and then among individual copyright owners within

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24. PACER Service Center, *Public Access to Court Electronic Records: Overview*, at <http://pacer.psc.uscourts.gov/pacerdesc.html> (last visited Mar. 14, 2003).

25. Netanel, *supra* note 16.

26. William Fisher, *Digital Music: Problems and Possibilities* (Oct. 10, 2000) (unpublished manuscript, available at [http://www.law.harvard.edu/Academic\\_Affairs/coursepages/ffisher/Music.html](http://www.law.harvard.edu/Academic_Affairs/coursepages/ffisher/Music.html)); see also *Fisher @ FMC: Replace Copyright with Watermarks, Taxes*, available at <http://www.corante.com/copyfight/20030101.shtml#17322> (Jan. 8, 2003).

27. Netanel, *supra* note 16.

28. *Id.* at 28-38.

each category.<sup>29</sup> Those entitled to levies would receive them in proportion to how often their works were used.<sup>30</sup> Unless affected industry segments themselves agreed on the levies, Copyright Office arbitrations would determine the levy amount applied to each type of product or service.<sup>31</sup> Presumably, Copyright Office arbitrations would also settle disputes over allocation to copyright owners.

Professor Fisher has proposed a "Tax and Royalty System."<sup>32</sup> Under this system, the government would tax ISP access and any technology used to perform music, including MP3 players, hard drives, and computers. The collected revenues would be distributed to copyright owners in proportion to how often their works are accessed. Professor Fisher's proposal focuses on the recorded music industry in particular, but there is no reason his Tax and Royalty System could not be used to compensate copyright owners in other industries as well.

The Noncommercial Use Levy and the Tax and Royalty System both use DRM to monitor the frequency with which users access particular copyrighted works.<sup>33</sup> Under both models, ISPs monitor the flow of copyrighted files through their routers and record the frequency with which a copyrighted work appears. The compiled data is used to allocate collections proportionately among copyright owners.

Royalty setting and royalty allocation, the two key features of these models, are based on well-established elements of existing copyright law. Copyright Office arbitrations already set statutory license fees and allocate collected fees in connection with cable and satellite retransmissions of copyrighted movies, television programs, the musical compositions in their soundtracks,<sup>34</sup> and with consumer duplication of digital music recordings.<sup>35</sup> The same arbitrations also determine the license fees for certain online digital performances of music recordings<sup>36</sup> although Congress

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29. *Id.* at 38-39.

30. *Id.* at 39.

31. *See* 17 U.S.C. §§ 801-803 (West 1996 & Supp. 2002).

32. Fisher, *supra* note 26.

33. *See infra* Part III.A.2 (describing watermarking and fingerprinting technologies that can monitor the frequency with which individual works are used).

34. 17 U.S.C. § 111(d) (2000) (describing statutory license fees and allocation for secondary transmission of copyrighted works by cable companies); 17 U.S.C. § 119(b) (2000) (describing statutory license fees and allocation for secondary transmission of television stations by satellite carriers); 17 U.S.C. § 122 (2000) (describing statutory license fees and allocation for secondary transmission of television broadcasts by satellite carriers within local markets).

35. 17 U.S.C. §§ 1003-1008 (2000).

36. 17 U.S.C. § 114 (2000).

itself has already specified the allocation of digital performance royalties among those entitled to receive them.<sup>37</sup>

Although the Noncommercial Use Levy and the Tax and Royalty System are similar, they differ in at least one important respect. The Noncommercial Use Levy permits users to create new versions of digital works in addition to making and redistributing copies.<sup>38</sup> The Tax and Royalty System, on the other hand, does not contemplate the creation of new versions; it simply authorizes copying and redistribution.<sup>39</sup> Thus, the Tax and Royalty System leaves more control in the hands of copyright owners, namely the right to license the creation of new versions of their works on terms agreed to in private negotiations.

## 2. *Models Giving Copyright Owners Discretion and Control*

Several other models give copyright owners discretion over licensing terms and control over unauthorized uses of their works rather than impose statutory licenses. These models are being used now (and what follows are my own descriptions of their key features).

One model gives copyright owners access control, using passwords as the only DRM feature. This model does not control copying or redistribution, and thus does not require encrypting the distributed content. Familiar examples of this model include the online editions of *The New York Times* and *The Wall Street Journal*. Both websites require registration to obtain a password that is necessary for access. Use of *The New York Times*' site is free to anyone. By contrast, *The Wall Street Journal*'s site requires all users, including those who subscribe to the paper edition, to pay an on-line subscription fee. Both companies enforce their password requirements using technologies that run on their own servers. A user's computer does not require password-related design features or website-specific software.

A second model gives copyright owners copy and redistribution control in addition to access control. Under this model, encryption restricts access to those using special software provided by or on behalf of copyright owners. This software controls what those who are given access may do with materials, allowing only authorized uses. Familiar examples of this model include publications in the Adobe eBook format, and audio and video materials in the RealMedia and Windows Media formats.

A third model gives copyright owners control over access, but not over copying or redistribution, by using encryption instead of password protection. This model requires authorized users to have specially designed

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37. *Id.* § 114(g)(2).

38. Netanel, *supra* note 16, at 29.

39. *See* Fisher, *supra* note 26.

equipment to receive and decrypt materials. Companies that manufacture the necessary equipment voluntarily incorporate the necessary design features into their equipment; they are not compelled to do so by law. This model is used by cable systems and satellite TV companies.

A fourth model uses encryption to give copyright owners control over access, copying, and redistribution. This model, like the previous model, requires authorized users to have specially designed equipment to access and decrypt materials. Manufacturers of this equipment also incorporate necessary design features voluntarily; they are not required by law to do so. This model is used in connection with movie DVDs which are encrypted and then decrypted using the Content Scramble System (CSS).<sup>40</sup> The record industry's Secure Digital Music Initiative (SDMI) would have used this model.<sup>41</sup> Although SDMI was not implemented in connection with commercially released CDs, some record companies are now using similar technologies based on this model.<sup>42</sup>

Finally, a fifth model uses DRM to give copyright owners access, copy, and redistribution controls over digital works that are not encrypted, but contain digital data that prevent unauthorized uses of those works. Because these works are not encrypted, this model works only if computers and consumer electronics devices contain circuitry that recognizes and responds to the authorized use information. Without such circuitry, computers and other devices would play unencrypted works and permit them to be copied and redistributed. One example of this model is the Serial Copy Management System, intended to permit record companies to control digital copying of recorded music.<sup>43</sup> This system, which is at the heart of the Audio Home Recording Act of 1992, requires digital audio recorders to be equipped with circuitry that prevents them from being used to make serial copies (that is, copies of copies) of digital recordings.<sup>44</sup> The commercial significance of that ban was largely undercut by the advent of MP3 technology for storing recorded music and consumers' use of computers, rather than digital audio recorders, to copy and redistribute MP3

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40. See *Universal City Studios v. Corley*, 273 F.3d 429, 436-37 (2d Cir. 2001); Dean S. Marks & Bruce H. Turnbull, *Technical Protection Measures: The Intersection of Technology, Law and Commercial Licenses*, 46 J. COPYRIGHT SOC'Y U.S. 563, 578-86 (1999).

41. Marks & Turnbull, *supra* note 40, at 592-95.

42. See, e.g., Fat Chuck's, *Corrupt CDs + News*, at <http://www.fatchucks.com/z3.cd.html> (updated Nov. 9, 2002).

43. See *Recording Indus. Ass'n, Inc. v. Diamond Multimedia Sys., Inc.*, 29 F. Supp. 2d 624, 631-32 (C.D. Cal. 1998), *aff'd*, 180 F.3d 1072 (9th Cir. 1999); Marks & Turnbull, *supra* note 40, at 592-95.

44. 17 U.S.C. § 1002 (2000).

files. MP3 technology undermines the Serial Copy Management System because the Audio Home Recording Act exempts computers from the need to have anti-copying circuitry.<sup>45</sup>

Nevertheless, this fifth model remains at the forefront of current debates about the proposed “Broadcast Flag System” for restricting the use of unencrypted digital television broadcasts.<sup>46</sup> These debates are the result of an FCC mandate that digital television broadcasting be introduced nationwide by 2006.<sup>47</sup> Movie and television producers are not going to provide expensive content for digital TV broadcasts if that content can easily be copied and forwarded over the Internet to recipients around the world. As a result, the lack of effective copy protection methods may hinder the development of digital TV broadcasting by greatly reducing the amount of attractive programming that is made available for it.

The Broadcast Flag copy protection method was the centerpiece of a bill in the 107th Congress formally entitled the “Consumer Broadband and Digital Television Promotion Bill.”<sup>48</sup> The bill, commonly referred to as the “Hollings Bill,” would have required “digital media devices” to provide “effective security for copyrighted works.”<sup>49</sup> The 107th Congress adjourned without enacting or even voting on the Hollings Bill, but that does not delay the effective date of nationwide digital TV broadcasting.

With these developments in mind, the FCC recently issued a Notice of Proposed Rulemaking by which the Commission invited comments on whether it should adopt rules that would mandate the incorporation of copy protection technology into television receivers and other consumer electronics devices, such as digital TV recorders.<sup>50</sup> An alliance of copyright owners, broadcasters, and entertainment industry unions has urged the FCC to adopt a rule that would require devices to recognize and respond to “Broadcast Flags” included in digital TV broadcasts. These

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45. 17 U.S.C. § 1001(5)(B)(ii) (2000); *Recording Indus. Ass’n, Inc.*, 29 F. Supp. at 631.

46. *Digital Broadcast Copy Protection*, MB Docket No. 02-230, FCC 02-231, at 2-3 (released Aug. 8, 2002) (Notice of Proposed Rulemaking), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-02-231A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-231A1.pdf) (last visited May 5, 2003).

47. *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, MM Docket No. 87-268, FCC 97-116, at 43 (released Apr. 21, 1997) (DTV Fifth Report and Order), available at [http://www.fcc.gov/Bureaus/Mass\\_Media/Orders/1997/fcc97116.pdf](http://www.fcc.gov/Bureaus/Mass_Media/Orders/1997/fcc97116.pdf) (last visited May 5, 2003).

48. S. 2048, 107th Cong. (2002), available at <http://thomas.loc.gov/cgi-bin/query/z?c107:S.2048>: (last visited May 4, 2003).

49. *Id.* § 3(d).

50. *Digital Broadcast Copy Protection*, MB Docket No. 02-230, FCC 02-231 (released Aug. 8, 2002) (Notice of Proposed Rulemaking), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-02-231A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-231A1.pdf).

Broadcast Flags would indicate whether those broadcasts may be redistributed outside the recipient's home.<sup>51</sup> Broadcast Flags do not encrypt unencrypted digital TV signals. Therefore, the Broadcast Flag System would require devices that receive and process digital broadcasts to recognize whether particular signals may be redistributed outside the recipient's home. Additionally, those devices would not permit redistribution if a signal's Broadcast Flag does not authorize it.

The following chart recaps these business models (excluding the anti-copyright and beyond-copyright extremes). Those that protect copyright the most are at the top of the chart; those that protect copyright the least are at the bottom. The chart also reflects the technology required to implement each business model. Not coincidentally, the chart shows that providing more control over copyrighted works requires more control over technology under the business models discussed thus far.

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51. *Digital Broadcast Copy Protection*, MB Docket No. 02-230 (released Dec. 6, 2002) (Joint Comments of the Motion Picture Association of America, et al.), available at [http://www.mpa.org/Press/MPAA\\_Comments\\_02-230.pdf](http://www.mpa.org/Press/MPAA_Comments_02-230.pdf) (last visited May 5, 2003).

Copy-right Control	Business Model	Enabling Technology	Controls			Control over Technology
			Access	Copy	Redis-trib.	
<p style="text-align: center;">↑</p> <p style="text-align: center;">More</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Less</p>	SCMS for digital audio music recorders; Broadcast Flag System for digital TV broadcasts	Watermarks: Equipment must contain legally mandated features	Yes	Yes	Yes	<p style="text-align: center;">↑</p> <p style="text-align: center;">More</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Less</p>
	CSS for DVDs; SDMI for music CDs	Encryption: Equipment must contain voluntarily installed features	Yes	Yes	Yes	
	Adobe eBook, RealMedia, Windows Media	Encryption: Requires only special software to read	Yes	Yes	Yes	
	Cable and satellite TV	Encryption: Equipment must contain voluntarily installed features	Yes	No	No	
	N.Y. Times/Wall St. J. online	Passwords: No special user technology required	Yes	No	No	
	Tax and Royalty System	Watermarks: No special user technology required; watermarks used for royalty allocation only	No	No	No	
	Noncommercial Use Levy	Watermarks: No special user technology required; watermarks used for royalty allocation only	No	No	No	

### III. ISPS AS DIGITAL RETAILERS MODEL

The birth of my Digital Retailers model occurred in connection with a panel discussion on P2P computing sponsored by the Berkeley Center for Law & Technology during the 2002 Spring semester. The discussion included a debate between panelists who advocated unimpeded P2P computing even when P2P networks were used for unauthorized distribution of digital files of copyrighted works and panelists who advocated imposing liability on facilitators of P2P computing if they knew their technologies were being used for unauthorized distribution of copyrighted works. The debate took place in the wake of *A&M Records, Inc. v. Napster, Inc.*<sup>52</sup> and much of the discussion dealt with the nuances of vicarious and contributory infringement, and with “safe harbors” under the Digital Millennium Copyright Act.<sup>53</sup>

The panel’s organizers asked me to talk about whether there was a “solution” to the “P2P problem.” It occurred to me that since P2P computing takes place on the Internet and all P2P users use ISPs to get access to the Internet, ISPs could play an important role in a possible solution. But I did not think that ISPs could solve the P2P problem at their own, unreimbursed expense. If ISPs are going to be used as *de facto* distributors of copyrighted digital works, ISPs could be made legal distributors of these works as well. ISPs could be persuaded to take on the role of authorized distributors by giving them financial incentives. In the world of physical goods, a retailer’s financial incentive is the spread between the wholesale and retail prices of those goods. It seemed to me that the same incentive could be given to ISPs in return for their serving as digital retailers.

#### A. How the Digital Retailers Model Would Work

##### 1. Overview

Under the Digital Retailers model, people would use the Internet much as they do now. They would connect to the Internet through dial-up or broadband accounts with ISPs. While online, they would visit websites, newsgroups, chatrooms, email servers, and P2P peers. And while visiting these destinations, they would download or stream digital content to their computers. But for digital content containing copyrighted works, the owners of the copyrights would have the right to digitally identify each work, its owner, and the wholesale royalty price to be paid by ISPs for its transmission to users.<sup>54</sup> As content identified in that fashion passed through

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52. 284 F.3d 1091 (9th Cir. 2002).

53. 17 U.S.C. § 512(d) (2000).

54. See *infra* Part III.A.2 (describing the technology by which this can be done).

ISPs' routers to their users, ISPs would log those transmissions and bill users' accounts monthly for the content they received, at retail royalty rates set by ISPs, using the same billing methods by which ISPs now charge users for Internet access.

To protect users from downloading unwanted works<sup>55</sup> or incurring exorbitant charges, ISPs could send pop-up notices before the actual files are transmitted. These pop-up notices would inform users that files requiring payments are about to be sent and would display the cost of sending the file. These pop-up notices could look and work like virus warnings seen today, and users would respond to them by clicking "Yes" or "No" buttons.

## 2. *Enabling DRM Technologies*

For ISPs to become digital retailers, they must be able to track each user's access to digital versions of copyrighted works and record those users who download and purchase these digital versions. ISPs can monitor copyrighted file access using two types of existing DRM technologies: "watermarking" and "fingerprinting."

Digital watermarks are digital identifications inserted into digital copies of works when they are manufactured.<sup>56</sup> People cannot hear or see watermarks, but computers and software can detect them.<sup>57</sup> Few digital versions of works on the Internet contain watermarks because many digital copies of copyrighted works are created without watermarks. For example, when consumers digitally copy analog works from music cassettes, video tapes, photographs, and texts, they do not insert watermarks into the copies they make. Consumers can also strip a watermark off a digital work by converting the work to analog and then recording the work back into a digital format.

In addition to watermarking, copyright owners can create digital identifiers for copies of their works by "fingerprinting" a digital version of their work. Fingerprinting converts the work's content into a unique digital identification mark by applying an algorithm to selected features of that content.<sup>58</sup>

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55. *See infra* Part III.D.2.

56. *See generally* Digimarc Corp., *Digital Watermarking Frequently Asked Questions*, at <http://www.digimarc.com/products/support/faqs.asp> (defining and discussing digital watermarking).

57. *Id.*

58. *See generally* Audible Magic Corp., *Home Page*, at [www.audiblemagic.com](http://www.audiblemagic.com) (describing one patented audio fingerprinting process).

Together, watermarking and fingerprinting can provide digital identifications for every digital work that copyright owners choose to have identified. ISPs can use these identifications to recognize works transmitted as digital files through networks connected to ISPs, which includes transmissions from websites, over P2P networks, and as attachments to emails or instant messages. Information about the copyright owner of each watermarked and fingerprinted work could be stored in a database along with the wholesale royalty price the copyright owner has decided to charge for the work's transmission to the ISP's customer. As these works pass through ISPs' routers, ISPs would identify the works and determine their wholesale royalties by checking their watermarks or fingerprints against the database. ISPs would then apply their retail markup and charge their customers' accounts for works they download.

### 3. *Implementation of the Technology by ISPs*

Under the Digital Retailer model, the technology used to identify watermarked and fingerprinted files would reside on *ISPs' computers*, not on the end-users' computers or on consumer electronic devices. This distinction is important for four reasons.

First, putting the technology on ISPs' computers frees computer and consumer electronics manufacturers and software companies to innovate without legal restrictions on their products' designs. Although ISPs would have to acquire, install, and use the enabling technology just described, that technology would not have to be used by consumers or by operators of websites, P2P networks, newsgroups, and chatrooms.<sup>59</sup>

Second, putting the technology on ISPs' computers makes circumvention less likely. CSS, Adobe eBook and SDMI—all of which are implemented on consumers' computers—were circumvented quite quickly.<sup>60</sup> One recent technical report persuasively argued both that watermark detection technology implemented in software on users' computers or electronic devices could be easily defeated and that detection technology implemented in hardware makes the computers and devices obsolete too quickly.<sup>61</sup>

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59. See *supra* Part III.A.2.

60. See, e.g., *Universal City Studios v. Corley*, 273 F.3d 429, 436-37 (2d Cir. 2001); *United States v. Elcom Ltd.*, 203 F. Supp. 2d 1111 (N.D.Cal. 2002); Scott A. Carver et al., *Reading Between the Lines: Lessons from the SDMI Challenge*, available at <http://www.usenix.org/events/sec01/craver.pdf> (visited Mar. 14, 2003).

61. Peter Biddle, et al., *The Darknet and the Future of Content Distribution*, available at <http://crypto.stanford.edu/DRM2002/darknet5.doc> (visited Mar. 14, 2003).

Third, all users of an online service connect to the Internet through ISPs, and thus can be billed by their ISPs for whatever copyrighted works they access. ISPs can already meter the bandwidth usage of each of their subscribers, and several ISPs may begin charging subscribers based on usage rather than flat monthly fees.<sup>62</sup>

Fourth, an Internet user could download many copyrighted works during a single online session. Furthermore, the royalties requested for these works could vary from fractions of a cent to hundreds of dollars. This presents both a problem and a potential solution.<sup>63</sup> Many website operators will likely use only royalty-free works to avoid driving away users unwilling to pay for copyrighted content.<sup>64</sup> To minimize the royalty and billing data that has to be processed, ISPs may create two channels for Internet access. One would allow access to royalty-bearing works; the other would not. The no-royalty channel would display icons to indicate that royalty-bearing works were available but blocked. Users would be able to switch back and forth between the two channels with a mouse click to selectively access royalty-bearing works or to avoid them.

#### 4. *Statutory License*

The Digital Retailer model would require copyright owners, by statute, to permit the copying and redistribution of their works, but would not require copyright owners to watermark or fingerprint their works. By choosing not to watermark or fingerprint their works, owners would allow ISPs and subscribers to freely transfer the works. In contrast, the statute would require ISPs to pay royalty charges for each watermarked or fingerprinted copyrighted work downloaded. This arrangement is thus equivalent to a statutory license because it authorizes copying and redistribution of copyrighted works without negotiated licenses from copyright owners. But while this proposed license authorizes the use of copyrighted works, it also requires ISPs to pay royalties at whatever rates copyright owners set.

All ISPs that have relationships with end users who access copyrighted works would have to pay royalties. These ISPs would include:

- ISPs that provide Internet access to dial-up and broadband subscribers,

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62. John Borland, *ISP download caps to slow swapping?*, CNET News.com (Nov. 26, 2002), at <http://business2-cnet.com.com/2100-1023-975320.html>.

63. See *infra* Part III.D (acknowledging and discussing other potential problems with the Digital Retailer model).

64. See *infra* Part III.A.4 (discussing copyright owners' royalty options, including the option not to charge a royalty).

- colleges and corporations that provide Internet access to students and employees,
- libraries that provide Internet access to patrons, and
- coffee shops, airports and other public places that provide Wi-Fi access to customers and travelers.

Currently, most colleges, corporations, libraries, and Wi-Fi-equipped coffee shops do not have billing relationships with their users.<sup>65</sup> These providers have two options: (1) create billing relationships with their users or (2) allow users to access only the no-royalty channel described above.<sup>66</sup>

ISPs themselves would not have to bear the cost of copyright royalties. Instead, they would be authorized to charge subscribers for the water-marked and fingerprinted files they receive, presumably at a rate greater than the copyright owner's fee. In most cases, a markup of 100% is likely. That is, ISPs would retain about 50% of the *retail* price paid by subscribers, and would pay about 50% to copyright owners. This is the traditional split between retailers and publishers in the book business, between retailers and record companies in the music business, and between theater owners and distributors in the movie business.

But a 100% markup from wholesale or a 50/50 split of retail would not be required. In the world of physical goods, retailers are as varied as Rodeo Drive boutiques whose markups may exceed 100% to Main Street warehouse-style discount stores whose markups may be 20% or less. In the world of digital content, ISPs may use low retail prices as a competitive tool to attract subscribers from ISPs that charge higher prices. Some ISPs may offer subscribers bulk-purchase plans, just as cell phone companies offer local and long-distance packages as alternatives to minute-by-minute charges.

## **B. The Digital Retailer Model Compared to Other Business Models**

If the Digital Retailer model were placed in the business model chart, it would be slotted above the Tax and Royalty System, but beneath the others:

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65. But some Wi-Fi-equipped airports will have a billing relationship with its users. See Reuters, *AT&T Wireless to Provide Wi-Fi in Hotels, Airports* (Jan. 28, 2003), available at <http://www.azcentral.com/shopping/0128NET-TELECOMS-ATT-REPORT-DC.html>.

66. See *supra* Part III.A.3.

Copy right Control	Business Model	Enabling Technology	Controls			Control over Technology
			Access	Copy	Redistrib.	
More  Less	SCMS; Broadcast Flag System	Watermarks: Equipment must contain legally mandated features	Yes	Yes	Yes	More  Less
	CSS; SDMI	Encryption: Equipment must contain voluntarily installed features	Yes	Yes	Yes	
	Adobe eBook, RealMedia, Windows Media	Encryption: Requires only special software to read	Yes	Yes	Yes	
	Cable and satellite TV	Encryption: Equipment must contain voluntarily installed features	Yes	No	No	
	N.Y. Times/ Wall St. J. online	Passwords: No special user technology	Yes	No	No	
	ISPs as Digital Retailers	Watermarks and Fingerprints: Requires monitoring technology on ISPs' computers; watermarks and fingerprints used for royalty assessment and payment	No	No	No	
	Tax and Royalty System	Watermarks: No special user technology; watermarks used for royalty allocation only	No	No	No	
	Noncommercial Use Levy	Watermarks: No special user technology; watermarks used for royalty allocation only	No	No	No	

The Digital Retailer model is similar to the Tax and Royalty System because both rely on ISPs to collect royalties from their subscribers, both use DRM to identify digital works accessed over the Internet, and both use DRM-enabled identifications to allocate collections among copyright owners entitled to receive royalties. In addition, because the Digital Retailer model does not require access, copy, or redistribution controls, it allows technology companies to innovate with new product designs as under the Tax and Royalty System.

The Digital Retailer model, however, is preferable to the Tax and Royalty System. The Tax and Royalty System deprives copyright owners of the ability to determine the royalty value of their own works and to vary their prices over time. By contrast, the Digital Retailer model allows copyright owners to do both. The ability to vary prices over time—quite likely by reducing the royalties set for individual works as those works get older—is the way in which copyright owners will be able to price discriminate,<sup>67</sup> even with uncontrolled copying and redistribution.

The Tax and Royalty System also requires expensive and time-consuming legal proceedings, both to establish royalty rates and to distribute collected royalties.<sup>68</sup> For the Copyright Office to determine the statutory license fee for digital transmission of recorded music has required many steps: an arbitration, a decision by the Librarian of Congress, a Copyright Act amendment, a privately-negotiated interim agreement, and a still-pending judicial appeal.<sup>69</sup> One Copyright Office arbitration costing more than \$41,000 was necessary to resolve conflicting claims to digital audio recording royalties totaling just \$6.10 split between two songwriters and a music publisher.<sup>70</sup> Moreover, each of these proceedings involved works of just one type: recorded music in the digital transmission proceeding and musical compositions in the digital audio recording proceeding. Under the Tax and Royalty System, rate setting and royalty distribution

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67. *See supra* Part II.A.

68. *See, e.g.*, Karen Fessler, Comment, *Webcasting Royalty Rates*, 18 BERKELEY TECH. L.J. 399 (2003) (describing the shortcomings of the CARP process).

69. *Rate Setting for Digital Performance Right in Sound Recordings and Ephemeral Recordings*, Docket No. 2000-9, Library of Congress: Copyright Office (Feb. 20, 2002), available at <http://www.copyright.gov/fedreg/2002/67fr4472.html>; *Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings and Ephemeral Recordings; Final Rule*, Library of Congress: Copyright Office, 67 C.F.R. 130 (July 8, 2002), available at [www.copyright.gov/carp/webcast\\_regs.html](http://www.copyright.gov/carp/webcast_regs.html); Small Webcaster Settlement Act of 2002, H.R. 5469 (2002), available at [www.copyright.gov/legislation/](http://www.copyright.gov/legislation/); *Rates and Terms Available to Certain Small Commercial Webcasters* (Dec. 13, 2002), available at [http://www.soundexchange.com/Rates\\_Terms.pdf](http://www.soundexchange.com/Rates_Terms.pdf).

70. *Digital Audio Recording Royalty Proceeding was Much Ado About Very Little . . . Measured in Dollars*, 23 NO. 1 ENT. L. REP. 7 (2001).

proceedings will be infinitely more complex than in those proceedings because digital works range from \$600 computer programs to \$1 recorded music tracks. Leaving software out of the plan altogether does not solve the problem: unlicensed MP3 files have been the most newsworthy, but the problem encompasses unlicensed redistribution of computer programs as well.

However, I acknowledge that tracking copyrighted works would be less cumbersome under the Tax and Royalty System than under the Digital Retailer model. The Tax and Royalty System does not require ISPs to determine or track which users have accessed particular works. This system may be able to allocate collections using data obtained by digital file sampling in much the same way that ASCAP and BMI sample radio play of musical compositions before allocating public performance royalties. The Digital Retailer model, by contrast, requires complete file tracking and end-user billing.

Nonetheless, technology already exists that can track individual watermarked and fingerprinted files.<sup>71</sup> Even if existing technology cannot yet perform the tasks required for the Digital Retailer model to work, the issue is one of scale rather than function. So while existing technologies may have to be improved, it does not appear that any new technologies would have to be invented.

The Noncommercial Use Levy system has all the drawbacks of the Tax and Royalty System, plus one more: it would permit users to create derivative works using downloaded digital works without the copyright owner's consent.<sup>72</sup>

### C. Objectives Satisfied

Having ISPs serve as digital retailers achieves several objectives.

First, copyright owners would receive payment for all uses of their works—downloads, streams, and attachments—at royalty rates they set themselves.

Second, consumers would have ready, legal access to digital versions of copyrighted works, though they would have to pay for what they receive (just as we do in the physical world).

Third, website operators, P2P networks and users, emailers, instant messengers, online indexes, and search engines would be able to legally play whatever role they desire in the distribution of digital works without getting further consent from copyright owners. Online indexes and search

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71. See, e.g., Digimarc, Corp., *supra* note 56; Audible Magic Corp., *supra* note 58.

72. Netanel, *supra* note 16.

engines would still be free to charge for their use or sell advertising space on their display pages without sharing their revenues with copyright owners. Copyright owners would be paid by ISPs if and when works are accessed. Websites and other online services that charge users for access (like Westlaw and the online version of *The Wall Street Journal*) would have to provide something of value to justify their fees because users would be billed by their ISPs for access to copyrighted content itself. Subscribers of a pay-for-access online service may not feel they are being double billed if the service is well-organized, comprehensive, easy to use, or otherwise earns its own access fee.

Fourth, computer and consumer electronics manufacturers and software companies would be able to build and sell their products without any legal constraints on how they are designed, and without any legal requirement that they contain, or not contain, certain features.

Fifth, ISPs would gain an incentive for potential customers to subscribe to broadband service and a significant additional revenue source—one that is likely to be equal in size to the revenues received by copyright owners from the online distribution of copyrighted works.

#### **D. Problems Requiring Solutions**

Several obstacles stand in the way of successfully implementing the Digital Retailer model.

##### *1. Technological Measures Taken by Users to Avoid Being Billed*

I have argued that the technology necessary to implement the Digital Retailers model should be installed at the ISP level, rather than on users' computers, to reduce the probability of user circumvention.<sup>73</sup> I acknowledge, however, that determined users could nevertheless circumvent the technology.<sup>74</sup> For example, watermarks or fingerprints in royalty-bearing works can be hidden by encrypting those files before they are attached to emails or transmitted over P2P networks,<sup>75</sup> thereby preventing ISPs from billing for those works. Users may also spoof their IP addresses,<sup>76</sup> thereby

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73. See *supra* Part III.A.3.

74. See *supra* Part III.A.2.

75. Ingemar J. Cox & Jean-Paul M.G. Linnartz, *Some General Methods for Tampering with Watermarks*, 16 IEEE J. SELECTED AREAS COMM. 587, 592 (1998) (explaining how encryption can be used to defeat copy-control watermarks), available at [http://debut.cis.nctu.edu.tw/~ykleee/Research/Watermarking/Ingemar\\_J\\_Cox/IEEE-JSAC-1998-05.pdf](http://debut.cis.nctu.edu.tw/~ykleee/Research/Watermarking/Ingemar_J_Cox/IEEE-JSAC-1998-05.pdf).

76. Neil B. Riser, *Spoofing: An Overview of Some the Current Spoofing Threats* (July 1, 2001), available at <http://www.sans.org/rr/threats/spoofing.php>.

hiding their identities from their own ISPs and avoiding payment for downloading royalty-bearing works.

The question is whether these and similar possibilities defeat the utility of the Digital Retailers model. I conclude that they do not for three reasons. First, this sort of behavior is a crime<sup>77</sup> or can be made one. Second, theft—for that is what this behavior would be—is a serious problem in the physical world of retailing, but no one has suggested that we should eliminate retail stores for that reason. Third, I believe that much unauthorized digital distribution of copyrighted works is currently done by people who suppose that it is legal. If users understood the illegality of encryption, IP spoofing, and similar techniques to avoid paying for copyrighted works, they would likely discontinue these practices.

## 2. *Spamming*

Since virtually all works transmitted online are eligible for copyright protection and all copyright owners would be entitled to be paid at rates they set themselves, unscrupulous authors may attempt to “game” the system by spamming end-users with unwanted material in order to get royalties. Technology may provide a solution to this problem; but if not, other non-technical solutions may be available.

ISPs’ routers would be alerted to the existence of copyrighted material in files by watermarks or fingerprints before those files are transmitted to Internet users. To prevent spamming, ISPs could send pop-up notices informing users that files requiring payments are about to be sent for a certain cost before the actual files are transmitted. Users would then be given an opportunity to click an on-screen button, indicating whether or not they want the files sent. To users, the process would resemble virus warnings seen today. Users would respond, the way they respond to virus warnings, with a simple click of the mouse.

An alternate, non-technical solution may be drawn from the world of credit card fraud. In order to receive copyright royalties under the Digital Retailer model, identification information for materials sent by spammers would have to be placed in watermark and fingerprint databases along with the watermarks and fingerprints of other copyright owners. ISPs could be authorized to suspend royalty payments to those against whom spamming complaints are lodged, just the way banks suspend or revoke the credit card merchant accounts of retailers if consumer complaints are lodged against them.

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77. 17 U.S.C. § 1204(a) (2000) (making it a crime to violate the anti-circumvention provisions of §§ 1201 and 1202 for “commercial advantage or private financial gain”).

### 3. *Intra-industry Conflicts*

Implementing the Digital Retailer model also requires resolving two conflicts within the entertainment industry. The first intra-industry conflict is the result of an old but still troublesome fact: single works often embody several separately-owned copyrights. Music recordings embody at least two copyrights per track: a copyright in the musical composition, usually owned by a music publishing company (and if a song is co-written by more than one songwriter, the musical composition copyright is likely to be co-owned by more than one publisher); and a copyright in the recording itself, usually owned by a record company. As a result, royalties for the online performance or download of a single recording must be split between two or more copyright owners. In addition, music publishers grant licenses for performances and downloads through separate agencies: ASCAP, BMI or SESAC for performances; and the Harry Fox Agency for downloads. So today, royalties for the online use of a single music recording may be claimed by three separate agencies on behalf of two or more separate copyright owners.

Likewise, a movie may embody several separate copyrights: one in its visual elements and the sound effects in its soundtrack, and another in each song in the soundtrack. As a result, royalties for the online performance or download of a single movie may also have to be split among several copyright owners.

Some copyright owners may demand too much, thereby discouraging customers from making online uses of works to which those copyright owners contributed. Other contributors to the same work may be pressured to decrease their royalty rates in order to lower the total royalty claimed for that work enough to increase sales volume. The presence of multiple owners may thus trigger strategic bargaining among copyright owners, each owner hoping to persuade the others to lower their royalty demands. This process may not succeed, however, in lowering the total royalty enough to actually increase sales.

Under the Digital Retailer model, none of these kinds of conflicts is of concern to ISPs. But before ISPs can know who to pay, conflicts like these will have to be resolved.

The second intra-industry conflict involves ISPs: some ISPs and some copyright owners are subsidiaries of the same corporate conglomerate. Given complete discretion, such a conglomerate may choose to implement a business plan that seeks to attract subscribers to its ISP subsidiary by offering them exclusive access to the conglomerate's copyrighted works

or access at lower rates than those charged to unaffiliated ISPs.<sup>78</sup> The Digital Retailer model, however, would give all ISPs access to all copyrighted works. Also, to prevent copyright owners from substituting high prices for exclusivity, all ISPs would have to be charged the same wholesale royalty for each work. Copyright owners could not favor some ISPs with lower royalties than they charge other ISPs. This means, for example, that Warner Bros. and Time Inc. could not charge their sister company America Online lower royalties for digital recordings or online magazines than they charge other ISPs, let alone give America Online exclusive access.

#### 4. Privacy

The Digital Retailer model requires copyright owners to make significant concessions of control over how, when, where, and to whom their works are distributed. It also requires some concessions from users. For example, in order to enjoy the convenience of online access to copyrighted works, users will have to tolerate some loss of privacy. The Digital Retailer model requires ISPs to compile records of copyrighted works accessed by their subscribers for billing purposes.

Some may view this as an unacceptable loss of privacy.<sup>79</sup> I, on the other hand, see this as a small and acceptable loss of privacy when compared with the other invasions of privacy people accept today. Credit card companies already know where we shop and how much we spend. When we shop in places or spend amounts that look unusual, they call us on the phone to confirm that our cards have not been stolen. Likewise, phone companies already know who we call, when we call, and how long we talk. Even our patronage of brick-and-mortar retail stores is likely to be videotaped.<sup>80</sup> And in many American cities, highway and toll bridge users and their passengers are likely to be videotaped as well.<sup>81</sup>

In sum, The Digital Retailer model is no more intrusive than credit card or telephone company billing schemes. Tracking copyrighted works

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78. Reuters, *AOL to Offer Exclusive Time, CNN features* (Dec. 3, 2002), available at [http://www.ispworld.com/Reuters/BreakingNews/120302\\_js04.htm](http://www.ispworld.com/Reuters/BreakingNews/120302_js04.htm).

79. See, e.g., Julie Cohen, *DRM and Privacy*, 18 BERKELEY TECH. L.J. 575 (2003).

80. See, e.g., Tim Coyne, *Videotaped Beating Mom Pleads Guilty*, CBSNews.com (Feb. 14, 2003), available at <http://www.cbsnews.com/stories/2002/09/20/national/printable522684.shtml>.

81. Paul W. Shuldiner & Jeffrey B. Woodson, *Acquiring Travel Time and Network Level Origin-Destination Data by Machine Vision Analysis of Video License Plate Images*, Presentation at 1996 National Traffic Acquisition Conference, at 442, available at <http://www.itsdocs.fhwa.dot.gov/jpodocs/proceedn/2g901!.pdf>.

we access online, for billing purposes, diminishes our current levels of privacy only slightly.

#### 5. *Pay-per-use, Fair Use, and Non-infringing Uses*

Some may object to the Digital Retailer model because it requires a pay-per-use royalty and makes no payment exceptions for non-infringing uses, including fair use.<sup>82</sup> But this objection is accurate only in part and is no reason to reject the model.

The Digital Retailer model does not require payment for each *use* of a work. It requires payment each time a work passes through an ISP's router. Thus, rather than characterizing the model as a pay-per-use model, it should be thought of as a pay-per-redistribution model. Downloaded works may be used countless times on the computer to which they are downloaded without additional payment. Only the initial download triggers a royalty fee.

Those raising the non-infringing use objection imply that users should be able to get free access to copyrighted works they intend to use in ways that qualify as non-infringing. That, however, has never been the case in the physical world. Teachers, for example, may be entitled to display or even photocopy newspaper articles for use in their classes, but they do not have the right to take copies of newspapers from the newsstands they pass on their way to school without paying. Likewise, movie critics have the right to include plot synopses and quote dialogue in their reviews, but they are not entitled to free admission to movie theaters showing the movies they intend to review.

#### 6. *Unregulated Royalty Rates*

I have left the lack of regulation of royalty rates for last because for me it is not a problem at all. I acknowledge, however, that for others, lack of regulation may be troubling. One might argue that copyright owners may effectively eliminate the ability to legally reproduce copyrighted works and redistribute them online by charging high rates.

While copyright owners may charge high royalties for some works, especially when they are new, they always have had the ability to do so in the physical world. A recent report entitled "Digital Rights Management: Content Protection in the Networked Economy" has been priced by its publisher at \$995,<sup>83</sup> and newsletters published by the same company cost

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82. See, e.g., Raymond Ku, *Consumer Copying & Creative Destruction: A Critique of Fair Use as Market Failure*, 18 BERKELEY TECH. L.J. 539 (2003).

83. See Kagan, *Kagan Catalog*, at <http://www.kagan.com/cgi-bin/pkcat/drm03.html> (last visited May 3, 2003).

more than \$1,000 a year,<sup>84</sup> without apparent objection from anyone. There is no reason why things should be different—especially not by law—in the digital world.

Nor is there any reason to suppose that copyright owners would set high rates to eliminate digital versions of their works altogether. Naturally, when motion pictures are first released to movie theaters, or television programs are broadcast for the first time, their owners will not be pleased by online distribution of unauthorized copies. As previously noted,<sup>85</sup> distributing unauthorized copies online shortly after a work's first release interferes with the owner's ability to engage in sequential and separate releases of that work. Copyright owners may therefore set high royalty rates for newly released works to discourage the online distribution of unauthorized copies at that stage. However, by the time movies and television programs are made available on DVDs, copyright owners have no reason to prefer DVD distribution through retail stores to online distribution through ISPs, so long as their online royalties net them the same amount per download as they net from the wholesale price of a DVD.

#### IV. CONCLUSION

In a perfect world, technology companies and copyright owners would have complete freedom to design and market their products as they think best. Digital copying and redistribution have made these objectives incompatible, at least in part. The quest is for a business model that best accommodates these conflicting objectives.

As a general rule, copyright owners are opposed to statutory licenses.<sup>86</sup> Some copyright owners may object to the Digital Retailer model as being a statutory license and will be hostile to it for that reason. Their freedom, however, to set their own royalties should soothe this objection. Still other copyright owners may contend that the Digital Retailer model—tied, as it is, to online redistribution—will simply promote unlicensed and uncompensated CD and DVD burning and a return to the “sneaker net” of disks and tapes that “were handed in person between members of a group or

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84. See Kagan, *Kagan Catalog*, at [http://www.kagan.com/cgi-bin/pkcat/scan/se=usnews/sf=pk\\_item/se=hardcopy/sf=pk\\_sort/tf=title.html](http://www.kagan.com/cgi-bin/pkcat/scan/se=usnews/sf=pk_item/se=hardcopy/sf=pk_sort/tf=title.html) (last visited May 3, 2003).

85. See *supra* Part II.A.

86. See, e.g., *Napster, Music Industry Square Off on Capitol Hill*, USATODAY.com (Feb. 6, 2002), available at <http://www.usatoday.com/tech/techreviews/2001-04-03-napster.htm>; *Statement of the American Society of Composers, Authors and Publishers on Internet Uses of Music for the Senate Judiciary Committee Hearing on “Online Entertainment,”* available at <http://www.copyrightassembly.org/briefing/ASCAP2.pdf>.

were sent by postal mail.”<sup>87</sup> Indeed this may occur; if it does, the issue of blank media levies will again take center stage.

The Digital Retailer model will likely draw objections from consumers and their advocates. Hardware and software companies would be relieved of all burdens by the Digital Retailer model. And ISPs should be pleased with their share of the retail take. My concern is that even if the implementing technology works perfectly so that consumers are charged only for what they choose to buy and only at prices they have agreed to pay, they or their advocates will view the Digital Retailer model as one that gives copyright owners too much control.

Any argument that copyright owners would have too much control, however, is one that would overstate the extent to which copyright owners have exclusive rights to their works. Copyright law gives copyright owners very thin protection. It does not protect ideas, concepts,<sup>88</sup> theories, or the facts on which they are based.<sup>89</sup> Thus, although “Mickey Mouse” belongs to Disney, “Mighty Mouse” does not; “Mighty Mouse” belongs to Viacom.<sup>90</sup> And while copyright law does not permit others to make exact copies of “Mickey” or “Mighty Mouse,” it does permit unregulated breeding of other animated mice by all who wish to do so. The thin protection of copyright law does not even give anyone the exclusive right to tell stories about archaeologists in search of artifacts hidden in snake-infested caves while simultaneously confronting dangerous human antagonists. Anyone who wants to tell that story, may.<sup>91</sup>

Finally, in the music business, copyright law does not give record companies the ability to obtain exclusive recording rights to songs. Instead, all who want to make and sell their own recordings of popular songs, even sound-alike versions, may do so simply by paying license fees to music publishers at rates set by law.<sup>92</sup> MP3.com could have started its own record company—producing sound-alikes or original recordings—for less money than it agreed to pay in settlement of copyright infringement lawsuits filed against it by record companies.<sup>93</sup>

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87. Biddle, *supra* note 61, at 3.

88. 17 U.S.C. § 102(b) (2000).

89. *Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972 (2d Cir. 1980), *cert. denied*, 449 U.S. 841 (1980).

90. Search for “Mighty Mouse” at <http://www.copyright.gov/records/cohm.html>.

91. *Zambito v. Paramount Pictures Corp.*, 613 F. Supp. 1107 (E.D.N.Y. 1985).

92. 17 U.S.C. § 114(b) (2000).

93. *MP3.com Settles Copyright Case Filed Against it by Universal Music Group by Agreeing to \$53.4 Million Judgment*, 22 NO. 6 ENT. L. REP. 5 (Nov. 2000).

There has been debate over the appropriate scope of the derivative work right: the right to make new versions of copyrighted works.<sup>94</sup> But the derivative work right is not at the heart of the digital copyright controversy. P2P and related controversies have involved digital copying and online redistribution of exact duplicates of copyrighted works.

Given that copyright law permits anyone to breed new animated mice, tell new stories about adventuresome archaeologists, and make new recordings of “Oops! I Did It Again” using vocalists who sound just like Britney Spears, it hardly seems too much to ask that they do so, rather than make unpaid-for digital reproductions of works whose copyrights are owned by others.

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94. *See* 17 U.S.C. § 106(2) (2000); *Suntrust Bank v. Houghton Mifflin Co.*, 268 F.3d 1257 (11th Cir. 2001); *Castle Rock Entertainment, Inc. v. Carol Publishing Group, Inc.*, 150 F.3d 132 (2d Cir. 1998).

