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BERKELEY TECHNOLOGY LAW JOURNAL

A CONTINUATION OF HIGH TECHNOLOGY LAW JOURNAL
EFFECTIVE VOLUME 11

VOLUME 12 NUMBER 1 1997

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FOREWORD

THE DIGITAL CONTENT SYMPOSIUM

PAMELA SAMUELSON†

The chance that a law will achieve its intended purpose improves when it is grounded in an accurate understanding of the phenomena it will regulate. The Digital Content Symposium reported in this volume was organized in the hope that it would provide lawyers and others involved in the policy process with a firmer grounding in digital technologies and businesses that distribute digital content so that the law to regulate them can be shaped in an appropriate manner. The Symposium brought together representatives of a number of digital content industries, lawyers, and legal academics to discuss emerging business models and to identify legal regulations that may be needed to enable digital content marketplaces to develop and thrive.[1] It also hoped to discern whether or not present regulations, unless changed, would impede development of those marketplaces by, for example, making certain promising business models impossible or very difficult to pursue.[2] Because the digital environment is relatively "frictionless" owing to the lack of physical constraints on digital entrepreneurs, the law may play a more important role in facilitating or impeding Internet commerce than it has played in fostering other industries.[3]

The Symposium did not aim to formulate a set of plain-vanilla consensus positions on these issues. Nor did such consensus emerge from the Symposium. The industry presentations made clear that a number of newly invented business models in the digital environment are still evolving; the jury is still out on which of them will succeed. The views expressed on copyright, contract, and trademark law varied about as widely as was possible. John Perry Barlow, for instance, argued that

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Thanks to Robert J. Glushko for his insightful comments on an earlier draft of this Foreword.

1. The program for the symposium is reprinted in the Appendix to this Foreward.

2. For example, an excessively broad scope of copyright protection in the digital environment might impede business models based on linking or indexing material now located on the World Wide Web. *See, e.g.*, Eric Schlachter, *The Intellectual Property Renaissance in Cyberspace: Why Copyright Law Could Be Unimportant on the Internet*, 12 BERKELEY TECH. L.J. 15, 49-51 (1997) (discussing caching and linking).

3. Thanks to Robert J. Glushko for this insight. *See also* Robert P. Merges, *The End of Friction? Property Rights and Contract in the "Newtonian" World of On-Line Commerce*, 12 BERKELEY TECH. L.J. 115, 116 (1997).

applying copyright law in digital networked environments was hopeless (and in fact counterproductive).[4] In contrast, Mark Stefik argued that content owners could get more, not less, protection in digital environments than in print environments, at least if they used trusted systems technologies effectively.[5] Both at the live Symposium and in this volume, Maureen O'Rourke viewed with favor the idea of contract law displacing copyright law in the licensing of digital content,[6] whereas Robert Merges[7] and Niva Elkin-Koren[8] here articulate reasons why copyright law will still be a needed part of the commercial and regulatory landscape for digital content. They argue that copyright law should preempt license terms when their enforcement would interfere with bedrock copyright principles (although they differ some in the approach that they take toward the form of this preemption).[9] This theme recurs and is carried further in Julie Cohen's article on copyright management systems.[10] At the live Symposium, Mark Radcliffe explained the increasing importance of trademark law in Internet domain name disputes, while Margaret Jane Radin offered some reasons to think that trademarks might recede to unimportance in an Internet future she could imagine.[11]

The speakers at the Digital Content Symposium presented widely differing views of the relative importance of copyright, trademark, contract law, and technology in protecting digital content,[12] as well as a

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4. Barlow was the luncheon speaker at the live Symposium. For an article expressing his views on digital copyright issues, see John Perry Barlow, *The Economy of Ideas*, WIRED, March 1994, at 85.

5. *See* Mark Stefik, *Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 BERKELEY TECH. L.J. 137 (1997).

6. *See* Maureen O'Rourke, *Copyright Preemption After the ProCD Case: A Market-Based Approach*, 12 BERKELEY TECH. L.J. 53 (1997).

7. *See* Merges, *supra* note 3, at 23-26.

8. *See* Niva Elkin-Koren, *Copyright Policy and the Limits of Freedom of Contract*, 12 BERKELEY TECH. L.J. 93 (1997).

9. *See id.* at 108-13; Merges, *supra* note 3, at 125-26.

10. *See* Julie A. Cohen, *Some Reflections on Copyright Management Systems and Laws Designed to Protect Them*, 12 BERKELEY TECH. L.J. 161 (1997).

11. Radin pointed out that Bloomingdale's, after all, doesn't need to be situated on Bloomingdale Street in order to be a viable department store business; perhaps the Internet will evolve beyond the model that today would make bloomingdales.com the exclusive property of the store, even if Johnny Bloomingdale wanted it as a site to post his favorite jokes.

12. Schlachter, for example, seems to assume that copyright is the predominate law to apply to digital content (although he also explains why he thinks even it may be less important than many intellectual property lawyers might expect in regulating the distribution of digital content). *See* Schlachter, *supra* note 2, at 16-17. O'Rourke clearly expects digital licensing to predominate, *see* O'Rourke, *supra* note 6, at 54, whereas Stefik clearly expects technology to prevail, *see* Stefik, *supra* note 5, at 138. One could even argue that trademarks will be the chief form of intellectual property in digital commerce because "brand" implies trust. This point is implicitly raised in Schlachter's article in its insistence on the interest of information providers in being attributed as the source of the digital content they distribute. *See* Schlachter, *supra* note 2, at 31.

variety of alternative conceptions of the copyright regime. If copyright merely provides a set of default rules to enable the formation of markets in literary and artistic works, then saying that contract can override copyright provisions that might favor users is less troublesome.[13] Alternatively, one might view copyright as a kind of social bargain in which authors and publishers must give up some benefits otherwise available from contract law in order to get the benefits of a state-created property right. This view provides more reason for concern about contractual provisions that override rights that users would otherwise have under copyright law, particularly in mass-market transactions, for this smacks of having your cake and eating it too.[14] Much the same tension is evident in relation to technological overrides of copyright rules that creators may embed in digital documents.[15] Finally, participants at the Symposium expressed a range of concerns about the social and cultural implications of digital commerce, especially those that may flow from widespread deployment of technological systems of protection.[16]

For all the diversity of viewpoints expressed at the Symposium, it is worth noting that, on some issues, relative consensus exists among those who write here. A number of authors discuss benefits of using rights management information that future creators may attach to digital information products.[17] Each author has a somewhat different perspective on these benefits, and each perspective has a somewhat different bearing on the formation of appropriate legal protection for the integrity of this information. Even the articles most at odds with each other on substantive issues advance our understanding of the issues by their perceptive articulation of their own and competing positions in a manner that will provide policymakers with a better grasp of the hard choices they face.[18] In addition, readers of this volume will have a more informed perspective about which legal issues should be addressed now in order to enable certain markets to form and which should await the development of a more stable digital content marketplace.[19] They will also come to understand that some legal initiatives, such as those that

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13. *See, e.g.*, O'Rourke, *supra* note 6, at 83.

14. *See, e.g.*, Merges, *supra* note 3, at 121,126-7; Elkin-Koren, *supra* note 8, at 109.

15. *See, e.g.*, Stefik, *supra* note 5, at 155-56; Cohen, *supra* note 10, at 179-83.

16. *See, e.g.*, Schlachter, *supra* note 2, at 34-38; (expressing concern about the social costs of policing digital copyrights); Cohen, *supra* note 10, at 175-78 (expressing concern about the implications of technological protection for fair use). *But see* Stefik, *supra* note 5, at 143 (expressing optimism that trusted systems will make it easier for honest people to pay for works they use).

17. *See* Schlachter *supra* note 2, at 31-32; Merges *supra* note 3, at 127-28; Cohen *supra* note 10, at 162; Stefik *supra* note 5.

18. *See, e.g.*, O'Rourke, *supra* note 6, at 79; Merges, *supra* note 3, at 128; Cohen, *supra* note 10, at 172-79; Elkin-Koren, *supra* note 8, at 106-13.

19. *See, e.g.*, Schlachter *supra* note 2, at 50-51; Cohen *supra* note 10, at 187.

aim to protect rights management information, need to be approached within a broader policy framework than currently exists.[20]

Finally, several of the articles pull back from the fine details of legal analysis to reflect on the broad impact that can be expected from digital technologies and emerging marketplaces for digital information as, for instance, they interact with institutions which have been built around the print-based information infrastructure.[21] and as they affect and are affected by the culture and social fabric of the countries that become "wired" to the global Internet.[22] As Dan Rosen reminds us, the fast-paced commodification of information in global digital networked environments is a ride on a runaway horse that may take us to some different destinations than we had intended.

The written Digital Content Symposium begins, as the live event did, with an overview of a number of business models with which many firms are currently experimenting in the distribution of digital content.[23] As Eric Schlachter's article shows, some of these business models suggest a more limited role for copyright in emerging digital content marketplaces than, for example, the Clinton Administration's White Paper on Intellectual Property and the National Information Infrastructure did.[24] Schlacter points to a number of ways in which digital content vendors are cross-subsidizing the distribution of "free" information (by means of advertising, sponsorship, and the selling of upgrades or other follow-on services, among others). Communities, he suggests, may become the "secret weapon" of the successful electronic merchant.[25] Yet he also foresees the use of a wide variety of technical measures for myriad purposes. Even those who distribute "free" information will want to be attributed as its provider.[26] Schlachter sees in the White Paper's proposal to protect the integrity of copyright management information a means of protecting this attribution interest,[27] but otherwise argues that

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20. *See, e.g.*, Cohen *supra* note 10, at 183-87 (privacy issues raised by copyright management systems).

21. *See, e.g.*, Robert Berring, *Chaos, Cyberspace and Tradition: Legal Information Transmogrified*, 12 BERKELEY TECH. L.J. 189 (1997)

22. *See, e.g.*, Dan Rosen, *Surfing the Sento*, 12 BERKELEY TECH. L.J. 213 (1997)

23. *See* Schlachter, *supra* note 2.

24. *See* U.S. DEP'T OF COMMERCE, INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (Sept. 1995) [hereinafter NII WHITE PAPER].

25. *See* Schlachter, *supra* note 2, at 29. At a recent industry conference, Web Market West, I saw a number of demonstrations of this principle. Many firms were working to make sites to which people will want to return, in part because of the presence of others with whom they feel some affinity. The firms' hopes are that not only will people return to the site, but that they will also spend money there.

26. *See id.* at 31.

27. *See id.* at 31; NII WHITE PAPER, *supra* note 24, at 235.

legislation aimed at conforming copyright to the needs of the new digital marketplace is premature.[28]

Maureen O'Rourke seems also to perceive a limited role for copyright in the digital future, although for her, copyright will be dwarfed not so much by cross-subsidization but by the desirability of using licenses "not just to modify copyright rights that would otherwise apply but also to create private copyright through contract in instances in which the public law would deny copyright protection altogether."[29] Others might assert that copyright preemption does not apply to digital licenses because a licensing agreement is not "equivalent" to an exclusive right of copyright because of the extra element of an agreement.[30] Or they might point to the very different natures of contract and copyright law, the former class of rights generally being good only against the parties who agree to them while the latter confers rights that are good against the world.[31] O'Rourke invokes these themes, but opines that the problem of preemption goes deeper than this.[32] She first articulates two competing perspectives about copyright law which largely underlie the differing preemption analyses in the opinions in the two *ProCD v. Zeidenberg* decisions:[33] the "freedom of contract" perspective that would find no contract preemptable and the "public domain" perspective that would find preemption whenever contracts were crafted to evade user rights under copyright law. O'Rourke then sets forth criteria for the rare instances when she thinks preemption might appropriately be invoked without undue interference with freedom of contract principles.[34]

If O'Rourke's views lie near the "freedom of contract" end of her preemption spectrum, Niva Elkin-Koren is very near the "public domain" end of that spectrum.[35] Elkin-Koren views with dismay the prospect of ubiquitous vendor-centric licenses displacing the traditional copyright balance in the digital environment. She notes that this practice has even been spreading recently to traditional works in traditional media.[36] If Zeidenberg can be held to the use restriction that came with the CD-ROM he bought, Elkin-Koren fears that print publishers will expect to be able to enforce license restrictions such as those that forbid the reproduction of

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28. *See* Schlachter, *supra* note 2, at 50-51.

29. O'Rourke, *supra* note 6, at 54.

30. *See* 17 U.S.C. § 301 (1994) (requiring an equivalence between a state-created right and one or more of the exclusive rights of copyright before federal preemption of state law can be invoked).

31. *See, e.g.*, ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).

32. *See* O'Rourke, *supra* note 6, at 77.

33. ProCD, Inc. v. Zeidenberg, 908 F. Supp. 640, 645 (W.D. Wis.), *rev'd*, 86 F.3d 1447 (7th Cir. 1996) *discussed in* O'Rourke, *supra* note 6, at 77.

34. *See id.* at 91.

35. *See* Elkin-Koren, *supra* note 8, at 102 n.46.

36. *See id.* at 95.

any part of a book without prior written permission, the redistribution of one's copy, or the reading of a book more than once. Such restrictions aim to do away with the fair use, first sale, and limited exclusive rights provisions of copyright law.[37] If merely using the information product signals assent to the license, Elkin-Koren argues that "[t]he outcome will be very similar to the effect of a right in rem,"[38] that is, to an exclusive right against the world such as copyright has historically conferred. Because she views the copyright monopoly as "contingent, instrumental, and limited to the level necessary to provide incentives,"[39] she asserts that "[it] does not simply define the rights of the copyright owners, but instead draws the boundaries between privately and publicly accessible information."[40] Elkin-Koren's article goes on to discuss some social costs she perceives to flow from a disruption of these boundaries.[41]

Robert Merges foresees less displacement of copyright by licensing in the digital environment than Elkin-Koren fears.[42] Property rights will be needed in cyberspace, he argues, to enable rightsholders to take action against third parties who obtain access to a digital information product without having entered into the license with which the product is normally distributed. The third party access problem could be resolved, of course, by mounting yet another assault on privity, but Merges strongly objects to such an erosion of the boundaries between property and contract. As he aptly puts the point, "there is stretching and then there is breaking."[43] On preemption issues, Merges falls somewhere between O'Rourke and Elkin-Koren, although seemingly closer to O'Rourke's end of the spectrum. In general, he thinks intellectual property owners should be free to craft licenses as they see fit, subject only to limitations deriving from constitutional norms or serious third party harm.[44] Yet he repeats his objections to "private legislation" that can arise from ubiquitous use of licensing terms that, if enforced, would interfere with purposes

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37. *See* 17 U.S.C. §§ 107 (fair use), 109 (first sale), 106 (exclusive rights provisions) (1994).

38. Elkin-Koren, *supra* note 8, at 104.

39. *Id.* at 100.

40. *Id.* at 101.

41. *See id.* at 111-13.

42. *See* Merges, *supra* note 3, at 118-20, 126.

43. *Id.* at 120. While Merges does not explicitly use this example, by extension his article would characterize as a stretch to say that Zeidenberg was bound by the license included with the CD-ROM he purchased when he loaded the CD-ROM on his machine, but it would be breaking contract law to say that anyone who got access to the CD-ROM could be bound to the license terms by using the product. *Cf.* Elkin-Koren, *supra* note 8, at 103 (expressing concerns that even a stranger who did not purchase, but found and used, the ProCD CD-ROM could be bound by the license because of the minimal assent that the ProCD case seems to require).

44. *See* Merges, *supra* note 3, at 126-27.

underlying federal intellectual property law.[45] His article also explores alternative rationales for fair use, now that the market failure rationale (which has been the rage in recent years[46]) seems to be subsiding in view of the rise of new institutions, such as the Copyright Clearance Center, that facilitate low-transaction-cost licensing.[47] Merges also views technical protection systems and copyright management information (including that with self-reporting features) as desirable developments because of their potential to facilitate low-cost transactions in digital content, thereby letting new markets for this content get off the ground.[48]

Technical systems of protection for copyrighted works are, of course, still in relatively early phases of development and deployment. For this and other reasons, they are somewhat foreign to many intellectual property lawyers. However, because some systems are already deployed and more will be so in the near future, the well informed intellectual property lawyer should invest in learning about these systems in order to adequately advise clients about their protection options.[49] Mark Stefik of Xerox's Palo Alto Research Center, one of the leading technical experts in this new field, here provides the reader with a basic understanding of trusted-systems technologies that his company and others are developing.[50] He also explains several aspects of the digital property rights language he is developing to encode the terms and conditions of authorized use of digital information and then to embed these terms in the documents containing the information.[51] If a user tries to employ a trusted system object in a manner for which the user hasn't paid, Stefik explains, the trusted system simply will not execute the command. While Stefik is generally enthusiastic about the prospect of trusted systems' displacing copyright and contract law, he proposes establishing a quasi-regulatory entity to be known as the Digital Property Trust to protect the

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45. *See id.* at 126 (citing Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570 (1995)). As before, Merges asserts that these should be preempted, although he now qualifies his position in two respects. *Id.*

46. *See, e.g.*, Wendy J. Gordon, *Fair Use as Market Failure: a Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600 (1982).

47. *See* Merges, *supra* note 3, at 132.

48. *See id.* at 116-17.

49. At the Symposium, I suggested that intellectual property lawyers should become interested in these protection systems because they might very well put these lawyers out of business. *See generally* Schlachter, *supra* note 2, at 38-44 (surveying a range of these techniques).

50. *See* Stefik, *supra* note 5, at 139-44.

51. *See id.* Among other things, Stefik shows how this digital property rights language can be used to bring about the technical equivalent of the first-sale rule of copyright law by disabling someone's copy when he or she lends it to a friend and reviving it when the friend's copy has ceased to operate. *See id.* at 148. As Julie Cohen notes, this action will occur only when a publisher chooses to encode this lending right for its works which the publisher need not do. *See* Cohen, *supra* note 10, at 177.

public interest and to fend off the interoperability and patent wars that threaten to impede widespread deployment of trusted system technologies.[52]

With the aid of an apt quotation from cyberlaw scholar Larry Lessig, Julie Cohen implicitly agrees with Stefik and Merges that "'[c]ode is an efficient means of regulation.... One obeys these [technical] laws as code not because one should; one obeys these laws as code because one can do nothing else.... In the well implemented system, there is no civil disobedience.'"[53] Cohen is encouraged by Stefik's recognition that trusted systems raise enough serious public policy concerns that he calls for creation of a regulatory body to deal with public interest issues that the marketplace and technology alone cannot adequately work out.[54] She would deal with these issues, at least in part, through copyright legislation to protect copyright management systems and rights management information in accordance with the WIPO Copyright Treaty concluded in Geneva in December 1996.[55] She contends that "[c]opyright owners cannot be prohibited from making access to their works more difficult, but they should not be allowed to prevent others from hacking around their technological barriers. Otherwise, the mere act of encoding a work within copyright management systems would magically confer upon vendors greater rights against the general public than copyright allows."[56] She offers a number of trenchant critiques of existing legislative proposals, as well as some alternative statutory language that would better maintain the balance in copyright law.[57]

Maintaining continuity and balance in the law is also of concern to Robert Berring, whose article explores the impact that consolidation in the legal publication marketplace and that digital technologies are having on the stability of US legal institutions and the credibility of American law.[58] Printed legal publications have long lain at the core of the American conception of law. Even as online databases have gained acceptance, they have still relied on the printed volumes as the final authoritative source. For a variety of reasons, change in this reliance was inevitable,

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52. *See* Stefik, *supra* note 5, at 156. Stefik himself is seeking patents for some of his trusted systems ideas.

53. Cohen, *supra* note 10, at 182 (quoting Lawrence Lessig, *The Zones of Cyberspace*, 48 STAN. L. REV. 1403, 1408 (1996)). Cohen does not address the question of whether this implies that programmers should be trained in legal rules and only encode that which the law permits.

54. *See id.* at 183 n.96 (citing Stefik, *supra* note 5).

55. World Intellectual Property Organization, *Provisional Treaty on Protection of Literary and Artistic Works*, Arts. 11, 12, 53 PAT. TRADEMARK & COPYRIGHT J. 155 (1997). *See generally* Pamela Samuelson, *The U.S. Digital Agenda at WIPO*, __ VA. J. INT'L L. __ (forthcoming 1997).

56. Cohen, *supra* note 10, at 178.

57. *See id.* at 163-78.

58. *See generally* Berring, *supra* note 21.

and Berring reports that "[f]or old models of legal information, 1996 was the year the music died."[59] While the reader should look to Berring's article for full explanation of this remark, it is interesting to note that he perceives with some skepticism the "reform" of vendor-neutral citations for legal information.[60] As beneficial as these new citation forms may be in fostering competition in the legal information market, they may also introduce new credibility problems.[61] When multiple providers supply CD-ROMs of the decisions of a particular state court, whose version is definitive if they differ in minor (let alone major) respects? New institutions will no doubt arise to lend credibility and authority to legal information, but we are in for a difficult transition in the meantime. Berring also points out why public access to legal information may become both better and worse in the digital environment.[62]

Dan Rosen's article on the Japanese reaction to the Internet explores another kind of digital content transition anxiety.[63] Rosen points out that "[t]he unspoken assumption [of the Digital Content Symposium] was that the Net is there to be used, even exploited, but not restricted."[64] His article shows how thoroughly American has been the debate thus far about how to optimize development of the Internet to enable electronic commerce. Other cultures, and particularly Japan, tend to regard this kind of fast-paced, open-ended, spontaneous, market-driven, multiplexed approach to development to be undesirable.[65] Because of profoundly different values, other cultures may not embrace the new digital information products as soon or as completely as many American entrepreneurs may hope. To the extent that American firms succeed in establishing global markets for their digital content products, Rosen points out reasons to be concerned about the unintended consequences that might flow from such successes.[66] Rosen uses some developments related to the Japanese institution known as sento (public baths) as a metaphor for how Japan may cope with the Internet, which he describes as "the greatest sento of them all."[67]

In reflecting on the rich brew of ideas that the Digital Content Symposium has brought into being, I am grateful to Berkeley Technology Law Journal's editor-in-chief Laurel Jamtgaard for the opportunity to

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59. *Id.* at 190.
60. *See id.* at 201.
61. *See id.* at 202.
62. *See id.* at 203-09; *see also* Pamela Samuelson, *The Quest For Enabling Metaphors For Law and Lawyering In the Information Age*, 94 MICH. L. REV. 2029 (1996).
63. *See* Rosen, *supra* note 22, at 213.
64. *Id.* at 215.
65. *See id.* at 224-25.
66. *See id.* at 221-22.
67. *Id.* at 226, 229.

write this introduction and for the hard work and positive energy that she and other Journal members, including Mike Hagele, Mary Heuett, Jamie Nafziger, and Gabe Wachob, contributed to the organization of the live event and this special issue. Thanks also go to Robert Merges and Peter Menell, Co-Directors for the Berkeley Center for Law and Technology/Intellectual Property, for their efforts relating to the conference, as well as to the Center's law-firm sponsors for their support. Pat Murphy of the Haas School and her outstanding staff of conference planners also deserve much thanks. Last, but not least, I want to thank the speakers at the Digital Content Symposium and the contributors of the articles in this issue, without whom the content in this volume would not have reached Berkeley Technology Law Journal's readers.[68]

68. A final tip of the hat to Denise Caruso for pointing out that the term "digital content" commodifies expression and depersonalizes the creator and the cultural context of the work.

Appendix: Program for the Digital Content Symposium, held November 8, 1996

DIGITAL CONTENT:
NEW PRODUCTS AND NEW BUSINESS MODELS

FRIDAY, NOVEMBER 8, 1996
ANDERSEN AUDITORIUM, HAAS SCHOOL OF BUSINESS

9:00 — 9:10 **Welcoming Remarks**
Laurel Jamtgaard, Editor–in–Chief, *Berkeley Technology Law Journal*
Robert Merges, Director, Berkeley Center for Law & Technology

9:10 — 10:30 **Session I: Overview of Business Models (The Advertising Model)**

Presenters:
Curt Blake, Starwave
Nat Goldhaber, CyberGold, Inc.
Denise Caruso, New York Times
Charles Stanford, ABC Television
Michael Tchong, I/Pro

Moderator:
Robert Merges, UC Berkeley School of Law

Discussion Panel:
James Kennedy, Electronic Arts
Heather Rafter, Digidesign
Joel Riff, Fenwick & West
Hal Varian, UCB School of Information Management & Systems

10:30 — 10:50 **Break**

10:50 — 12:00 **Session II: Overview of Business Models (Other Models)**

Presenters:
William Nisen, McGraw–Hill
Nathan Benn, Picture Network International

Moderator:
Robert Merges, UC Berkeley School of Law

Discussion Panel:
James Kennedy, Electronic Arts
Heather Rafter, Digidesign
Joel Riff, Fenwick & West
Hal Varian, UC Berkeley School of Information Management & Systems

12:15 — 1:45 **Lunch — Wells Fargo Room, Haas School of Business**

Guest Speaker
John Perry Barlow, Electronic Frontier Foundation

AFTERNOON ANDERSEN AUDITORIUM, HAAS SCHOOL OF BUSINESS

2:00 — 3:30 **Session III: Electronic Contracting for Digital Content**

Presenters:
Peter Boyle, A.S.C.A.P.
Judith Klavans, Columbia Digital Library
Irvin Muchnick, Publication Rights Clearinghouse
Raymond Nimmer, University of Houston Law Center
Raymond Ocampo, Oracle Corporation
Maureen O'Rourke, Boston University School of Law

Moderator:
Pamela Samuelson, UC Berkeley School of Information Management and Systems & School of Law

Discussion Panel:
Henry Barry, Wilson, Sonsini, Goodrich & Rosati
Robert Berring, UC Berkeley School of Law
Robert Merges, UC Berkeley School of Law

3:30 — 3:50 Break

3:50 — 5:00 Session III continued

5:30 — 7:30 Reception
Goldberg Room, Boalt Hall School of Law

SATURDAY, NOVEMBER 9, 1996
ANDERSEN AUDITORIUM, HAAS SCHOOL OF BUSINESS

9:00 —10:20 Session IV: Synthetic Images, The Right of Publicity, And On–line Trademarks

Discussion Panel:
Nathan Benn, Picture Network International
Mark Radcliffe, Gray Cary Ware & Friedenrich
Joseph Beard, St. John's University School of Law
Tom McCarthy, University of San Francisco School of Law
Margaret Jane Radin, Stanford Law School

Moderator:
Robert Merges, UC Berkeley School of Law

10:20 — 10:40 Break

10:40 — 12:00 Session V: Technical Protection for Digital Content: Electronic Rights Management Systems

Industry Experts:
Jeffrey Lotspeich, IBM
Mark Stefik, Xerox PARC
Louise Velazquez, Interval Resources
Robert Weber, InterTrust

Moderator:
Peter Menell, UC Berkeley School of Law

Discussion Panel:
William Coats, Brown & Bain
Lori Fena, Electronic Frontier Foundation
Paul Geller, University of Southern California School of Law
Ronald Laurie, McCutchen, Doyle, Brown & Enersen
Pamela Samuelson, UC Berkeley School of Information Management and Systems & School of Law

Computer & Internet Access

Computer Lab, Haas School of Business
AVAILABLE DURING CONFERENCE HOURS

ARTICLE

THE INTELLECTUAL PROPERTY RENAISSANCE IN CYBERSPACE: WHY COPYRIGHT LAW COULD BE UNIMPORTANT ON THE INTERNET

ERIC SCHLACHTER†

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The views expressed in this article are the author's own and do not necessarily reflect those of Cooley Godward or its clients. Cooley Godward represents some of the companies referenced in this article.

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I. INTRODUCTION

Influential futurist Ithiel de Sola Pool wrote:

> For copyright, the implications [of electronic publishing] are fundamental. Established notions about copyright become obsolete, rooted as they are in the technology of print. The recognition of a copyright and the practice of paying royalties emerged with the printing press. With the arrival of electronic reproduction, these practices become unworkable. Electronic publishing is analogous not so much to the print shop of the eighteenth century as to word-of-mouth communication, to which copyright was never applied.[1]

The emergence of electronic networks has undeniably placed significant pressure on our existing intellectual property system. As with each new technological advance, copyright law must adjust to fit the new circumstances presented by the Internet. Until law and technology reach an equilibrium, many predict that intellectual property creators will be reluctant to create works for the Internet environment since creators will be unable to protect their copyright interests.[2] Others have argued that only minor adjustments are necessary to fit copyright law to electronic

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1. ITHIEL DE SOLA POOL, TECHNOLOGIES OF FREEDOM 214 (1983).

2. *See* U.S. DEP'T OF COMMERCE, INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY 10-11 (1995) [hereinafter NII WHITE PAPER], *available at* <http://www.uspto.gov/web/offices/com/doc/ipnii>; Ken Kay & Steve Metalitz, *Copyright Act Needs Digital Expansion*, LEGAL TIMES, Apr. 8, 1996 <http://www.cic.org/clip5.html>; Mark Stefik, *Trusted Systems*, SCI. AM., Mar. 1997 <http://www.sciam.com/0397issue/0397stefik.html> ("Uncontrolled copying has shifted the balance in the social contract between creators and consumers of digital works to the extent that most publishers and authors do not release their best work in digital form.").

[Throughout this article, websites are referenced as both primary and secondary sources. Unless otherwise noted, all websites were verified on May 1, 1995.]

networks such as the Internet.[3] Still others—a distinct minority—believe that copyright law has become less important in the age of electronic networks, and that production of intellectual property will continue unabated even without powerful copyright rights.[4]

Unlike Professor Pool, we have the benefit of a few years of empirical evidence to draw upon in analyzing the effects of electronic networks on intellectual property. This article analyzes some of the lessons we have learned in the commercial Internet's toddler years to glean some insights into the implications for copyright law and Internet-based commerce. After analyzing recent economic, business, sociological and technological developments, this article concludes that, while copyright law has a role to play on the Internet, other developments overshadow copyright law as a tool for conforming behavior such that copyright law may be unimportant to the Internet. The public policy implications are clear: the business models, sociology and technology of the Internet are evolving so rapidly that efforts to conform copyright law to this environment would be detrimental.

Part II summarizes a few basic points of U.S. copyright law. Part III describes specific threats that the Internet poses to the enforcement of rights under copyright law. Part IV analyzes the economics of electronic networks to identify why intellectual property might be created even in a putatively anarchistic, piracy-infested environment such as the Internet. Part V discusses sociological attitudes towards intellectual property on the Internet, identifying why it will be difficult to conform behavior on the Internet to the strict letter of existing copyright laws. Part VI discusses technologies that copyright holders can use in the battle over works subject to copyright. Finally, part VII concludes with thoughts about how we can live in a world where copyright laws are not the primary influence on our behavior towards intellectual property.

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3. NII WHITE PAPER, *supra* note 2, at 17. However, criticism of the NII WHITE PAPER has been widespread, with commentators arguing that its proposed changes are not minor. *See, e.g.*, Pamela Samuelson, *The Copyright Grab*, WIRED, Jan. 1996, at 134, *available at* <http://www.hotwired.com/wired/4.01/features/white.paper.html>; Digital Future Coalition <http://www.ari.net/dfc>.

Although this article focuses on the Internet, much of the analysis applies with equal force to other networks such as BBSs and on-line services.

4. *See* John Perry Barlow, *Selling Wine Without Bottles: the Economy of Mind on the Global Net* (a.k.a. *The Economy of Ideas*), WIRED, Mar. 1994, at 85, *available at* <http://www.hotwired.com/wired/2.03/features/economy.ideas.html> ("Intellectual property law cannot be patched, retrofitted, or expanded to contain digitized expression any more than real estate law might be revised to cover the allocation of broadcasting

II. UNITED STATES COPYRIGHT LAW BASICS[5]

Many excellent summaries of U.S. copyright law exist,[6] and this section will not attempt to duplicate those efforts. However, mapping out the basic contours of the existing U.S. copyright law scheme is helpful in understanding the import of the conclusions of this article.

The Constitution authorizes Congress to establish a legislative scheme "to promote Science and the useful Arts, by securing for limited Times to Authors . . . the exclusive right to their . . . writings . . . ."[7] In response, Congress enacted the Copyright Act of 1909, which it later replaced with the Copyright Act of 1976 (the "Copyright Act").[8]

The Copyright Act governs original works of authorship that are fixed in a tangible medium of expression. While the standard for originality is low, facts and ideas may not be copyrighted.[9] For copyrightable works, the owner has the following exclusive rights:

> (1) to reproduce the copyrighted work in copies or phonorecords;
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> (2) to prepare derivative works based upon the copyrighted work;
>
> (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
>
> (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly;
>
> (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly; and
>
> (6) in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission.[10]

These exclusive rights are subject to numerous restrictions. First, in the case of works created after January 1, 1978, these rights cease 50 years after the death of the author, or, in the case of works made for hire, the earlier of 75 years from the date of first publication or 100 years from the date of creation.[11]

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spectrum . . ."); Esther Dyson, *Intellectual Value*, WIRED, July 1995, at 136, *available at* <http://www.hotwired.com/wired/3.07/features/dyson.html>.

5. This article discusses only U.S. copyright law, although other copyright law schemes are similarly worthy of analysis.

6. *See, e.g.*, NII WHITE PAPER, *supra* note 2, at 19-147; Terry Carroll, *Frequently Asked Questions About Copyright*, version 1.1.3, January 6, 1994 <http://www.eff.org/pub/intellectual_property/copyright.faq>.

7. U.S. CONST. art. 1, sec. 8, cl. 8.

8. 17 U.S.C. § 101 et seq. (1994).

9. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 340 (1991), *available at* <http://www.seamless.com/rcl/feist.html.

10. 17 U.S.C. § 106 (1994).

11. *Id.* § 302.

Second, these exclusive rights are subject to the doctrine of fair use, which may permit the infringement of an exclusive right of a copyright owner if its conditions are met. The Copyright Act enumerates four factors that are to be considered to determine whether or not a use is fair:

> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
>
> (2) the nature of the copyrighted work;
>
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
>
> (4) the effect of the use upon the potential market for or value of the copyrighted work.[12]

In evaluating a claim of fair use, the court is to consider all four factors. However, taking 100 percent of a copyrighted work ordinarily militates against a finding of fair use,[13] and the fourth factor is generally considered the most important.[14]

There are numerous other statutory exceptions and limitations to copyright owners' rights, generally set out in Sections 108 to 120 of the Copyright Act.

Other intellectual property rights in U.S. law often also apply to works for which copyright protection is sought, including trade secret rights, trademark rights, patent rights, rights of publicity, and rights of privacy. While these other forms of intellectual property are not addressed in this paper, collectively they form an important additional basket of rights available to creators of intellectual property.

III. THREATS TO ENFORCING COPYRIGHT RIGHTS ON THE INTERNET

This section describes some of the unique ways that the Internet poses a threat to copyright owners' ability to enforce their copyrights.

A. No Loss of Quality In Reproduction

Unlike copies of intellectual property made using analog copiers (such as photocopy machines, video and music tape recorders, facsimile machines and others), digital copies of intellectual property produce perfect copies without any loss of quality. The first generation and the 1000th generation copy of digital material are indistinguishable. Since each copy is a perfect copy, no quality-related limits inhibit pirates from making as many copies as they please, and recipients of these copies

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12. *Id.* § 107.
13. *See* Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 449-50 (1984).
14. *See* NII WHITE PAPER, *supra* note 2, at 79.

have no incentive to return to authorized sources to get another copy equal in quality to the original version.

B. No Meaningful Marginal Costs of Reproduction or Distribution

Unlike the business of selling and distributing physical copies of books, magazines, music cassettes or CDs, video cassettes or software, the costs of making one extra copy of intellectual property on-line are insignificant, as are the distribution costs associated with moving that copy to the end user over the Internet. Assuming no per-byte or other volume costs are imposed on the site owner (which is the current state of the market), infringement can occur at virtually no marginal cost.

C. Ability to Act Anonymously

Using anonymous remailers and other existing technologies, pirates are able to act anonymously on-line, leaving no traceable trail of activity. Anonymity poses a significant threat on the Internet, because it theoretically allows pirates to cause harm without bearing any risk of loss, thus undermining the general presumption that those causing harm can be forced to internalize the costs of their actions. As a result, more infringement is likely to occur than if costs were properly internalized.

However, anonymous activity is not a copyright-specific problem; it applies to all crimes and torts that can be committed on-line. Therefore, it may be more appropriate to address the harm caused by anonymity generally, rather than drafting a specific resolution applicable only to losses suffered by copyright owners. Furthermore, there is a built-in limitation to the scope and size of anonymous actions, particularly if any element of the activity is commercial; at a certain point the activity should become large enough to leave at least shreds of evidence, both in physical space and cyberspace, sufficient to allow attribution.[15]

D. Uneducated Users

Many users do not understand the existing copyright legal framework.[16] While the lack of user education applies in both physical

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15. Lance Rose, *The Emperor's Clothes Still Fit Just Fine*, WIRED, Feb. 1995, at 103, 104, *available at* <http://www.hotwired.com/wired/3.02/departments/rose.if.html>; *See* Philip E. Ross, *Cops Versus Robbers in Cyberspace*, FORBES, Sept. 9, 1996, at 134, 137, *available at* <http://www.forbes.com/forbes/090996/5806134a.htm> (noting that "[intellectual] property owners rely heavily on old-fashioned methods: police raids, lawsuits and tip-offs," all of which become more likely as the size of the venture increases).

16. *See* Jessica Litman, *The Exclusive Right to Read*, 13 CARDOZO ARTS & ENT. L.J. 29, at 50-51 (1994), *available at* <http://yu1.yu.edu:80/csl/journals/aelj/articles/13-1/litman.html> ("The current copyright statute has proved to be remarkably education-

space and cyberspace, the Internet permits these users to widely disseminate works with relative ease. Often times, this publication can inadvertently cause harm, such as the forwarding of works subject to copyright to third parties. The result may be a number of relatively small infringements that, in the aggregate, can lead to significant losses for copyright holders.

E. Conclusion

The foregoing threats indicate that copyright holders face substantial risks on-line. Nevertheless, we already have ample evidence that intellectual property is still being created for distribution on the Internet. Indeed, a staggering—almost unmanageable—quantity of intellectual property continues to be produced and made available on-line despite these threats.[17] Therefore, despite the assertions of those who believe that the threats posed on-line to copyrighted works would result in disincentives to create and distribute works, it appears other forces are at work on the Internet.

IV. ECONOMICS AND THE INTERNET

This section applies economic theory and surveys existing business models to suggest why, without increased copyright protection, intellectual property is still likely to be produced even if it is given away on the Internet.

A. Price-Setting Behavior in a Nearly Efficient Marketplace When Marginal Costs Are Meaningfully Zero

The Internet is not a perfectly efficient market, but it does represent a close approximation. Among the requirements for an efficient market are perfect information and zero transaction costs. First, while the Internet does not offer perfect information, some industries provide enough information on the Internet to give buyers an opportunity to compare prices based on nearly perfect information.[18] On the Internet, it

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resistant.... [O]ur current copyright statute could not be taught in elementary school, because elementary school students couldn't understand it. Indeed, their teachers couldn't understand it. Copyright lawyers don't understand it.").

17. *See* Steve G. Steinberg, *Seek and Ye Shall Find (Maybe)*, WIRED, May 1996, at 108, *available at* <http://www.hotwired.com/wired/4.05/features/indexweb.html> (noting that "at its current growth rate, the Web will contain more words than the giant Lexis-Nexis database by [summer 1996], and more than today's Library of Congress by the end of 1998").

18. *See* Netbot <http://www.netbot.com/>. For example, the Internet provides numerous "agents" for buying music CDs. These agents search the available pricing databases on the Internet and deliver a comprehensive set of results, allowing customers to

is likely that many additional industries will experience this phenomenon. Second, while transaction costs are not zero, the Internet has significantly reduced transaction costs. In particular, buyers may experience no marginal transaction costs attributable to using the Internet for finding purchasing opportunities or consummating a transaction.[19]

In an efficient marketplace, a firm's profit-maximizing price is the price where marginal revenue from each sale of the product equals the marginal costs of the product.[20] If marginal costs are zero, what is the profit maximizing price?

1. *MARGINAL COSTS ON THE INTERNET*

For many intellectual property creators, the marginal cost of each additional "sale" of the intellectual property is likely to be effectively zero. While many costs are associated with producing intellectual property, including the time of the creator and the Internet infrastructure (such as the hardware, software and Internet connection), these costs become fixed costs once the intellectual property is produced.[21] At that point, if the intellectual property is uploaded to the Internet, the remaining costs are trivial—further reproduction or distribution on the Internet imposes no meaningful marginal costs.

2. *OPTIMAL PRICING*

Economic theory predicts that if the marginal costs to "selling" intellectual property is zero, then some producers will accept zero marginal revenues. In other words, the profit-maximizing price for theses producers will be zero. Since this is a seemingly anomalous result, how can this be explained? There are at least four different possible explanations:

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easily compare prices and, presumably, choose the lowest. *See, e.g.*, BargainFinder Agent <http://bf.cstar.ac.com/bf/>.

19. *See* part III.B *supra*. In part, transaction costs are limited due to current market conditions of pricing for access that does not vary with usage. There has been much discussion suggesting that per-byte or per-unit pricing will be required because of the problems inherent in a system where users can get unlimited use of the scarce resources of the Internet without paying marginal costs. *See* Jeffrey K. MacKie-Mason & Hal R. Varian, *Economic FAQs About the Internet* (June 1995) <http://www.spp.umich.edu/ipps/papers/info-nets/Economic_FAQs/FAQs/FAQs.html>.

20. A producer will continue to produce so long as the marginal revenue from an additional unit of output is greater the marginal cost of such output, since the difference represents a contribution towards fixed costs. In an efficient market, the party with the lowest marginal cost sets the price, since it is able to undercut its competitors' prices and therefore win customers.

21. In the long run, all costs are variable costs. However, in the short run, costs that cannot be varied easily are fixed costs. Therefore, costs such as salaries, hardware and software expenses and contractual commitments for Internet service are all fixed costs in the short run.

(i) A zero-revenue pricing strategy may persist only in the short run; but, ultimately, because no profits are being made, all producers will exit this business. This is fundamentally the assertion of those who believe that intellectual property owners must be paid directly for their creative efforts, or else they will not produce.[22]

(ii) The only sustainable pricing strategy may be a scheme involving price discrimination, where prices are set in accordance with users' willingness to pay. In this situation, intellectual property will be offered at varying prices, including possibly free, depending on the user.[23]

(iii) Traditional economic theory may break down on the Internet so that intellectual property will not be offered for free despite the absence of marginal variable costs. If this were true, the profit-maximizing price may not be where marginal revenue equals marginal cost. This would be a rather profound result, implicating large chunks of existing economic theory.

(iv) Finally, the profit-maximizing price on the Internet may be where marginal revenue equals marginal cost because intellectual property will be cross-subsidized by other products in a manner sufficient to cover the fixed costs associated with intellectual property creation and distribution. If this is true, a market price of zero for intellectual property can still create long-term economic profits attributable to intellectual property creation.

Of the four possible explanations, as explained in the remainder of this part IV, the author believes that the last proposition best explains why the production and distribution of intellectual property will continue even in the absence of marginal revenues directly attributable to users of the intellectual property.

The remainder of this part IV will discuss why the last theory is at least supportable when it comes to many categories of intellectual property on the Internet.

B. Cross-subsidization of Intellectual Property Creation

There is nothing new about the proposition that vendors may give away X to sell Y. In the classic formulation of its strategy, Gillette is credited with conceiving the business model of giving away razors to sell

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22. *See, e.g.*, James Gleick, *I'll Take the Money, Thanks*, NEW YORK TIMES MAGAZINE, Aug. 4, 1996, at 16, *available at* <http://www.around.com/copyright.html>.

23. *See* Hal R. Varian, *Differential Pricing and Efficiency* (June 1996) <http://alfred.sims.berkeley.edu/Different/different.html> (arguing that it is optimal for intellectual property to be offered on a price-discriminated basis). Price discrimination is tricky because it requires careful definition of the product being price-discriminated. If the business model adopted by an Internet company is to provide free intellectual property as an inducement to sell other goods or services, is the "product" the intellectual property or the package of intellectual property plus the ancillary goods or services?

its blades.[24] However, the deployment of this strategy is inherently limited because a razor is a tangible "thing" that will always have marginal costs to produce. On the Internet, where the marginal costs of reproduction and distribution of intellectual property are effectively zero, cross-subsidization becomes viable for a significantly greater number of products.

An intellectual property owner can use a myriad of alternative business models to extract value from the free distribution of intellectual property. If successful, these business models will permit the cross-subsidization of intellectual property creation. Internet entrepreneurs will be induced to create intellectual property if they are able to use it to make a profit from alternative revenue sources.[25]

The remainder of part IV.B provides a survey of Internet-based cross-subsidization models that may support the production of intellectual property designed to be given away freely.

1. *ADVERTISING*

Advertising is one of the highest-profile business models on the Internet. Under the advertising model, a company gives away intellectual property to attract visitors to its site and then sells advertising space on its site to others. A broad range of companies are launching advertising-based attempts to freely give away intellectual property and substantive services, including email accounts,[26] interactive news agents,[27] editorial periodicals[28] and search engines and indexes.[29]

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24. *See* Robert Metz, *Shaking the Money Tree* (Nov. 4, 1996) <http://www.talks.com/library/rm110496.html>.

25. It is generally believed that few, if any, Internet businesses are currently making a profit. *See, e.g.*, Kathy Rebello, *Making Money on the Net*, BUS. WEEK, Sept. 27, 1996, at 104, *available at* <http://www.businessweek.com/1996/39/b34941.htm> (indicating that Internet businesses losing money outnumber moneymakers two to one); *See* Jeff Moad, *Web Shakeout*, PC WEEK, July 15, 1996, at E1, *available at* <http://www8.zdnet.com/pcweek/ExecConnect/0715/15emain.html> (describing a number of high-profile failures of Internet businesses). This limited empirical evidence does not yet prove that the Internet will provide insufficient profits to induce the creation of intellectual property. The Internet is far from mature, either as a commercial environment or in terms of the predictability its technical or legal framework. Further, in most industries, significant upfront investments must be made before profits accrue—and most Internet businesses are less than 3 years old. Instead, the high stock valuations of many Internet companies indicates that many investors forecast significant future profits.

26. *See, e.g.*, Juno On-line <http://www.juno.com> and Hotmail <http://www.hotmail.com>. Other companies, such as Cyber FreeWay <http://cyberfreeway.net> and @bigger.net <http://bigger.net> are offering lifetime email accounts for a low one-time fee. However, Freemark, one of the early entrants in this arena, has already gone defunct.

27. *See, e.g.*, Pointcast Network <http://www.pointcast.com>, Freeloader <http://www.freeloader.com> and Mercury Mail <http://www.merc.com/>.

28. *See, e.g.*, HotWired <http://www.hotwired.com> and C|Net <www.cnet.com>.

29. *See, e.g.*, HotBot <http://www.hotbot.com/>, Yahoo! <http://www.yahoo.com>, Excite <http://www.excite.com>, InfoSeek <http://www.infoSeek.com>, Switchboard

However, the slow increase in Internet advertising dollars suggests that, in the short run, advertising revenue may be insufficient to support the level of free distribution of intellectual property that exists today.[30] Because the supply of advertisement placement opportunities exceeds the demand of advertisers, advertisers are becoming more demanding.[31] Moreover, Internet users have grown weary of the often annoying banner advertisements. Nevertheless, the results obtainable from on-line advertising can be so compelling that certain advertisers have strong incentives to choose Internet advertising over other media.[32]

Furthermore, other media industries indicate that multi-billion dollar industries can be built primarily on advertising. For example, the multi-billion dollar broadcast TV industry effectively gives away its intellectual property to viewers, supporting itself almost exclusively on advertising. The television broadcasting model is consistent with the contention that Internet users will not be required to pay for intellectual property, and that the production of intellectual property can be entirely supported by advertising.

In reality, many intellectual property owners will combine the advertising model with other forms of ancillary revenues.[33] Nevertheless, advertising remains a critically important component of Internet cross-subsidization business models.

<http://www.switchboard.com>, Four11 <http://www.four11.com> and BigBook <http://www.bigbook.com/>.

30. *See* Lauren Gibbons Paul, *Web Rewards Wait Only for the Patient*, PC WEEK, July 15, 1996, at E4, *available at* <http://www8.zdnet.com/pcweek/archive/1328/pcwk0007.htm> (suggesting that content sites should not expect to break even before the year 2000); Rosalind Resnick, *Follow the Money*, INTERNET WORLD, May 1996, at 34, 34-36 [hereinafter Resnick, *Follow the Money*], *available at* <http://www.iw.com/1996/05/money.html> (noting that advertising revenue is heavily concentrated among a small number of sites, leaving few advertising dollars for other sites); *See also* Hunter Madsen, *Reclaim the Deadzone*, WIRED, Dec. 1996, at 206, 212, *available at* <http://www.wired.com/wired/4.12/esmadsen.html> (describing how the limited real estate for banner advertisements suggests that banner advertisements will be insufficient to support Web publishing). Web advertisement revenues were $71.7 million in the first six months of 1996, although they are expected to increase to $5 billion in 2000. Rebello, *supra* note 25, at 107.

31. *See* Zachary Schiller, *For More About Tide, Click Here*, BUS. WEEK, June 3, 1996, at 44, *available at* <http://www.businessweek.com/1996/23/b3478129.htm> (describing how Procter & Gamble, America's largest advertiser, has attempted to pay based solely on click-through rates, not page impressions).

32. *See* Craig R. Evans, *The Web's REAL Opportunity—Advertising!*, ELEC. RETAILING, Sept./Oct. 1996, at 6 (describing a survey of Web users indicating that 46% of those who used the Web to research products and services went on to buy the product at retail).

33. *See* Rosalind Resnick, *AdTech '96: Is Banner Advertising Dead?*, INTERACTIVE PUBL'G ALERT, July 1, 1996 <http://www.netcreations.com/ipa/banners.html> [hereinafter Resnick, *Banner Advertising*] (describing "sponsored content," "targeted direct mail" and "pay-per-use" advertising strategies).

2. *SPONSORSHIPS*

A variant on the advertising model, sponsorship is the "co-branding" of intellectual property with the sponsor's trademarks. In the old days of television, sponsorship was common; companies would purchase all of the advertising for a show and be acknowledged as the sponsor.[34] On-line, sponsorship can take many forms, but the fundamental premise is that the sponsor will be more integrated with the content than just sticking its banner ad at the top of the page. For example, Riddler <http://www.riddler.com/home/html> promotes a contest which gives rewards to participants who can answer riddles that require the participants to visit sponsors' sites.[35]

Sponsorship is emerging as a strong alternative to banner advertising, at least partly due to advertisers' dissatisfaction with the results from banner advertising.[36] However, sponsored content also raises difficult issues about editorial integrity as the line between advertisement and editorial information becomes blurred.

3. *"TRY BEFORE YOU BUY"*

In the "try before you buy" model, companies provide consumers with a free copy of a work which is limited in some way (such as duration or functionality) in the hopes that the consumers will purchase a full copy. For example, a vendor may give away software in the hopes that recipients will return to purchase a copy. Moreover, in many instances consumers may unilaterally pirate works and then later decide to purchase legitimate copies, even though the vendor never intended to provide "try before you buy" copies.[37] On the Internet, the "try before you buy" model has become extremely popular, in part because no meaningful marginal costs are associated with manufacturing or distributing trial copies. Thus, software,[38] content[39] and subscription services[40] are routinely given away on a "try before you buy" basis.

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34. Madsen, *supra* note 30, at 220.

35. In another example, IBM makes the full text of patents issued to it since 1971 available for free on its website. IBM's motivation is, in part, to reinforce the message that IBM has received more patents than anyone else for the past several years. *See* IBM Patent Server <http://patent.womplex.ibm.com/>.

36. Resnick, *Banner Advertising*, *supra* note 33.

37. *See* Margie Wylie, *Can Copyright Survive the Digital Age? Should It?*, DIGITAL MEDIA: A SEYBOLD REPORT, July 3, 1995 (on file with author) ("'Some of the more popular spreadsheet and wordprocessing programs were greatly aided by being ripped off to a certain degree.' It let people use them enough that they were convinced it was worth the money to buy a legitimate copy, with documentation, support and upgrades." (quoting R.W. Lucky of Bellcore Labs)).

38. This model is exemplified by the long-standing "shareware" industry. *See, e.g.*, McAfee, <http://www.mcafee.com>, which makes anti-virus shareware software, and Netscape <http://www.netscape.com>, which gives its browser away as shareware. Id Software, the makers of Doom II, a popular (and violent) computer game, took a slightly

4. SALES OF UPGRADES

Under the sale of upgrades model, consumers are freely given intellectual property with the expectation that some of them will purchase a superior version. In some ways a variant of the "try before you buy" model, this model capitalizes on the fact that version 1.0 of a product can be the best device to sell version 2.0. For example, sales of upgrades are ubiquitous in the modem software business, where companies bundle their "lite" version of software with the modem for free in the hope that consumers will upgrade to the "professional" version. However, the model is not limited to software; an author might give away a short story as a way to build demand for a "further adventures" sequel story or the movie.[41]

5. SALE OF COMPLEMENTARY TECHNOLOGY

The truest application of Gillette's maxim, the Internet version might be "give away the client software to sell the server software." For example, the Internet's "browser software wars" have focused heavily on the free distribution of client software. With a large installed base of client software, the server software—which is sold and provides added functionality for people using the client software—becomes more attractive. More generally, software companies who also have hardware businesses may give away software to encourage the use of complementary proprietary hardware.[42]

6. SALES OF PHYSICAL GOODS

Companies may use the free distribution of intellectual property to foster the sale of physical goods in many ways. For example, Digital initially intended to popularize its Alta Vista search engine in order to

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different approach—they gave away the first 3 basic "levels" of the Doom II dungeon; the other 47 levels were made available for a charge.

39. Numerous pornography sites on the Internet offer a few free photos for browsing as a teaser to purchasing access to the remaining database of photos. *See generally* <http:www.yahoo.com/Society_and_Culture/Sexuality>.

40. *See, e.g.*, the Wall Street Journal Interactive Edition <http://www.wsj.com>, which offers a free two-week trial subscription.

41. *See* Paulina Borsook, *Steal This Article*, UPSIDE, Mar. 1996 at 80, 88 [hereinafter Borsook, *Steal This Article*], *available at* <http://www.upside.com/texis/archive/search/article.html?UID=9603011002> (describing how music groups have a love/hate relationship with their underground fans, knowing that infringement by the underground is often a way to expand their fan base). Spectrum Press <http://users.aol.com/specpress/free.htm> gives away samples of short stories and novels that it sells in electronic form delivered on floppy disks. *But see id.* ("'You can upgrade software, not music.'" (quoting Judith Saffer, in house attorney for BMI)).

42. *See* Caryn Gillooly, *Cabletron's Unbeatable Price Plan*, INFO. WEEK, July 24, 1995, at 28 (describing how Cabletron was giving away its Spectrum software, worth $20,000, as an entree to sell its other network management products).

showcase the speed of its Alpha servers.[43] Digital thus intended to give away a search tool as a way to enhance sales of its physical goods. Similarly, in the area of character merchandising, many companies may seek to build character awareness on-line through free distribution of character-related content; the increased character awareness may translate into increased demand for character-branded merchandise.[44] Finally, electronic distribution of intellectual property could be used to create demand for physical copies of intellectual property that have been bolstered with additional content or experience-enhancing elements.[45]

7. *SALES OF SERVICES*

Companies may stimulate demand for services by distributing free intellectual property on-line. For example, consultants may find it relatively easy to attract potential customers by distributing free content that demonstrates expertise. Alternatively, software companies can give away software as a way to sell systems integration or customized application development.

A notable example of the use of cross-subsidization to sell services is the free distribution of software as an avenue to sell technical support. For example, Microsoft gives away its Internet Explorer browser without a licensing fee, but users must purchase technical support. The sale of technical support unbundled from the underlying software has become increasingly popular.

8. *PERSONAL INFORMATION COLLECTION AND DATA MINING*

Internet sites can easily collect a fair amount of information about their users, much of it without the user's consent. For example, Internet sites can learn the user's IP address and most recently visited site. Furthermore, by placing a unique identifier into the user's "cookie"[46] (or, with less precision, by analyzing the server logs), the Internet site can trace the user's activity through the site and glean insights into what the user looks at and for how long. In addition, many sites may request or

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43. Rose Aguilar, *Digital to Market Alta Vista*, Mar. 29, 1996 <http://www.news.com/News/Item/0,4,1005,00.html>.

44. This model may explain why companies tolerate unauthorized fan sites. *Cf.* Constance Sommer, *Film Rights Falling Through the Net*, SAN JOSE MERCURY NEWS, Dec. 10, 1996, at 10E (referring to Disney's laissez-faire attitude toward on-line fan sites).

45. *See* Paulina Borsook, *Music Lessons*, UPSIDE, Mar. 1996 at 84, [hereinafter Borsook, *Music Lessons*] (describing how music companies can add value to free on-line music sufficient to induce purchases of CDs through better packaging, thicker CD booklets, and accompanying video).

46. A "cookie" is a file on the user's hard drive where websites may store user-specific information. Most browser software programs support the use of the cookie.

require users to fill out registration forms which call for the disclosure of extensive personal information.

Companies can then exploit this information for commercial gain in a number of ways, such as selling email mailing lists to other companies or selling advertising space to companies that want to provide users with customized product offerings or page views based on their perceived preferences.[47] Although the commercial use of this personal information can create some significant privacy issues,[48] such use is generally not subject to legal restrictions in the United States.

9. *COMMUNITIES*

The Internet is particularly useful for facilitating community formation. In physical space, community formation may be inhibited by geography, the cost of communication, or the asynchronous methods of communication. On the Internet, however, groups can form quickly and cheaply since these barriers are absent. Moreover, the absence of these barriers may facilitate the formation of communities devoted to extremely narrow topics, which otherwise would not form.

The formation of Internet communities offers one of the most promising Internet business opportunities. If an Internet site can successfully attract like-minded people to interact with each other on the site, it will have a number of ways to extract value from these relationships.[49] In addition to the obvious methods, such as selling the demographics to advertisers and selling the mailing list to merchants interested in reaching the target audience, the Internet site can extract value by enhancing the community members' ability to communicate with each other. The site could accomplish this by providing proprietary tools to facilitate onsite communication and tools and methods to facilitate and enrich physical-space meetings between members.

For example, WebGenesis <http://www.theglobe.com> provides chat rooms oriented primarily towards young adults. While the general public can access the chat rooms for free, subscribers receive "bonus" onsite privileges, including an onsite home page to which all their onsite chat postings are hypertext linked automatically, access to private chat

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47. *See, e.g.*, CyberGold <www.cybergold.com> (a service which will pay users to read advertisements sent to them based on their articulated preferences).

48. *Cf.* Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 <http://www2.echo.lu/legal/en/dataprot/directiv/directiv.html> (discussing the protection of individuals with regard to the processing of personal data and the free movement of such data).

49. *See* Rebello, *supra* note 25, at 106 ("'[Community-building] is the secret weapon of an electronic merchant.'" (quoting Amazon.com founder Jeff Bezos)). *See generally* Arthur Armstrong & John Hagel III, *The Real Value of On-Line Communities*, HARV. BUS. REV., May-June 1996, at 134.

rooms available only to other subscribers (who presumably are also dedicated chatters), and the ability to use tools such as Java that enhance the chatting experience. In other words, by providing the chat rooms for free, WebGenesis is able to identify those members of the communities who desire a greater relationship to the community and target these people for the sale of advanced onsite communications products.

Companies could also derive revenue opportunities from Internet communities by organizing conferences and other events of interest to the community. A site that forms a community dedicated to river rafting, for example, could sell river rafting trips to its members, an endeavor that would have the added value of creating an opportunity to meet other members of the community in physical space.

10. REINFORCEMENT OF PHYSICAL-SPACE MESSAGES

Internet sites can be used to reinforce marketing and sales efforts being made elsewhere. Such reinforcement can occur in the form of customer support and outreach, such as Federal Express' <http://www.fedex.com>, use of its website to provide data tracking services to its customers, or a software company's use of the Internet to distribute bug fixes, FAQs, usage tips and other forms of customer assistance.

Alternatively, some companies use Internet sites to increase customer loyalty or provide branding opportunities.[50] For example, the websites prepared by Zima <http://www.zima.com> and Miller Genuine Draft <http://www.mgdtaproom.com/> contain offerings designed to allow their consumers to feel like the part of a community and to encourage brand loyalty. The Internet market has been described as a "relationship" market;[51] free intellectual property can be the way to initiate, build or reinforce the relationship.

C. Importance of Attribution

As the prior section has indicated, companies can try a myriad of methods of creating value by giving away intellectual property. However, for cross-subsidization to work, buyers impressed with product X (freely given away) must be led to product Y (for sale). In most cases, this will mean that product X must give proper attribution to the seller of product Y so that buyers can make the connection.

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50. *See* Neil Gross & Peter McCoy, *The Technology Paradox*, BUSINESS WEEK, Mar. 6, 1995, at 76, 80 (describing how giving intellectual property away for free can build mindshare in the coming "attention economy").

51. *Id.* at 77.

U.S. copyright law affords no "right of attribution" to owners of intellectual property distributed on the Internet.[52] While some trademark, unfair competition, or right of publicity theories may limit the ability of users of intellectual property to falsely represent the origin of the intellectual property, there is no copyright obligation of attribution.[53]

In some cases, attribution may be the only right that matters on the Internet. In fact, an intellectual property owner seeking cross-subsidization may encourage people to "infringe" the intellectual property through wide distribution, so long as attribution is given.[54] Thus, existing copyright law lacks an important right, the absence of which could hinder the deployment of key business models on the Internet.

The NII White Paper recognized that attribution could be important and therefore recommended that copyright law be amended to "prohibit the provision, distribution or importation for distribution of copyright management information known to be false and the unauthorized removal or alteration of copyright management information."[55] The White Paper defines copyright management information as the name of the copyright owner and the terms and conditions for use of the work.[56]

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52. 17 U.S.C. § 106A applies only to "visual works," which include paintings, drawings, prints or sculptures in a limited edition of less than 200 copies which are signed and consecutively numbered, or a still photographic image which is a single copy signed by the author or is a limited edition of less than 200 copies signed and consecutively numbered. *Id.* § 101. While it theoretically possible for a work existing on the Internet to be categorized as such, this possibility is highly remote.

53. None of the six exclusive rights of copyright have been interpreted to require attribution. *See* Mark A. Lemley, *Rights of Attribution and Integrity in On-line Communications*, 1995 J. ON-LINE L. art. 2 <http://warthog.cc.wm.edu/law/publications/jol/lemley.html>.

54. *See* John S. Erickson, *Open Commerce through Enhanced Attribution* (1996) <http://www.netrights.com/EnhancedAttribution.html>; *cf.* Borsook, *Music Lessons*, *supra* note 44, at 84 (describing how a musical group used the name of a Japanese character for one of the group's songs; the litigation over the use of the name was amicably settled when the group pointed out that the character owner could not buy the kind of free advertising it had received).

Some of the business models, such as advertising, may require the attribution to occur only on the site where the advertising is located. Therefore, not every business using cross-subsidization will necessarily encourage widespread infringement.

55. NII WHITE PAPER, *supra* note 2, at 235. See also Julie A. Cohen, *Some Reflections on Copyright Management Systems and Laws Designed to Protect Them*, 12 BERKELEY TECH. L.J. 161 (1997) [hereinafter Cohen, *Copyright Management Systems*] (discussing policies prohibiting alteration of copyright management information).

56. *Id.* The reference to terms and conditions of use may be problematic because it suggests that owners can unilaterally impose "contract" terms on all consumers of the file. *See* Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at Copyright Management in Cyberspace*, 28 CONN. L. REV. 981 (1996) [hereinafter Cohen, *Right to Read Anonymously*]. While this unilateral contract approach might be the right result, as found in ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996), *available at* <http://www.kentlaw.edu/7circuit/1996/jun/96-1139.htm>, no consensus currently exists that the *federal* government should be dictating that licensors should be permitted to unilaterally impose contract terms on licensees. *See* U.C.C. *proposed* Article 2B (Mar. 21, 1997 draft) <http://www.lawlib.uh.edu/ucc2b/> (a controversial attempt to develop model *state*

While not adopted into law in the United States, a virtually identical proposal was adopted at the proceedings of the World Intellectual Property Organization ("WIPO").[57] Time will tell if the treaty will be adopted without changes in the United States.

The White Paper proposal and the WIPO treaty represent an important step toward the recognition of the right of attribution in the United States. However, the proposed law could have profound effects on some current Internet practices.[58] First, website operators commonly incorporate content maintained on remote servers into the pages delivered to users through a direct hypertext link to the remote content.[59] Intellectual property owners whose files are linked this way may object (1) because these direct-linked users do not actually visit their site, and (2) because the file may be displayed so as to suggest that the site providing the link is the source of the file. Does this form of direct linking run afoul of the White Paper's proposal? Should it? Would it matter if the linked-to site provided a notice denying access to others who attempted to link to the site?[60]

Second, robots and agents can, for example, survey multiple search engines and display the search results to the end user in summary form, without displaying any advertising contained on the search engine's site (or, for that matter, giving any attribution to the search engine).[61] As a

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legislation permitting increased ease in the formation of unilateral contracts by licensors); *See also* Maureen O'Rourke, *Copyright Preemption After the ProCD Case: A Market-Based Approach*, 12 BERKELEY TECH. L.J. 53, 71 (1997). This issue is particularly important because presumably the licensor-imposed terms will exceed the licensor's rights under copyright law (otherwise, why would they need to impose them?). However, terms and conditions would be less problematic if they were merely grants of licensor's copyright rights (i.e., "you may use this material for any noncommercial use").

57. *See* World Intellectual Property Organization, Diplomatic Conference on Certain Copyright and Neighboring Rights Questions, WIPO Copyright Treaty (Dec. 23, 1996) <http://www.wipo.org/eng/diplconf/distrib/94dc.htm>; World Intellectual Property Organization, Diplomatic Conference on Certain Copyright and Neighboring Rights Questions, WIPO Performances and Phonograms Treaty (Dec. 23, 1996) <http://www.wipo.org/eng/diplconf/distrib/95dc.htm>. *See also* Cohen, *Copyright Management Systems*, *supra*, note 56 at 161, 165-69.

58. Prof. Samuelson also notes that the proposal could protect devices incorporated into files that effectively report on users' behavior, raising potentially serious privacy concerns. Samuelson, *supra* note 3, at 188; *See also* Cohen, *Right to Read Anonymously*, *supra* note 56.

59. The HTML command "img src," followed by a URL, instructs the user's browser software to access the file contained at the referenced URL and to incorporate that file into the page displayed to the user. The user will see the file displayed on the page, but the user will not see the site from which the file originated, nor will the linking site store a copy of the linked-to file on its server. Issues related to linking are discussed in part VI.D.1, *infra*.

60. *Cf.* CompuServe, Inc. v. Cyber Promotions, Inc., 1997 U.S. Dist. LEXIS (S.D. Ohio Feb. 3, 1997), *available at* <http://www.bna.com/e-law/cases/compus1.html> (discussing how when a mass email sender was notified by CompuServe that their "junk" email was no longer welcome, the sender's continued sending of mass emails was a trespass to chattels; however, notice "may be insufficiently communicated to potential third-party users when it is merely posted at some location on the network.").

61. *See, e.g.*, SavvySearch <http://williams.cs.colostate.edu:1969/>.

result, the search engine sites must bear the costs of providing the service without getting the anticipated benefits from the consumers of the information. Does this type of robot behavior run afoul of White Paper's proposal? Should it? Would it matter if the search engine's site contained a notice that notified others that robots and agents were not welcome?

D. Conclusion

The large number of alternative business models presented above is necessarily incomplete; entrepreneurs have proven highly capable of developing new ways of extracting value from the Internet. However, the mere existence of so many alternatives reinforces the fundamental message: intellectual property creators can cross-subsidize the production of their works in many ways.

The impact of this concept is powerful: if even one person is able to produce and freely distribute a type of intellectual property through cross-subsidization, why would consumers continue to pay for an equivalent work? While each copyrightable creation is theoretically unique, many types of intellectual property have substitutes which consumers would readily choose if they were available for free.[62] In other words, if the Internet is a relatively efficient market and intellectual property is somewhat fungible, then the free availability of a type of work should establish the market price for that type of intellectual property at zero.[63]

The implications of this proposition are truly profound. It suggests that intellectual property owners who expect to be paid directly by end users will face extreme competitive pressures. A single entrepreneur able to cross-subsidize the production of substitute intellectual property should theoretically drive the market price to zero and eliminate all prospects that end users will directly pay for the intellectual property. Given the plethora of methods an entrepreneur could use to achieve this result, zero pricing may be inevitable for many classes of intellectual property.

A recent case involving the use of "frames" raises similar issues which arise when one site engages in "free riding" on the efforts of other sites. *See* Washington Post Co. v. Totalnews, Inc. (complaint filed Feb. 20, 1997) <http://www.ljx.com/internet/complain.html>. However, Totalnews does provide attribution to the sites it frames.

62. *But see* Cohen, *Right to Read Anonymously*, *supra* note 56 (assuming that each intellectual property is unique to the point that owners are able to exercise monopoly powers sufficient to impose unfair terms on consumers seeking access to the work).

63. *See generally* Gross & McCoy, *supra* note 50 (describing the recurring phenomenon of valuable goods and services being given away for free, even where manufacturing and distribution have marginal costs).

However, some categories of intellectual property almost certainly will not be given away for free.[64] For those categories that will support user payments, entrepreneurs can deploy various technologies to protect their intellectual property and increase the likelihood of payment. These technologies are discussed in part VI.

V. SOCIOLOGY OF THE INTERNET

While business and technological factors significantly impact the market for intellectual property, some noteworthy features about users' attitudes towards intellectual property also warrant attention. This section describes certain sociological aspects of the Internet culture and how they may influence users' willingness to pay.

A. Attitudes Towards Intellectual Property

Attitudes towards intellectual property can be placed on a spectrum ranging from "intellectual property should not be protected" to "intellectual property should be highly protected." Though not discrete nodes, five distinguishable segments of this spectrum can be identified:[65]

1. *INFORMATION WANTS TO BE FREE*

Adherents to this perspective believe that any intellectual property should be in the public domain and available for all to use. While finding dogmatic adherents to this perspective may be difficult, finding people who believe that anything they find on the Internet is "fair game" for free use is relatively easy.

2. *RIGHT OF ATTRIBUTION*

Adherents to this perspective believe that intellectual property can be freely "infringed" so long as the source is attributed. Again, though it may difficult to find people who strictly adhere to this perspective, it is very easy to find people—even among creators of intellectual property—who subscribe to this perspective at least some of the time. Interestingly, U.S. copyright law rarely requires attribution (see part IV.C, *supra*), although netiquette usually encourages it.

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64. Which categories these are is presently unclear, but presumably they will be categories lacking high fungibility between specific intellectual property outputs.

65. *See* Lance Rose, *Is Copyright Dead on the Net?*, WIRED, Nov. 1993, at 112, *available at* <http://www.hotwired.com/wired/1.5/departments/idees.fortes/copyright.on.net.htm> (discussing various visions of what copyright law means on the Internet).

3. *LIMITED USE OF WORKS SUBJECT TO COPYRIGHT*

Adherents to this perspective believe that intellectual property creators should have protectable rights in their creations, but they do not believe that these rights are absolute. Often, adherents want to strike a balance between protecting creators' interests and permitting "infringement" of the intellectual property in a manner consistent with their lifestyle or business. This position arguably represents the framework for existing U.S. copyright law, which gives significant protection to copyright holders but provides the fair use defense and statutory exemptions.

4. *MORAL RIGHTS*

"Moral rights" are the rights of the author to be attributed as the author of the work and to object to a particular use of the work.[66] As between the author and any potential user (including assignees or licensees), this perspective strongly favors the author; often the author cannot assign his or her rights, and in some jurisdictions the author cannot waive the enforcement of his or her moral rights.[67] Generally, moral rights reflect a belief that the author's creations are an extension of the author, and therefore the author can control how the public views author through his or her creations. U.S. copyright law does not explicitly recognize moral rights except in a very limited set of circumstances.[68]

5. *STRONG INTELLECTUAL PROPERTY RIGHTS*

Adherents to this perspective believe that the author should have significant power to control the use of his or her intellectual property. Adherents would extend the author's power beyond moral rights and permit the author to control all uses of his or her work.

From a policy perspective, it is useful to think about how our copyright laws can conform the behavior of people who subscribe to the perspectives outlined above. Importantly, people who subscribe to the "information wants to be free" theory may very well abuse copyright restrictions regardless of the strength of intellectual property laws, in which case strengthening copyright laws to conform their behavior serves little purpose.[69] To the extent that the Internet culture has increased the number of people unsupportive of strong intellectual property rights, new

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66. *See generally* Berne Convention for the Protection of Literary and Artistic Works (Paris Text 1971), § 6*bis* <http://www.law.cornell.edu/treaties/berne/6bis.html>.

67. *See* NII WHITE PAPER, *supra* note 2, at 146.

68. 17 U.S.C. § 106A (1994).

69. *See* Rose, *supra* note 15, at 104.

copyright laws designed to increase creators' rights are unlikely to produce the desired results.

B. Internet Culture and Micro-Infringements

Historically, the Internet has been populated by academics and technologists, many of whom would properly be categorized in the "Information Wants to be Free" segment (or perhaps the "Right of Attribution" segment) of the intellectual property attitude spectrum.[70] While waves of newcomers to the Internet have diluted this culture, many of these newcomers bring complementary attitudes towards intellectual property.

Take, for example, people under the age of thirty. During most or all of their life, they have had easy access—often in their home—to a number of devices they could use to infringe copyrights: audio cassette recorders (and cheap blank tapes); video cassette recorders (and again cheap blank tapes); high quality, low cost photocopy machines; fax machines; and perhaps the most powerful copying device of all, the personal computer (and cheap blank disks and hard drives). As a result, the under-thirty generation has grown up being able to freely expropriate intellectual property easily and at little cost.[71] As college students, how many of them bought most (or even some) of the software on their computer, rather than "borrowing" it from their folks or from a friend down the hall? How many of them put together a compilation tape of their favorite songs? How many of them made a cassette tape of someone else's music album? What mechanisms are in place—or could be put into place—to effectively convince these people that these acts are impermissible under the existing system?

The early Net users and the under-thirty crowd appear to have combined to create an interesting psychology on the Internet. The Internet community reacts with widespread disbelief when someone tries to assert that web browsing is an infringement,[72] that linking to a third party's materials is an infringement,[73] that forwarding an email to a mail list could be copyright infringement,[74] or that setting up a fan site could be an

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70. *See* Rebello, *supra* note 25, at 113-14.

71. *Cf.* Litman, *supra* note 16, at 34-35 ("Most of us can no longer spend even an hour without colliding with copyright law. Reading one's mail or picking up one's telephone messages these days requires many of us to commit acts that [the NII WHITE PAPER] now tells us ought to be viewed as unauthorized reproductions or transmissions.").

72. *See* NII WHITE PAPER, *supra* note 2, at 64-65.

73. *See* The Shetland Times Ltd v. Wills, Court of Sessions, Edinburgh, October 24, 1996 <http://www.shetland-news.co.uk/opinion.html> (a United Kingdom court enjoined one newspaper from hypertext linking to stories at a competing newspaper's website).

74. *See* Mitch Betts, *On-line Pay Per View*, COMPUTERWORLD, June 5, 1995, at 58, *available at* <http://www.computerworld.com/search/AT-html/9506/950605SL22 rights.html> (citing a survey of 255 information systems professionals which indicating

infringement.[75] Conceivably, the Internet community could be educated to understand why these actions implicate copyright rights, but changing the state of the Internet to conform to expansive readings of the copyright law would cause major upheaval. Furthermore, the logistics involved in trying to police these "micro-infringements" are daunting, and perhaps not efficient from a social cost versus social benefit standpoint.[76] Indeed, such an approach could ultimately prove economically counterproductive for intellectual property owners as well.[77]

More generally, the combination of the Internet culture and the general effect of technological evolution may be affecting our collective attitudes toward intellectual property. We have become a culture largely comfortable with serial micro-infringements. Generally, we want to respect other people's intellectual property rights, but we also want to run our lives in a way that ultimately results in numerous minor, almost trivial, but still theoretically actionable infringements.[78] The effect of trying to try to apply copyright laws (or worse, to try to strengthen them) to overcome this attitude would likely be regressive.

C. Conditioning to Expect Freebies

Because so many intellectual property owners are giving away valuable intellectual property for free, users are becoming conditioned to expect free intellectual property everywhere they go. In this environment, users become very reluctant to pay for intellectual property, since they know that free substitutes are likely to be available elsewhere. Even minor non-cash impediments, such as required registration forms, may be sufficient to drive users away. This conditioning makes it increasingly

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that 72% believed they "should be able to download on-line news articles and share them with as many people as they want").

75. For example, when Lucasfilms, the owner of Star Wars, contacted a dedicated fan who had established a Star Wars appreciation website regarding alleged infringements, the fan transcribed the conversation and posted the transcription on the website. After Lucasfilms was flooded "with angry emails, demanding to know how it could presume to assert such totalitarian control over a product some fans had woven into the very fabric of their lives," Lucasfilms backed down. Sommer, *supra* note 44, at 10E.

76. *See* Wylie, *supra* note 37 ("Copyright doesn't work today because people pay 100 percent of the time. It works because people pay often enough that intellectual property owners make a profit."); *cf.* Borsook, *supra* note 45, at 84 (noting that the music industry long ago accepted that it would lose 15-20% of its potential revenues to home copying).

77. A good example can be found in the movie studios' action against video cassette recorder manufacturers, Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417 (1984), where the studios' victory would have inhibited the development of an industry (video cassette rental) that generated $13 billion in revenues for the studios in 1993. *See Current Revenue of Target Markets*, UPSIDE, Dec. 1994 at 18 (graph referencing a Yankee Group study); *cf.* Litman, *supra* note 16, at 46 ("Whenever we have discovered or enacted a copyright exception, an industry has grown up within its shelter.").

78. *The Property of the Mind*, ECONOMIST, July 27, 1996, at 57, 57. <http://www.economist.iconnet.net/issue/27-07-96/wbsf1.html>.

difficult for intellectual property owners to charge users directly for intellectual property.

VI. TECHNOLOGIES AND METHODS FOR CONTROLLING INTELLECTUAL PROPERTY

This section analyzes existing technological tools and other methods that enable intellectual property owners to protect their property. Technology will by necessity play an essential role in the controlled distribution of intellectual property on the Internet, despite the fact that many categories of intellectual property will be made available to consumers free of charge. Technology will help support revenue-producing markets in those categories of intellectual property that are not going to be freely given away, and it may also help those intellectual property owners who desire attribution.

Some people believe that the availability of the technologies described in this section will lead to the development of a micropayment economy, where even minor uses of intellectual property will result in micropayments to the intellectual property owners. In addition to this result being unlikely for the reasons described in part IV, micropayments raise other difficult issues. In particular, the transaction costs of micropayments can be relatively large—and any customer support is likely to be too costly to provide.[79]

Clearly no single technology or method can prevent all forms of infringement. However, it is both theoretically and practically possible that a combination of technologies and other methods will provide significant protection against unwanted infringement throughout the productive life of the intellectual property. By setting up impediments to infringement, the intellectual property owner can conform the behavior of those who are unwilling to invest the extra effort to infringe. Furthermore, while the pirates will have plenty of incentive to defeat the technology, "technology does tend to favor the good guys because the good guys are better funded."[80]

A. Pre-Infringement

This section describes technologies and methods that copyright owners may put into place before distributing their intellectual property to control or inhibit infringement of their works.

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79. Tom Steinert-Threlkeld, *The Buck Starts Here*, WIRED, August 1996 at 132, 134, *available at* <http://www.wired.com/wired/4.08/features/nanobucks.html>.

80. Ross, *supra* note 15, at 137.

1. *LIMITED FUNCTIONALITY*

Under this approach, intellectual property owners provide a copy of the work which is functionally limited. This approach provides one way to technically implement the "try before you buy" and "sell the upgrades" business models. For example, software creators can distribute software that cannot print or save. Under a slightly different approach, a software vendor can distribute "buggy" software, such as beta versions. While buggy software gives people the opportunity to use and become familiar with it, buggy software also induces those who desire stable software to purchase it. As a last example, database providers or other vendors of large pieces of intellectual property can deliver the content in small chunks, making it difficult to compile the complete work.[81]

2. *DATE BOMB*

Analogous to the limited functionality approach, under this approach the intellectual property owner distributes fully functional intellectual property but locks off access at a pre-specified date.[82] Under a variant of this approach, the vendor can lock off access after a certain number of uses (i.e., after viewing the file 10 times, the file may no longer be viewed).

3. *COPY PROTECTION*

Under this approach, the vendor limits the number of times a file can be copied. Copy protection was standard in the 1980s, but it fell into disfavor largely because consumers resented the inconvenience and because copy protection was relatively easy to break.[83] While users are unlikely to be significantly more responsive to copy protection schemes now, copy protection is currently being used in certain situations.[84] For example, a creator can save a file in Adobe Acrobat's PDF format in a manner that prevents others from making copies, either directly or by such indirect means as printing the screen or copying the text displayed on the screen.[85] While this form of copy protection is probably not

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81. *Id.* Compare the approach used by Lexis in delivering cases on a screen-by-screen basis; compiling the full case by capturing each screen would be arduous.

82. *See, e.g.*, Release Software's SalesAgent <http://www.releasesoft.com/sadiagram.html>.

83. Ross, *supra* note 15, at 136.

84. *Cf. id.* (describing how Macrovision "spoilers" are inserted into movies; the spoilers confuse VCRs and produce distorted versions of the movies if copied).

85. Maximized Software's SiteShield software <http://www.maximized.com/products/siteshield/> encodes files in such a way that they may be browsed but not otherwise copied.

"hack-proof," it is sufficient to inhibit the vast majority of users from copying files.[86]

4. *ENCRYPTION ENVELOPES*

Encryption envelopes are software devices which encrypt intellectual property in such a way that access can be obtained only by using the proper key.[87] These devices are often referred to by IBM's trademark name "cryptolopes." Creators can protect their works by distributing files in cryptolopes and requiring users to pay for keys that remove the work from the envelope.

5. *CONTRACTS*

Contracts are an underrated pre-infringement control. When properly formed, contracts enable intellectual property owners to restrict the use of their intellectual property in excess of the rights granted under copyright laws.[88] An unresolved debate continues about the extent to which on-line shrinkwrap contracts (sometimes referred to as "clickthrough agreements") are enforceable.[89] If such agreements are enforceable, intellectual property owners may choose to rely heavily on contract law to control the use of their intellectual property.

B. Metering

This section describes technologies and methods that intellectual property owners can use to ensure payment prior to or at the time of a consumer's use of the intellectual property.

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86. "'Now, people say to themselves "Hey, let me take this for free," but with [Maximized Software's SiteShield], they'd have to decide to be trespassers.... People would have to put effort into stealing the images, and they'd know they were violating the copyright.'" Ross, *supra* note 15, at 139 (quoting Kenneth Spreitzer, president of Maximized Software).

87. *See* <http://www.cryptolope.ibm.com/wiacc.htm>; *See also* Digital Delivery's TitleBuilder <http://www.digitaldelivery.com/tbpage.html>; Portland Sotware's ZipLock <http://www.portsoft.com/ziplock.html>.

88. In some circumstances the enforcement of the contract will be limited because the contract provisions are preempted by copyright law. *See* Vault Corp. v. Quaid Software Ltd., 847 F.2d 255, 268-70 (5th Cir. 1988). *See generally* I. Trotter Hardy, *Contracts, Copyright and Preemption in a Digital World*, 1 RICH. J.L. & TECH. 2 (1995) <http://www.urich.edu/~jolt/v1i1/hardy.html>; *See also*, O'Rourke, *supra*, note 56.

89. *Cf.* ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996), *available at* <http://www.kentlaw.edu/7circuit/1996/jun/96-1139.htm> (holding that a shrinkwrap license, the functional equivalent of a "clickthrough" license, could constitute a properly formed contract); Hill v. Gateway 2000, Inc., 105 F.3d 1147 (7th Cir. 1997) (following ProCD); U.C.C. *proposed* Article 2B (Mar. 21, 1997 draft) <http://www.lawlib.uh.edu/ucc2b/> (making it easier for licensors to form shrinkwrap agreements with end users).

1. ACCESS CODES

Many of the devices described in the pre-infringement section can be coupled with "access code" devices. These devices permit users "unlock" protective mechanisms embedded in intellectual properties themselves, such as date bombs or functional limitations. This method allows the intellectual property owner to meter usage of the intellectual property, either by unlocking the intellectual property for a one-time license fee or by requiring periodic procurement of access codes.

2. RIGHTS-MANAGEMENT ENVELOPES

As with encryption envelopes, the creator places intellectual property inside special software envelopes. However, under this approach the envelope periodically communicates with a home base to implement the business parameters imposed by the intellectual property owner. For example, Wave Interactive Networks <http://www.winhome.com> provides a system which allows publishers to encrypt a file as a .wxn file, which when activated causes the Wave plug-in to debit the user's account maintained at Wave's website.[90]

3. HARDWARE DEVICES.

Hardware device approaches require the user to acquire and install the requisite hardware device. For example, using a debit card approach, the user purchases a debit card that is pre-loaded with a certain amount of value. After installation, the debit card is debited automatically as the user consumes the intellectual property. In a "superdistribution" approach, the hardware device meters the usage of intellectual property and automatically debits an account maintained at a central base.[91] In this way, even if the recipient has received a copy forwarded from a third party, the hardware device can ensure payment to the intellectual property owner.

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90. *See* InterTrust <http://www.intertrust.com/products/flow.html> (describing the DigiBox envelope, which communicates with a clearinghouse based on business rules encapsulated in the envelope); Gary N. Griswold, *A Method for Protecting Copyright on Networks,* 1994 <http://www.cni.org/docs/ima.ip-workshop/www/Griswold.html> (describing a software envelope which requires periodic confirmation with a home base prior to permitting further access); Stefik, *supra* note 2 (describing protocols to permit the permanent transfer or temporary lending of files while holding the number of files to the number actually paid for).

91. Brad Cox, *Superdistribution,* WIRED, Sept. 1994, at 89, *available at* <http://www.hotwired.com/wired/2.09/departments/idees.fortes/superdis.html>; *see* Infosafe Systems <http://www.infosafe.com/> (offering both a hardware system and a software-only system).

4. *DOWNLOADABLE EXECUTABLES*

Downloadable executables, such as Java applets and ActiveX scripts, are pieces of code which download from the server to the client on a "use and discard" basis. In other words, the executable runs during a particular session but will be flushed from RAM at the end of the session. These executables can be metered out because they need to be downloaded each session.

5. *CENTRALIZED COMPUTING*

Under this approach, all of the executables, other than a user interface on the client side, remain at the server. Therefore, the user's computer must establish contact with the server each time the executable is used, allowing the central computer to meter access. Centralized computing is actually the old "timeshare" model used in the early days of computing, when the client's processing power was so weak that centralizing processing power at the server level was more efficient.

6. *DIGITAL CERTIFICATES*

In the digital signature context, a certification authority issues to a user an electronic file (a "digital certificate") which identifies the user as the owner of a public key. However, digital certificates can be used to certify more information than mere identity. For example, they can be used to identify rights associated with a particular person. In these ways, vendors can use digital certificates to control access to system resources, including intellectual property files, by making files available to users who can provide a digital certificate with specified rights (such access, downloading, use, etc., including time limits). A user would obtain the digital certificate from either the vendor or a third party.

7. *COPYRIGHT CLEARINGHOUSES*

Under this approach, intellectual property owners would vest "clearinghouses" with the ability to license usage of their intellectual property. A user would pay a license fee to such a clearinghouse to obtain rights to the intellectual property. Copyright clearinghouses currently exist for music-related intellectual property,[92] although these are products of statutory compulsory licensing.[93] No similar comprehensive

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92. *See* ASCAP <http://www.ascap.com/ascap.html> and BMI <http://bmi.com/>.

93. 17 U.S.C. §§ 115 (making and distributing phonorecords), 116 (public performances by means of coin-operated phonorecord players ("juke boxes").

mechanisms have developed for other forms of intellectual property,[94] despite some long-standing attempts to do so[95] and the widely recognized benefits of having such a scheme in place. As a result, some technological efforts are being made to include copyright management information in all electronic files so that contact information for procuring copyright permissions will always be available.[96]

8. SALE OF PHYSICAL COPIES

As anachronistic as it may sound, selling physical copies of intellectual property remains a highly effective method of metering the usage of intellectual property. While the electronic distribution of intellectual property has many advantages, numerous advantages to purchasing physical copies of works available on the Internet still remain. First, many people still prefer reading physical copies over reading electronic copies. Second, obtaining a mass-produced physical copy rather than printing out the electronic copy may be beneficial from a cost or quality standpoint. Third, in the case of large electronic files, obtaining a physical copy may be more time-effective or convenient than downloading the electronic copy. Fourth, the consumer may use devices that have been optimized for use with physical copies, providing results that exceed the results available from using the downloaded electronic copy. Therefore, we should expect that certain categories of intellectual property will continue to be demanded in physical versions.

C. Post-Infringement

This section describes technologies and methods that creators can use to identify infringements and thus enhance enforcement of intellectual property rights.

1. AGENTS

Agents are programs that can implement specified commands automatically. Intellectual property owners can used agents to search the public spaces of the Internet to find infringing copies.[97] While agent

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94. The Copyright Clearance Center <http://www.copyright.com/> can grant licenses to reproduce 1.75 million documents—an impressive number, but clearly far short of the overall set of works subject to copyright available in the world.

95. Project Xanadu, an attempt to ensure compensation to creators whenever even small chunks of intellectual property are used, was initiated in 1960. Xanadu FAQ, § 1b, June 29, 1996 <http://www.xanadu.com.au/xanadu/faq.html>.

96. *See Seybold Report on Desktop Publishing*, July 8, 1996 <http://www.media.sbexpos.com/OldHotStories/960702.htm> (describing digital object identifiers and the LicensIt product from NetRights).

97. *See* Stanford Copy Analysis Mechanism (SCAM) <http://www-db.stanford.edu/~shiva/SCAM/scamInfo.html>; *see also* Hyperstamps CyberGumshoe

technology is still being developed and refined, even today creators can perform a relatively powerful set of searches using full-text search engines such as HotBot <http://www.hotbot.com> and Alta Vista <http://www.altavista.digital.com>.

2. *STEGANOGRAPHY*

Steganography, as applied to electronic files, refers to the process of hiding information in files in such a way that the hidden information is not easily detected by the user. Intellectual property owners can use steganography in a number of different ways on the Internet. One approach is to insert into the file a "digital watermark" which can be used to prove that an infringing file was the creation of the intellectual property owner and not the pirate.[98] The owner of the work could also store copyright management information using this technology. Another approach is to encode a unique serial number into each authorized copy of the file, enabling the owner to trace infringing copies to a particular source.[99]

3. *COPYRIGHT LITIGATION*

Copyright litigation is a powerful tool for enforcing intellectual property rights, one that should not be overlooked. While not every infringement will be the subject of litigation, the threat of litigation helps keep large pirate operations in check.[100] Copyright litigation not only helps the intellectual property owner obtain relief for specific acts of infringement, it publicly warns others of the dangers of infringement. Indeed, a number of intellectual property owners have had well-

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Services <http://www.hyperstamps.com/misc/gumshoe.html> (offering a robotic search of the Internet for documents containing serialized document numbers that developers may insert (for a cost) into an HTML page); Intellectual Protocols' Copysight <http://www.ip2.com/copysight.cgi> (offering a service similar to Hyperstamps); *cf.* MarkWatch <http://www.markwatch.com/> (providing an automated monitoring service for trademark usage on the Internet); Alex Alben, *The Death of Copyright in a Digital World: The Reports are Slightly Exaggerated*, ENT. LAW REP., July 1995 (describing "bounty hunter" programs used by intellectual property owners to cut down on infringements; third-party attorneys bringing suits against infringers were allowed to keep any damages won in the actions).

98. *See* Digimarc <http://www.digimarc.com/~digimarc/>; Highwater FBI <http://www.highwaterfbi.com/>; SysCoP <http://syscop.igd.fhg.de/>; Argent, a product created by the Palo Alto startup Dice (reported in Ross, *supra* note 15, at 139). Tests have indicated that digital watermarks are resilient enough to survive most editing and are still discernible after numerous reproductions. Ben Long, *Watermarking Makes Impression on Photos*, MACWEEK, Oct. 21, 1996, at 16, *available at* <http://www.macweek.com/mw_1040/ga_watermark.html>.

99. David Voss, *Stop That Copy*, WIRED, Aug. 1994, at 34, *available at* <http://www.hotwired.com/wired/2.08/departments/electric.word.html>; *see also* Jim Warren, *GovAccess.107*, March 12, 1995 <http://www.eff.org/ftp/Publications/E-journals/GovAccess/govaccess.107> (describing a similar approach).

100. *See* Borsook, *Steal This Article*, *supra* note 41.

publicized successes enforcing their copyrights against on-line infringers.[101]

D. Additional Problems Under Copyright Law Possibly Solvable by Technology

This section discusses some additional complex issues under U.S. copyright law that are not fully addressed by the technologies and methods described in parts VI.A-C, *supra*, but are still addressable by technology. In particular, linking and caching are both techniques used in the normal functioning of the Internet, yet their permissibility under U.S. copyright law is unclear.

When the technologies available for controlling linking and caching are combined with the technologies and methods described in parts VI.A-C, *supra*, the mosaic of the overall set of protection technologies and methods available to intellectual property owners becomes clearer. This clarity will lead to the question, discussed in part VI.E, infra, of whether situations exist the intellectual property owner should have the obligation—if he or she wants to exercise it—to prevent users from infringing before the owner is given the right to claim infringement.

1. LINKING

Hypertext linking is one of the blessings of the Internet, but its application has proven problematic. Most copyright experts generally believe that linking should not lead to copyright liability,[102] because the mechanical operation of the hypertext link does not implicate one of the exclusive rights of copyright owners; a hypertext-linked URL is merely an instruction which is loaded into the user's browser software, and the browser software does all of the work from there. As a result, the server providing the hypertext link never makes a copy or otherwise processes any of the data from the linked site.[103]

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101. *See* Lance Rose, *The Copyright Escalator of Fear*, BOARDWATCH, Nov. 1994 at 92, (describing $500,000 settlement reached in Playboy v. Event Horizons BBS), *available at* <http://www.boardwatch.com/november/LEGALLY.htm>; COMPUTER INDUSTRY LITIG. REP., Jan. 4, 1996 at 21634 (reporting on a $600,000 settlement reached in Sega of America v. The Ghetto); Playboy Enters. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993), *available at* <http://www.jmls.edu/cyber/cases/frena.txt>; Sega v. MAPHIA (N.D. Cal. Dec. 18, 1996) <http://www.bna.com/e-law/cases/sega2.html>; Sega v. Sabella, 1996 U.S. Dist. LEXIS 20470 (N.D. Cal. Dec. 18, 1996).

There have also been well-publicized criminal indictments, including actions against Davey Jones Locker, Rose, *supra* note 15, at 104, and Rusty & Edie's BBS, Michael A. Hobbs, *ACLU Cries Foul in Computer Raid*, THE PLAIN DEALER, Feb. 19, 1993 at 3B.

102. *See, e.g.*, James Evans, *Internet Issue: Use of the Web Raises Copyright Concerns*, L.A. DAILY J., Feb. 9, 1995, at 1.

103. If browsing the Web is an infringement because a copy of the page is made and sent to the user's computer, as proposed by the NII WHITE PAPER, *supra* note 2 at 64-65, then the linking site has arguably committed contributory infringement by substantially

While the plain language of the copyright statute suggests the above conclusion, commentators, to ensure that linking is not copyright infringement, have argued that uploading intellectual property to the Internet grants an "implied license"[104] to link. Alternatively, linking might be considered fair use.

Of course, given the alternative business models discussed earlier, in many cases Internet sites eagerly seek out linking as an entree to generate ancillary values. In fact, a nascent business of providing links has developed.[105] However, if an Internet site does desire to keep others from linking to some or all of its pages, a number of technologies are available to inhibit linking:

- The system operator (the "sysop") can make the page a "dynamic" page by building the page only when the user causes the execution of a program resident on the server. This prevents linking because dynamic pages have no fixed reference point to which to link. This technique, while effective, is also currently somewhat expensive. Alternatively, the low-technology approach is for the sysop to manually change the page's URL periodically, so that any links made to the page will become ineffective.
- If the sysop desires to prevent a specific site from linking to a page, the sysop may code the page in such a way that it refuses browsers who access the site from the forbidden linking site.[106]
- In the case of automatic linking performed by robots and spiders (such as those used by the search engines), the sysop may load information into the header of the page that instructs the robots and spiders not to index the page.
- The page can be password protected, although this practice inhibits the page's free accessibility to people browsing the Internet.

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contributing to the user's infringement (which occurred during the process of browsing). *See* Niva Elkin-Koren, *Copyright Law and Social Dialogue on the Information Superhighway: The Case Against Copyright Liability of Bulletin Board Operators*, 13 CARDOZO ARTS & ENT. L.J. 345, 353-56 (1995), *available at* <http://yu1.yu.edu:80/csl/journals/aelj/articles/13-2/elkin.html>. The assertion that browsing is an actionable infringement has met strong criticism. *See id.* at 354; Samuelson, *supra* note 3, at 137.

104. Although the term "implied license" is frequently bandied about on the Internet, the concept is rather amorphous under copyright law. At its heart, an implied license is an estoppel doctrine, arising because the infringing party detrimentally and justifiably relied on the intellectual property owner's actions.

105. *See* R. Lee Sullivan, *Toll Booths on the Info Highway*, FORBES, March 25, 1996, at 118.

106. *See* Maximized Software's SiteShield <http://www.maximized.com/products/siteshield/> (providing a product that prevents linking from all URLs other than those on the specific website); Kristi Coale, *Intellecast Smartens Up to Banner Bypass*, WIRED NEWS (Mar. 28, 1997) <http://www.wired.com/news/technology/story/2844.html> (describing how Intellicast, a weather site, prevented links to its weather maps which bypassed the associated banner advertisements).

• To address the problem of unattributed graphics being incorporated into pages on a remote system, the graphic may contain a program that automatically causes a notice to appear to users who access it that the graphic is the copyrighted work of the intellectual property owner.[107]

2. *CACHING*

Caching is a loosely used term that generally refers to the process of making an extra copy of a file or set of files for more convenient retrieval. On the Internet, caching of third party files can occur both locally on the user's client computer (either in RAM or on the hard drive) or at the server level (called "proxy caching"). When a user requests a file that has been cached, the browser will deliver the file from the cache rather than retrieving a fresh copy over the Internet.

Although different concepts, similar issues to caching arise with mirroring (establishing an identical copy of an Internet site on a different server), archiving (providing an historical repository for information, such as with newsgroups and mail lists, where the proceedings would otherwise be evanescent), and full-text indexing (the copying of a document for loading into a full text or nearly full-text database which is searchable for key words or concepts).

Caching is an integral part of the Internet's operation, in part because it speeds the user's access to files and in part because it reduces the infrastructure required for operation of the Internet (by reducing the number of files that must be transferred using the infrastructure). Without caching, our already taxed infrastructure would be even more clogged, to the point where it may become unworkable. As a result, a number of serious business plans have been predicated on using caching.[108]

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107. This is one of the features of the Copysight service from Intellectual Protocols <http://www.ip2.com/copysight.cgi>.

108. For example, @home <http://www.home.net> is deploying a network that permits users to use high-speed cable modems for Internet access. So that users will experience cable modem speeds as often as possible, @home will cache (or archive or mirror, depending on the terminology) the entire Internet on regional servers to which users will connect via their cable modems.

The recent start-up Marimba <http://www.marimba.com/> uses caching as a way to make the use of Java programs more robust.

Also, the number of offline browsers is growing. Offline browsers are software that automatically download some or all of an Internet site to the user's computer, allowing the user to browse without having to wait for the delivery of each page. *See, e.g.*, WebEx <http://www.gowebex.com>, WebWhacker <http://www.ffg.com/whacker/index.html>, InContext Flashsite <http://www.incontext.com/products/flashsite/ index.html> and DocuMagix HotCargo Express <http://www.documagix.com/products/hotcargo_express/welcome.html>.

However, caching could cause harm because the copies in the cache are not necessarily the most current and up-to-date copies.[109] For example, users relying on the cached copy may unwittingly use out-of-date material; similarly, harms such as defamation or infringement that existed on the original page may propagate for years until flushed from each cache where they have been replicated.[110] Also, since caching is an infringement under a literal reading of U.S. copyright law, either caching must be the subject of an implied license or fair use defense or it is (at least theoretically) actionable.

Internet sites can deploy a number of technologies to restrict or prevent caching:

- Sysops can make the page a "dynamic" page by building the page only when the user causes the execution of a program resident on the server. As in the case of linking, this solution may be expensive.
- Sysops may place information on the page's header which tells the party trying to cache the page when to replace the copy in the cache with a new copy (this is called an "expiry header"). In the case of a sysop who does not want the page cached at all, the sysop merely sets the expiry date as a date before the date on which the information is loaded. Unfortunately, no technology standards presently exist under which caching entities can read and manage this process automatically, so a sysop's instructions may well be ignored or not processed.
- The page can be password protected, although again this inhibits the page's free accessibility to Internet browsers.

Finally, parties trying to establish caches have an incentive to deploy software that automatically updates the cache every time the cached page changes. While this practice solves many of the problems, it leaves control of the process with the entity doing the caching rather than with the website being cached.

E. Is Technology a Substitute for Copyright Law?

Many on the Internet implicitly believe that the failure of an intellectual property owner to use available technology to prevent infringement controls grants to all comers an implied license to infringe.

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109. *See* Lisa Sanger, *Caching on the Internet*, Spring 1996 <http://seamless.seamless.com/eric/cache.html>; Eric Schlachter, *Cache-22*, INTELL. PROP. MAG. OF THE RECORDER, Summer 1996, at 15, *available at* <http://www.ipmag.com/schlacht.html>.

110. Toys R Us v. Akkaoui, 1996 U.S. Dist. LEXIS 17090 (N.D. Cal. Oct. 29, 1996) (describing injunction granted in favor of a trademark owner against an infringing website requiring the website to notify all publishers of directories or lists to remove reference to the website and to flush all references to the website from their caches).

This attitude is seen most often in the arguments raised against copyright infringement for linking and caching. However, based on all of the possible technological controls available to intellectual property owners as described in this part VI, the "use technology or accept infringement" argument might be expanded to apply to all types of infringement, going far beyond just linking and caching.

In some ways, this argument is unprecedented. No other situation come to mind where a copyright owner's failure to use technological protective controls has the effect of diminishing their rights under copyright law.[111] Why should the Internet create a new paradigm?

On the other hand, the normal functioning of the Internet is predicated on multiple infringements of copyright rights. If we want the Internet to work as it currently operates and as it can operate in the future, we must reduce the chilling effect of the threat of copyright litigation by changing the rules (or interpreting them differently) or placing some burden on intellectual property owners to "opt out" of the system by deploying technology controls.

Given that many intellectual property owners' business models are based on encouraging "infringement" by users, and that many users believe (innocently but mistakenly) that intellectual property found on the Internet is free for the taking, a trend is emerging toward increasing the burden placed on intellectual property owners to adopt technology controls rather than relying on copyright infringement litigation. Interestingly, this trend is incompatible with the efforts of those seeking to increase the scope of the copyright laws.[112]

VII. CONCLUSION

Even though many of this article's specifics will be out-of-date soon after it is published, its general conclusions should have lasting relevancy to the policies of future U.S. copyright law. This article has marshaled evidence to support the following conclusions:

- The creation and dissemination of intellectual property, both on the Internet and more generally, seems highly robust despite all of the threats.
- The economics of the Internet dictate that, in many cases, businesses must find a way to generate revenues without charging users for intellectual property.

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111. A different analysis might apply in regard to trade secret and trademark law. In the case of trade secrets, the owner must use efforts, whether technological or otherwise, to keep the information secret in order to preserve the information's status as a trade secret. In the case of trademarks, the owner must use quality control, whether technological or otherwise, to maintain the trademark.

112. *See, e.g.*, NII WHITE PAPER, *supra*, note 2, at 7-17.

- A wide variety of sustainable business models permit businesses to accomplish that end.
- Users are becoming increasingly unwilling to pay directly for intellectual property.
- The elimination of all infringements is an impossible and possibly undesirable goal.
- A cadre of entrepreneurs and existing companies are introducing a wide variety of technologies that intellectual property owners can use to manage the process of infringements.
- The perception is increasing that intellectual property owners should be required to use the available technological tools rather than relying on the threat of litigation over micro-infringements.

As a practical reality of these conclusions, the real battle between intellectual property owners and Internet users is being waged using the business models and technological tools available to intellectual property owners. Combined with the trends in sociological beliefs about the Internet, the business models and technological tools will evolve over time to make copyright law increasingly less important as a tool for conforming behavior on the Internet.

Concluding that copyright law's unimportance on the Internet suggests that copyright law should be abolished generally would be inaccurate. The fact that the existing copyright laws may have no effect on the way creators and consumers operate on the Internet does not mean that we no longer need these laws. Existing copyright laws are critically important to the world of physical space.[113] This holds true even though the Internet may become the preeminent vehicle for the dissemination of intellectual property.

However, except in the possible case of attribution rights, no new laws designed to increase the rights of intellectual property owners on the Internet are currently needed. Any such legislation would most likely destroy the delicate balance being struck in the marketplace right now. Furthermore, any anomaly in the existing laws is likely to be resolved by technological and business innovation, which is occurring at a dizzying rate.

We live in an energizing information age, where we are beginning to realize many of yesterday's dreams about information exchange on a

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113. At least two important exceptions to this general statement exist. First, the conclusion that loading a copy into RAM is an infringement creates a great deal of uncertainty for browsing. At a minimum, clarifying that browsing is not an actionable infringement would be helpful. Second, although generally a topic outside the scope of this paper, the conclusion reached in some cases that sysops are directly liable for copyright infringements occurring because users upload works subject to copyright onto their system has caused a great deal of consternation. If as a policy matter a consensus exists that sysops should not be liable in this circumstance, statutory clarification would be useful.

global scale. We should facilitate this environment by letting the marketplace reach its own equilibrium. We can do this best by pursuing legislation which regulates only the most extreme behavior, leaving the rest of the spectrum of behavior for marketplace solutions.

ARTICLE

COPYRIGHT PREEMPTION AFTER THE PROCD CASE: A MARKET-BASED APPROACH

MAUREEN A. O'ROURKE†

TABLE OF CONTENTS

I. INTRODUCTION

As information becomes increasingly available in digital form, a little noted yet significant legal change is occurring in the way in which information providers use the law to establish the terms under which they market their products. Electronic information providers, in contrast to their hard-copy counterparts, have continually turned to the private law of contract both to supplement and modify the public law of copyright.[1] While this trend began when most users were relatively large commercial, academic, or governmental enterprises, it accelerated as software providers began to market pre-packaged software to consumers, using the

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† Associate Professor of Law, Boston University School of Law. Thanks to David Dana, I. Trotter Hardy, Keith Hylton, Rob Merges, participants in Digital Content: New Products and New Business Models, a conference at the University of California, Berkeley, Boalt Hall School of Law (1996), my research assistants, Jim Dowd and Aaron Moore, and to the Boston University School of Law Library staff. This paper was presented at the 1997 American Law and Economics Association annual meeting.

1. *See* Copyright Act of 1976, 17 U.S.C. §§ 101-810, 1001-1010 (1994).

infamous "shrinkwrap" as a device to alter the copyright law through private contract.[2] This movement to contract has continued with the proliferation of on-line data. In particular, it has extended to contracting not just to modify copyright rights that would otherwise apply but also to create private copyright protection through contract in instances in which the public law would deny copyright protection altogether.

More specifically, since the Supreme Court's decision in *Feist Publications, Inc. v. Rural Telephone Service Co.*,[3] compilers of facts have faced considerable risk that their compilations will be considered outside the scope of copyright protection because they lack originality.[4] In the absence of certainty that public copyright will protect such data—and thereby allow recoupment of the investment made in gathering and collating it—many providers of electronic databases have attempted to create their own copyright protection through both standard form (i.e., shrinkwrap) and negotiated contracts.[5] By endowing noncopyrightable data with copyright-type protection, these contractual terms governed by

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2. *See* Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239, 1241 & n. 5 (1996) (noting that shrinkwrap licenses had become part of commercial practice by the early 1980s).

3. 499 U.S. 340 (1991) (holding selection, coordination and arrangement of data contained in an alphabetical white pages telephone listing to be insufficiently original to qualify for copyright protection).

4. Note, however, that the *Feist* Court stopped well short of holding that factual compilations are never copyrightable:

> Factual compilations . . . may possess the requisite originality [for copyright protection]. The compilation author typically chooses which facts to include, in what order to place them, and how to arrange the collected data so that they may be used effectively by readers. These choices as to selection and arrangement, so long as they are made independently by the compiler and entail a minimal degree of creativity, are sufficiently original that Congress may protect such compilations through the copyright laws.

Id. at 348. There is an extensive literature discussing *Feist*. For a listing of just some of that literature, see Paolo Cerina, *The Originality Requirement in the Protection of Databases in Europe and the United States*, 24 IIC: INT'L REV. OF INDUS. PROPERTY & COPYRIGHT L. 579, 589 n.71 (1993). Whether the *Feist* decision has in fact made any practical difference as to the copyrightability of such compilations is debatable. Prior to *Feist*, courts based copyright protection for these compilations on the labor that was involved in creating them. Now, they may accord that protection by stretching to find the originality required by *Feist*. For a synopsis of the cases decided after *Feist*, see MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 3.04[B][2], at 3-30 to 3-33 & n.76 (1996) (collecting cases and contending that generally courts have been faithful to *Feist* but also citing a Second Circuit case upholding the copyrightability of the Red Book listing of used cars).

5. *See infra* text accompanying note 18 (describing the contractual restriction involved in the *ProCD* case); *see also* Maureen A. O'Rourke, *Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms*, 45 DUKE L.J. 479, 555 & n.313 (1995) (setting forth relevant terms of LEXIS and WESTLAW subscriber agreements). Note that database providers did use contracts before *Feist;* providers have always included contracts with their electronic products. The need for contracting became more critical after *Feist* since contracts became the mechanism to replace the copyright rights that *Feist* had withdrawn. *Cf. id.* at 487-93 (offering a rationale for the use of contract even in cases in which copyright applies).

state law seem to be preempted since they may function to negate the federal copyright policy of promoting the free flow and use of factual information. To date, academic commentary has largely treated the contract formation and copyright preemption issues as discrete inquiries, focusing separately on the issues of the enforceability of shrinkwrap licenses[6] and whether providers of copyrightable information may use contract law to supplement or modify the rights which copyright grants.[7] It has had even less to say about the relationship between contract formation and copyright preemption where private parties are attempting to create their own copyright law by contract to protect information which Congress does not protect under the Copyright Act ("Act").[8]

This absence of academic commentary has become increasingly glaring as courts have begun to address these questions. In particular, *ProCD, Inc. v. Zeidenberg*[9] demonstrates not only the depth of the division of opinion on these issues, but also the compelling policy arguments on each side. In *ProCD*, the district court held that the shrinkwrap is not a valid contract and, even if it were, its provisions which effectively confer quasi-copyright rights on noncopyrightable data are preempted by the Copyright Act.[10] The Seventh Circuit reversed on both counts, holding that a shrinkwrap license may be enforceable and parties may, in certain circumstances, contract to treat noncopyrightable data as if it were copyrighted without running afoul of the Act.[11]

Because this case is the first of its kind and yet addresses the everyday practices of the database industry, it merits close attention. This article discusses the case in detail, analyzing the contentions of both courts. It then attempts to explain how the different decisions of the two

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6. *See* Lemley, *supra* note 2, at n.107 (collecting authorities on the enforceability of shrinkwrap licenses). Although the provisions of negotiated licenses are often similar to those contained in shrinkwraps, this article, like the *ProCD* case, addresses only shrinkwrap licenses.

7. This has begun to change as authors are beginning to discuss the relevance of contract bargaining in the preemption inquiry. This commentary, however, is still at a formative stage. *See, e.g.*, I. Trotter Hardy, *Contracts, Copyright, and Preemption in a Digital World*, 1 RICH. J.L. & TECH. 2 (1995) <http://www.urich.edu/~jolt/v1i1/hardy.html>; Lemley, *supra* note 2; O'Rourke, *supra* note 5, at 479 & n.75 (arguing against preemption, particularly where contracts are negotiated, as well as listing other authorities on the subject); David A. Rice, *Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543, 610 (1992) (arguing that the bargaining process is irrelevant to the preemption inquiry).

8. *But see* O'Rourke, *supra* note 5, at 555-57 (arguing that the preemption analysis proposed therein to apply to copyrighted works could be extended to deal with noncopyrightable works).

9. 86 F.3d 1447 (7th Cir. 1996), *rev'g* 908 F. Supp. 640 (W.D. Wis. 1996) [hereinafter *ProCD II*].

10. *See* ProCD, Inc., v. Zeidenberg, 908 F. Supp. 640, 659 (W.D. Wis. 1996) [hereinafter *ProCD I*].

11. *See ProCD II*, 86 F.3d at 1449, 1454-55.

courts reflect different understandings of the nature of copyright law. It argues that the Seventh Circuit's decision reflects a flexible freedom of contract approach to preemption which is fully appropriate given the relative novelty of the technology and congressional silence regarding preemption with respect to such technology. The article then discusses in more detail two approaches to preemption—the Easterbrook model which the Seventh Circuit used in the *ProCD* case and the default rules model which draws on the academic literature regarding default rules. It argues that a default rules approach may be preferable to the Easterbrook model but would require some legislative action to implement. In the interim, the Easterbrook model forms a reasonable basis from which to assess claims that provisions restricting copyright rights should be preempted.

II. THE *PROCD* CASE—OF SHRINKWRAP LICENSES AND PRIVATE COPYRIGHT LAW

In the *ProCD* case, ProCD marketed a CD-ROM called Select Phone, which contained a version of its database containing listings and information from over 3,000 telephone directories, along with search and retrieval software that facilitated the manipulation of that data.[12] ProCD marketed its product to both commercial and consumer[13] users, charging the general public a much lower price than it charged the trade.[14] Defendant Zeidenberg purchased the consumer version of the product in 1994 and later purchased two additional packages containing updated versions of the database.[15] The consumer version contained a shrinkwrap license agreement[16] that was referenced on the outside of the product packaging, encoded on the CD-ROM, reproduced in hard copy in the manual accompanying the product and that appeared on the screen whenever the user ran the software.[17] The license agreement contained a

12. *See id.* at 1449.

13. Of course, both commercial and non-commercial users of the product are literally "consumers." In this article, the term "consumers" refers to private, non-commercial users, following the convention adopted by the 7th Circuit in the *ProCD* case.

14. *See ProCD II*, 86 F.3d at 1449 (noting also that ProCD adopted an intermediate strategy of making its database available to the general public on America Online).

15. *Id.* at 1450.

16. "Shrinkwrap licenses take many forms. The prototypical example is a single piece of paper . . . wrapped in transparent plastic . . . Other examples of the genre include licenses printed on the outside of boxes . . . licenses simply included somewhere within the box . . . or licenses shrinkwrapped with the owner's manual accompanying the software." Lemley, *supra* note 2, at 1241. In recent years, vendors have moved to "electronic shrinkwraps"—licenses that appear on the screen and which the user allegedly accepts by continuing to use the software. Thus, at this time, "shrinkwrap" might be more accurately defined as any standard form-contract included with mass-marketed software, regardless of the manner in which the purchaser is to be made aware of the license's existence.

17. *See ProCD II*, 86 F.3d at 1450.

term limiting the use of both the copyrightable software and noncopyrightable listings to non-commercial purposes.[18] Zeidenberg violated the use restriction by making the noncopyrightable listings available from his corporation (Silken Mountain Web Services, Inc.), for a fee, via the Internet.[19] ProCD sued Zeidenberg and Silken Mountain Web Services in Wisconsin federal district court, setting forth a number of causes of action, including breach of contract.[20] The court (and subsequently, the court of appeals as well) analyzed the breach of contract claim as involving two interrelated inquiries: (i) whether the shrinkwrap license was enforceable as a matter of contract law; and (ii) if so, whether it was rendered unenforceable as preempted by the Copyright Act.

A. The Enforceability of the Shrinkwrap License Under Contract Law

Conceptually, the issue of the enforceability of the shrinkwrap license is divided into two questions: (i) whether, as a matter of contract formation, a valid contract may be formed in the manner employed by ProCD; and (ii) assuming such a contract may be formed, whether and what terms of that contract should be enforced. However, the courts did not bifurcate the issue in this manner. Instead, both courts presented one inquiry into enforceability, arriving at opposite conclusions. An examination of the judicial reasoning of both courts suggests that the ultimate holding of the court of appeals is that contracts may be formed in the manner employed by ProCD but both the formation process and particular terms will remain subject to judicial scrutiny. An analysis of both courts' reasoning demonstrates that this holding is both consistent with the relevant law and desirable from a policy perspective.

1. *THE DIFFERING VIEWS OF THE DISTRICT COURT AND COURT OF APPEALS*

Both the district court and court of appeals analyzed the enforceability of the shrinkwrap under common-law contract and Wisconsin's implementation of Article 2 ("Sales") of the Uniform Commercial Code ("UCC" or "Code"). According to the district court,

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18. *Id.* at 1449. Note that the program was protected by copyright and that the database was assumed not to be protected by copyright, even though "it is more complex, contains more information . . . is organized differently, and therefore is more original than the single alphabetical directory at issue in Feist." *Id.*

19. *Id.* at 1450.

20. *See ProCD I*, 908 F.Supp. at 644 ("Plaintiff contends that defendants' actions constitute copyright infringement, breach of the express terms of the parties' software license agreement, a violation of Wisconsin's Computer Crimes Act, misappropriation and unfair competition.").

Zeidenberg accepted the offer—and therefore formed a contract with ProCD—at the time of sale, rather than when he began to use the product after having the opportunity to become aware of the specific contractual terms desired by ProCD.[21] The district court contended that UCC provisions stating that acceptance does not occur until the buyer has a reasonable opportunity to inspect the product did not apply to the case at hand, since inspection is intended to uncover product defects, not additional written contractual terms that the seller desires.[22]

The district court, drawing on two of the three prior decisions relating to shrinkwraps,[23] analyzed the facts under sections 2-207 and 2-209 of the UCC. Section 2-207 is the "battle of the forms" provision. It essentially modifies the common-law mirror-image rule by recognizing the commercial reality that often the competing forms of the buyer and seller contain conflicting or additional terms yet the parties still intend to contract.[24] Section 2-207 contains detailed instructions on how to treat

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21. *ProCD I*, 908 F. Supp. at 652 ("Defendants accepted plaintiff's offer to sell Select Phone™ in a reasonable manner at the moment they purchased the product by exchanging money for the program . . . Paying for a software program is a reasonable manner of accepting the offer implicit in the program's display on a store shelf.").

22. *Id.* ("Section 2-602 of the Wisconsin Code grants buyers receiving a tender or delivery of goods an opportunity to inspect the goods before accepting. It guarantees that buyers will not be saddled with goods that have been damaged or are otherwise unsatisfactory upon arrival but it does not create a right to inspect additional written contractual terms.").

23. The three decisions addressing issues involving shrinkwraps are: *Step-Saver Data Systems, Inc. v. Wyse Tech.*, 939 F.2d 91 (3d Cir. 1991) (holding that a standard form disclaimer of warranties and limitation of remedies clauses contained on a shrinkwrap license was unenforceable under U.C.C. § 2-207 as a material alteration); *Vault Corp. v. Quaid Software Ltd.*, 847 F.2d 255 (5th Cir. 1988) (holding that a decompilation provision in a shrinkwrap license sanctioned by a state statute was constitutionally preempted under § 117 of the Copyright Act.); and *Arizona Retail Sys., Inc. v. Software Link, Inc.*, 831 F.Supp. 759 (D. Ariz. 1993) (holding shrinkwrap terms enforceable in a transaction in which the licensee opened the package with notice that such action would result in an enforceable contract, but the contract was not enforceable in subsequent transactions in which such notice was lacking). The district court placed primary reliance on the *Step-Saver* and *Arizona Retail* cases, *see ProCD I*, 908 F. Supp. at 652-55, while the court of appeals dismissed all three as irrelevant to the facts of *ProCD*.

> As [the titles of all three cases] suggest, these are not consumer transactions. Step-Saver is a battle-of-the-forms case, in which the parties exchange incompatible forms and a court must decide which prevails. Our case has only one form; U.C.C. § 2-207 is irrelevant. Vault holds that Louisiana's special shrinkwrap-license statute is preempted by federal law, a question to which we return. And Arizona Retail Systems did not reach the question, because the court found that the buyer knew the terms of the license before purchasing the software.

ProCD II, 86 F.3d at 1452 (citations omitted).

24. *See* 2 WILLIAM D. HAWKLAND, UNIFORM COMMERCIAL CODE SERIES § 2-207:02 (1992) (recognizing that "[s]ection 2-207(1) repudiates the common law principle, sometimes known as the 'mirror image rule,' that a response to an offer constitutes an acceptance only if it 'complies exactly with the requirements of the offer, omitting nothing from the promise or performance requested.'"); *see also* Douglas G. Baird & Robert Weisberg, *Rules, Standards, and the Battle of the Forms: A Reassessment of § 2-207*, 68 VA. L. REV. 1217, 1220-23 (1982) (recognizing the conventional wisdom that "[t]he drafters of 2-207 had the

additional terms appearing in the competing forms. In contracts between merchants,[25] the additional terms become part of the contract unless they materially alter it, the offer expressly limits acceptance to its terms, or notification of objection to the additional terms is given in a timely manner.[26] However, the Code does not clearly address what to do with additional terms when one party is a non-merchant like Zeidenberg. The literal text of the Code seems to indicate that a contract may be formed with the additional terms to be separately accepted or rejected.[27] According to the court:

> Keeping in mind the legislative goal behind § 2-207, it is improbable to think that the drafters wanted consumers to be held to additional proposed terms in situations in which merchants were given protection . . . [A]pplying § 2-207 to the consumer transaction in this case . . . leads to the conclusion that the user agreement was not binding on defendants because they never agreed to it expressly and it never became part of the agreement between the parties.[28]

Hence, one can infer that the court considered the contractual use restriction a material alteration to the contract formed at the point of sale.[29]

The court also considered whether the shrinkwrap might be viewed as an enforceable modification to the contract formed at the point of sale. Under § 2-209, while modifications to a contract do not require

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salutary, indeed the unexceptional purpose of overcoming the rigidity of one of the oldest and most mechanical common-law rules of offer and acceptance—the mirror-image rule," but arguing that the principles underlying the rule remain fundamentally sound); Daniel A. Levin & Ellen Blumberg Rubert, *Beyond U.C.C. Section 2-207: Should Professor Murray's Proposed Revision be Adopted?*, 11 J.L. & COM. 175, 175-84 (1992) (examining the resolution of the mirror-image rule and battle of the forms/last shot problems both before and after the adoption of § 2-207).

25. Different parts of Article 2 draw on different facets of the definition of merchant set forth in § 2-104(1).

"For purposes of [§ 2-207] almost every person in business would . . . be deemed to be a 'merchant' under the language [of § 2-104(1) stating that a merchant means a person] 'who . . . by his occupation holds himself out as having knowledge or skill peculiar to the practices . . . involved in the transaction . . .' since the practices involved in the transaction are non-specialized business practices . . . ." U.C.C. § 2-104 cmt. 1 (1996).

26. *See* U.C.C. § 2-207(2) (1996).

27. Under § 2-207(1), an acceptance may still be effective even though it contains terms additional to those offered. *See* U.C.C. § 2-207(1) (1996). "The additional terms are to be construed as proposals for addition to the contract." *Id.* at § 2-207(2) (1996).

28. *ProCD I*, 908 F. Supp. at 655.

29. The court had earlier stated that it was improbable that consumers would be held to terms from which merchants would be given protection. *See id.* Therefore, one could infer that the court meant that even a merchant would be given protection from the use restriction under § 2-207(2) had such merchant stood in the shoes of Zeidenberg. Under § 2-207(2), the term would not become part of the contract if Zeidenberg objected to it, the offer limited acceptance to its terms, or the term materially altered the contract. Since there is no evidence that Zeidenberg objected to the use restriction or that the offer limited acceptance to its terms, one can infer that the court meant that the use restriction was a material alteration. This would be consistent with the holding in *Step-Saver*. *See supra* note 23.

consideration to be binding, the parties still must agree to the modification.[30] The court stated:

> Section 2-209 requires the express assent of a party to any proposed contractual modifications. Assent cannot be inferred from a party's conduct in continuing with an agreement. In this case, defendants did not assent expressly to the terms of the user agreement. Their continued use of the Select Phone™ product has no bearing on whether they accepted the user agreement. Under these circumstances, § 2-209 does not warrant the incorporation of the user agreement into the parties' initial sales agreement.[31]

The district court stated in its holding:

> I conclude that because defendants did not have the opportunity to bargain or to object to the proposed user agreement or even review it before purchase and they did not assent to the terms explicitly after they learned of them, they are not bound by the user agreement.[32]

On appeal, the Seventh Circuit, in an opinion authored by Judge Easterbrook, informed its statutory analysis with reference to economic considerations and practical realities. From a statutory perspective, the court of appeals simply disagreed with the district court's reliance on § 2-207 and its reading of the UCC as not permitting "money now, terms later" contracts.[33] The court stated that § 2-207 does not apply in cases involving only one form and went on to note that § 2-204(1) of the Code permits contracts to be formed in any manner including conduct.[34] It stated that ProCD as "master of the offer" was free both to "invite acceptance by conduct, and [to] propose limitations on the kind of conduct that constitutes acceptance."[35] In the case at issue, ProCD offered a contract to be accepted by the buyer's use of the software after the buyer had an opportunity to review the offered contractual terms.[36] Zeidenberg's continued use of the software after becoming aware of the terms constituted his acceptance.[37]

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30. U.C.C. § 2-209(1) (1996) ("An agreement modifying a contract within this article needs no consideration to be binding."); *see infra* notes 70-83 and accompanying text (discussing § 2-209).

31. *ProCD I*, 908 F. Supp. at 655 (citations omitted).

32. *Id.*

33. *ProCD II*, 86 F.3d at 1451-52 (enumerating a number of common "pay now, get terms later" transactions at odds with the district court's contention, which the court of appeals characterized as follows: "According to the district court, the U.C.C. does not countenance the sequence of money now terms later.").

34. *See id.* at 1452; *see also* U.C.C. § 2-204(1) (1996) ("A contract for sale of goods may be made in any manner sufficient to show agreement, including conduct by both parties which recognizes the existence of such a contract.").

35. *ProCD II*, 86 F.3d at 1452.

36. *See id.*

37. *Id.*

Unlike the district court, the court of appeals drew support for its holding by analogy to § 2-606, which defines "acceptance of goods."[38] Under § 2-606(1)(b), a buyer may be deemed to have accepted where it fails to make an effective rejection, but such acceptance does not occur until the buyer has had a "reasonable opportunity to inspect [the goods]."[39] While § 2-606 deals with acceptance of goods and does not expressly mention acceptance of an offer, the court saw § 2-606 as further evidence of the UCC's flexibility in allowing the parties to arrange their affairs in such a manner "that the buyer has a chance to make a final decision after a detailed review."[40]

Unlike the district court, the court of appeals discussed at length the policy implications of holding boilerplate contracts unenforceable. Its focus thus seemed to be more systemic than that of the district court, as it was concerned with the impact of its decision not merely on the immediate parties, but on all similarly situated parties.[41] For example, it stressed that transaction costs may be saved through the use of standard forms[42] and that, in "real life," buyers often pay for a good or service before the detailed terms are even communicated to them.[43] In the consumer context, it emphasized the everyday transaction of purchasing boxed goods.[44] Warranty disclaimers that states routinely enforce are often inside such boxes.[45] Likewise, when a consumer purchases drugs

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38. *Id.*

39. U.C.C. § 2-606(1)(a) (1996).

40. *ProCD II*, 86 F.3d at 1453; *see also infra* notes 61-63, and accompanying text (reviewing Code goals, including flexibility).

41. *See id.* ("[A]djusting terms in buyers' favor might help Matthew Zeidenberg today (he already has the software) but would lead to a response, such as a higher price, that might make consumers as a whole worse off.").

42. "Standardization of agreements serves many of the same functions as standardization of goods and services; both are essential to a system of mass production and distribution. Scarce and costly time and skill can be devoted to a class of transactions rather than the details of individual transactions." *Id.* at 1451 (citing RESTATEMENT 2D OF CONTRACTS § 211 cmt. a (1981)).

43. *Id.* ("Transactions in which the exchange of money precedes the communication of detailed terms are common"; citing the purchase of insurance, airline tickets, and concert seats as examples of such arrangements).

44. *See id.*

45. *Id.* ("[S]o far as we are aware no state disregards warranties furnished with consumer products."); *see also* Earl Brace & Sons v. Ciba-Geigy Corp., 708 F.Supp. 708, 710-11 (W.D. Pa. 1989) (finding that a warranty disclaimer appearing not on the outside of the box but in bold type on a booklet attached to containers of herbicide within the box, did not fail of its essential purpose, nor work in an unconscionable fashion, and therefore was enforceable under Pennsylvania commercial law). *But see* JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE § 12-5, 427 & n. 22 (4th ed. 1995) (noting that warranty disclaimers which the buyer finds only after the delivery of the goods are disfavored and should be construed as modifications to the contract and citing *Gaha v. Taylor-Johnson Dodge, Inc.*, 53 Or. App. 471, 632 P.2d 483 (1981) (holding a disclaimer of warranty appearing in a booklet delivered two weeks after purchase to be ineffective)). Since its decision in *ProCD*, the Seventh Circuit has upheld an arbitration clause on a set of terms enclosed in a box, citing *ProCD* for support. Hill v. Gateway 2000, Inc., 105 F.3d

over the counter, the consumer is charged with reading the accompanying package insert.[46]

The court of appeals also considered the nature of the software industry, acknowledging that the shrinkwrap is routinely used. The court suggested the conclusion that while academia has doubts about its enforceability, business does not.[47] Moreover, the court emphasized the mischief that the district court's decision could work in stifling the burgeoning software distribution mechanisms of mail-order and on-line sales.[48] Particularly in on-line transactions, the customer never sees a box but instead receives an electronic file which contains the relevant terms and conditions.[49] As the court stated in an intuitive economic analysis:

> On Zeidenberg's arguments, these unboxed sales are unfettered by terms—so the seller has made a broad warranty and must pay consequential damages for any shortfalls in performance, two "promises" that if taken seriously would drive prices through the ceiling or return transactions to the horse-and-buggy age.[50]

The court of appeals also argued for contract enforceability from a more sophisticated economic approach. As it noted, ProCD engaged in price discrimination, charging consumer buyers less than commercial users.[51] If ProCD could not engage in such price discrimination—i.e., it had to charge all users the same amount—it would eventually have to raise the price to both consumers and commercial users.[52] Fewer consumers would be able to purchase the product, while commercial users might have to pay more to make up the revenue shortfall caused by lost consumer sales.[53]

For price discrimination to succeed, ProCD had to find a way to prevent consumers from defeating its strategy by reselling the product to commercial users for less than what ProCD would charge such users. In the words of the court of appeals, "[t]o make price discrimination

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1147, 1148-49 (7th Cir. 1997).

46. *See ProCD II*, 86 F.3d at 1451.

47. *Id.* at 1452.

48. *Id.* at 1451-52.

49. *See id.*

50. *Id.*

51. *See id.* at 1449 ("ProCD decided to engage in price discrimination, selling its database to the general public for personal use at a low price (approximately $150 for the set of five discs) while selling information to the trade for a higher price.").

52. *Id.* ("If ProCD had to recover all of its costs and make a profit by charging a single price—that is, if it could not charge more to commercial users than to the general public—it would have to raise the price substantially over $150.").

53. *Id.* If because of high elasticity of demand in the consumer segment of the market the only way to make a profit turned out to be a price attractive to commercial users alone, then all consumers would lose out—and so would the commercial clients, who would have to pay more for the listings because ProCD could not obtain any contribution toward costs from the consumer market.

work . . . the seller must be able to control arbitrage."[54] This control is particularly difficult for software vendors as they cannot easily distinguish between consumer and commercial purchasers in a garden-variety retail transaction in which a customer walks into the store, picks the software up from the shelf, and purchases it.[55] ProCD could have chosen to offer different products in an effort to force users to sort themselves into consumer and commercial segments. Instead, they marketed one product, using the license to limit use of the program to non-commercial purposes.[56] To hold the license unenforceable would essentially force ProCD either to raise its price or to change the way it packaged its product.

Based on these economic considerations, the court of appeals held the shrinkwrap to be an enforceable contract. However, it stopped short of a blanket statement that all terms of all shrinkwraps would be enforceable, stating that "[s]hrinkwrap licenses are enforceable unless their terms are objectionable on grounds applicable to contracts in general (for example, if they violate a rule of positive law, or if they are unconscionable)."[57]

2. *AN EVALUATION OF THE COMPETING VIEWS*

The court of appeals' decision upholding the enforceability of shrinkwrap licenses is likely to be considered both remarkable and disturbing by academia. The weight of academic commentary prior to *ProCD* argued primarily for a refusal to enforce such agreements or at least parts thereof for diverse reasons.[58] Judicial authority in this area has been quite scant and has yielded no clear cut answer. [59] However, Professor Lemley characterizes the precedent that does exist as reflecting a "general refusal of . . . United States courts to enforce shrinkwrap licenses" which brings U.S. law into harmony with that of the many other countries that do not enforce shrinkwrap licenses or do so only with

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54. *ProCD II*, 86 F.3d at 1450.

55. *Id.* ("Anyone can walk into a retail store and buy a box. Consumers do not wear tags saying 'commercial user' or 'consumer user.'"); *see also* O'Rourke, *supra* note 5, at 499 (contending that one reason software providers include standard form contracts with provisions against decompilation is to account for their inability to distinguish among types of users).

56. *ProCD II*, 86 F.3d at 1450 ("Instead of tinkering with the product and letting users sort themselves—for example, furnishing current data at a high price that would be attractive only to commercial customers, and two-year-old data at a low price—ProCD turned to the institution of contract.").

57. *Id.* at 1449.

58. *See, e.g.*, Lemley, *supra* note 2, at 1263-64 n.107 (collecting authorities discussing the issue).

59. *See supra* note 23 (describing the cases addressing shrinkwrap licensing prior to ProCD).

restrictions.[60] The court of appeals' decision then seems truly revolutionary, flying in the face of academic thought and, to a lesser extent, the views of other courts.

However, as a matter of statutory interpretation, the court's decision is eminently supportable. While it is tempting to avoid the federal copyright preemption issue by holding either the shrinkwrap itself (or certain of its terms) unenforceable, there is nothing in the UCC which precludes its enforcement. More importantly, both the UCC's policy and provisions provide ample support to argue both for allowing contracts to be formed in the manner used by ProCD and for enforcing the provisions of such contracts.

Any UCC analysis of both contract formation and enforcement should be anchored in a firm understanding of the Code's overall statutory goals, as well as those contained specifically in Article 2. The Code's overall philosophy is reflected in § 1-102(2) which states:

> Underlying purposes and policies of this Act are
>
> (a) to simplify, clarify and modernize the law governing commercial transactions;
>
> (b) to permit the continued expansion of commercial practices through custom, usage and agreement of the parties;
>
> (c) to make uniform the law among the various jurisdictions.[61]

In the context of Article 2, the UCC's drafters sought to decrease contracting costs by adopting legal rules that recognized commercial reality and de-emphasized the formalities of common-law contract.[62] Further, Article 2 is based on the belief that law can be and in fact is revealed by what parties actually do.[63] Thus, Article 2 often looks to commercial practice in defining the legal rule.[64] Moreover, the UCC, in

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60. Lemley, *supra* note 2, at 1253.

61. U.C.C. § 1-102(2) (1996).

62. *See, e.g., supra* note 24 and accompanying text (describing § 2-207 which rejected the common law mirror-image rule in order to accommodate commercial reality).

63. The Code—particularly Article 2—is often described as being based on Karl Llewellyn's legal realist philosophy. *See* WILLIAM TWINING, KARL LLEWELLYN AND THE REALIST MOVEMENT 302-40 (1973) (discussing the jurisprudence of the U.C.C. and the role Karl Llewellyn and his legal realist philosophy played in developing it); Richard Danzig, *A Comment on the Jurisprudence of the Uniform Commercial Code*, 27 STAN L: REV. 621 (1975). *But see* William A. Schnader, *A Short History of the Preparation and Enactment of the Uniform Commercial Code*, 72 U. MIAMI L. REV. 1, 5 (1967) ("I can also state that what Professor Llewellyn believed should be the articles of an ideal commercial code were not the articles as they emerged from the crucible of debate when the Code was promulgated."). In Llewellyn's own words, "I am ashamed of [the U.C.C.] in some ways; there are so many pieces that I could make a little better; there are so many beautiful ideas I tried to get in that would have been good for the law, but I was voted down." Karl Llewellyn, *Why a Commercial Code?*, 22 TENN. L. REV. 779, 784 (1953). However, out of all of the Articles in the Code, Article 2 probably best reflects Llewellyn's philosophy. *See* Peter A. Alces, *The Revision of Article 2 of the Uniform Commercial Code*, 35 WM. & MARY L. REV. 1299, 1299 (1994) ("Quite simply, Article 2 of the U.C.C., 'Sales,' is, more than any other article of the Code, Llewellyn's Llaw.") (citation omitted).

64. *See* Mark D. Rosen, *What Has Happened to the Common Law?—Recent American*

implementing its drafters' belief in freedom of contract, seeks to decrease costs by employing legal rules that give effect to the parties' agreement.[65] Thus, the statutory orientation of Article 2 is one in which the parties are given maximum flexibility to draft their own agreement which a court should generally enforce.[66]

Any particular dispute must be interpreted under the literal wording of the Code placed against this perceived intent. In the case of the shrinkwrap license, such an interpretation argues for its enforceability.[67] Simply put, holding the shrinkwrap enforceable based on the economic considerations which Judge Easterbrook identified illustrates the very flexibility in accommodating commercial reality that the drafters designed the Code to achieve.

As a matter of statutory interpretation, the court of appeals has the better argument in asserting that § 2-207 is not the governing provision.

Codifications, and their Impact on Judicial Practice and the Law's Subsequent Development, 1994 WIS. L. REV. 1119, 1170 (noting that the U.C.C. "bid[s] the legalists to make context-specific inquiries to infer the rules implicit in each situation.") (citation omitted). For example, the Code modifies the parol evidence rule by permitting evidence of usage of trade, course of dealing and course of performance to explain or supplement even a fully integrated agreement. U.C.C. § 2-202 (1996). Thus, an agreement is interpreted against the backdrop of shared assumptions inherent in a particular industry. *See* ALAN SCHWARTZ & ROBERT E. SCOTT, COMMERCIAL TRANSACTIONS—PRINCIPLES AND POLICIES 63-64 (2d ed. 1991) (noting that the result of including trade usage as a source of contractual meaning may be to decrease negotiation costs because parties are not required to memorialize common practices).

65. *See* Rosen, *supra* note 64, at 1222-23 (contending that Article 2 is based on an "Agreement" theory aimed toward ensuring enforcement of the parties' agreement); *see also* U.C.C. § 1-102 cmt. 2 (1996) ("Subsection (3) [of § 1-102] states affirmatively at the outset that freedom of contract is a principle of the Code . . . .").

66. The U.C.C. does contain some mandatory rules as well as vague admonitions that serve to limit the parties' flexibility. See SCHWARTZ & Scott, *supra* note 64, at 4 (noting that Code rules can be classified as belonging to one or more of 4 categories—directives, risk allocations, enabling provisions, and vague admonitions). For example, § 2-201 is a mandatory rule providing that a contract for the sale of goods of $500 or more must be evidenced by a writing to be enforceable. U.C.C. § 2-201 (1996). *See also* U.C.C. § 1-102(3) (1996) ("The effect of provisions of this Act may be varied by agreement, except as otherwise provided in this Act and except that the obligations of good faith, diligence, reasonableness and care prescribed by this Act may not be disclaimed by agreement . . . ."); U.C.C. § 2-302 (1996) (granting courts broad discretion to reform unconscionable contracts or clauses).

67. Today's U.C.C. does not explicitly address shrinkwrap licensing. However, the National Conference of Commissioners on Uniform State Laws, and the American Law Institute are currently drafting a new Article—Article 2B—for addition to the Code. Proposed Article 2B is still under discussion; it is not currently a part of the U.C.C., nor has it been adopted by any state. Article 2B would cover licensing transactions such as that entered into by ProCD and Zeidenberg. At least one of its drafts contains a provision that would sanction shrinkwraps like ProCD's. Both courts addressed this provision. The district court characterized it as "evidence that the American Law Institute views current law as insufficient to guarantee the enforcement of standard form contracts such as shrinkwrap licenses." *ProCD I*, 908 F. Supp. at 655. However, the Seventh Circuit argued that the district court's conclusion regarding the proposal "depends on a faulty premise. To propose a change in a law's text is not necessarily to propose a change in the law's effect. New words may be designed to fortify the current rule with a more precise text that curtails uncertainty." *ProCD II*, 86 F.3d at 1452.

Section 2-207 governs narrow situations in which the parties have either exchanged conflicting forms or discussed the transaction with one sending a confirmation adding terms which had not previously been considered.[68] The shrinkwrap transaction does not fit this paradigm. The very point that some critics argue should render the shrinkwrap unenforceable—its unbargained-for nature[69]—serves to remove it from the ambit of § 2-207 since § 2-207 contemplates some type of communication between the parties.

Further, even if one adopts the district court's view that the contract is formed at the time of payment, the conclusion that the shrinkwrap is an unenforceable modification under § 2-209 is not compelled. The district court went beyond the statutory wording in asserting that a modification requires the express assent of the party whom it is to bind and cannot be inferred by conduct.[70] Section 2-209 requires an "agreement" for an effective modification.[71] Under § 1-201(3), an agreement is "the bargain of the parties in fact as found in their language or by implication from other circumstances including course of dealing or usage of trade or course of performance."[72] According to § 1-201's Official Comments, "As used in this Act the word ['agreement'] is intended to include full recognition of usage of trade, course of dealing,

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68. U.C.C. § 2-207 cmt. 1 (1996).

> This section is intended to deal with two typical situations. The one is the written confirmation, where an agreement has been reached either orally or by informal correspondence between the parties and is followed by one or both of the parties sending formal memoranda embodying the terms so far as agreed upon and adding terms not discussed. The other situation is offer and acceptance, in which a wire or letter expressed and intended as an acceptance . . . adds further minor suggestions or proposals.

Id.

69. For articles discussing the pro's and con's of shrinkwraps, see Page M. Kaufman, *The Enforceability of State Shrink-Wrap License Statutes in Light of* Vault Corp. v. Quaid Software Ltd., 74 CORNELL L. REV. 222 (1988); see also David A. Einhorn, *Box-Top Licenses and the Battle-of-the-Forms*, 5 SOFTWARE L.J., 401, 406-12 (1992) (discussing the validity of shrinkwrap contracts in light of U.C.C. Article 2); Karen Puhala, Note, *The Protection of Computer Software Through Shrink-Wrap Agreements*, 42 WASH. & LEE L. REV. 1347 (1985) (identifying issues associated with shrinkwraps, including the likely inability of vendors unilaterally to impose terms on a user after completion of the sale but contending that shrinkwraps are enforceable when the user is able to read the license prior to purchase); Michael G. Ryan, Note, *Offers Users Can't Refuse: Shrink-wrap License Agreements as Enforceable Adhesion Contracts*, 10 CARDOZO L. REV. 2105 (1989) (arguing for the enforceability of shrinkwraps but noting objections to them including the failure of the bargaining model to fit classical notions of contract); Michael Schwarz, Note, *Tear-Me-Open Software License Agreements: A Uniform Commercial Code Perspective on an Innovative Contract of Adhesion*, 7 COMPUTER/L. J. 261 (1986) (discussing the problem of identifying when offer and acceptance occur with respect to shrinkwraps and assessing the enforceability of particular terms).

70. *See ProCD I*, 908 F. Supp. at 655.

71. U.C.C. § 2-209(1) (1996).

72. U.C.C. § 1-201(3) (1996).

course of performance and the surrounding circumstances as effective parts thereof."[73]

Under the Code's wording then, a modification may be inferred from conduct.[74] If one accepts the district court's view that the contract is formed at the time of purchase, then the original terms consist of the rights which the Copyright Act would grant[75] plus the UCC's gap-filling provisions.[76] The shrinkwrap terms would be considered a modification to which the purchaser may "agree" through his conduct in continuing to use the product after being put on notice of the relevant terms.[77]

In the *ProCD* case, usage of trade supports contracting in the manner that the parties employed,[78] as well as enforcing the particular

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73. U.C.C. § 1-201(3) cmt. 3 (1996).

74. *See, e.g.*, Morrison v. Devore Trucking, Inc., 68 Ohio App. 2d 140, 143, 428 N.E.2d 438, 441 (1980) ("Subsequent acts and agreements may modify the terms of a contract."); *Wolpert v. Foster*, 312 Minn. 526, 254 N.W.2d 348 (1977) (holding that a court may find an agreement to modify a written contract in the offeree's conduct); *see also J.W. Goodliffe & Son v. Odzer*, 283 Pa. Super. 148, 423 A.2d 1032 (1980) (holding conduct may constitute a waiver of a term requiring a modification to be in writing); *Bone Int'l , Inc. v. Johnson*, 74 N.C. App. 703, 329 S.E. 2d 714 (1985) (holding a post-sale agreement to be an oral modification); WHITE & SUMMERS, *supra* note 45, § 1-6, at 30.

75. Under the Copyright Act, the purchaser of a copyrighted work is subject to the exclusive rights of the copyright owner as detailed in § 106. The exclusive rights of the copyright owner include the right to reproduce the copyrighted work and prepare derivative works from it. 17 U.S.C. § 106 (1994). These exclusive rights are, however, limited in time (generally life of the author plus fifty years, 17 U.S.C. § 302(a) (1994)) and subject to other limiting doctrines such as the fair use (17 U.S.C. § 107 (1994)) and first sale doctrines (17 U.S.C. § 109) (1994)).

76. Under the Code, "[e]ven though one or more terms are left open, a contract for sale does not fail for indefiniteness if the parties have intended to make a contract and there is a reasonably certain basis for giving an appropriate remedy." U.C.C. § 2-204(3) (1996). For example, the Code will fill in an open price term (U.C.C. § 2-305 (1996)), and/or an open delivery term (U.C.C. §§2-307 to 2-309 (1996)).

77. *But see* James T. Peys, Note, *Commercial Law—The Enforceability of Computer "Box-Top" License Agreements Under the U.C.C.*, 7 WHITTIER L. REV. 881 (1985) (reviewing U.C.C. law on modifications and concluding that shrinkwraps are not enforceable modifications); Puhala, *supra* note 69, at 1373-76 ("[A] user's opening of the separate diskette package and use of the software is unlikely to indicate the user's acceptance of the modified terms . . . because the user usually does not intend to accept the modified terms by his ordinary act of using the software.").

78. U.C.C. § 2-202 makes clear that usage of trade may be used to interpret a contract already formed. "Terms . . . may be explained or supplemented (a) by course of dealing or usage of trade . . . or by course of performance." U.C.C. § 2-202(a) (1996). Less clear is whether that usage of trade may also inform the question of whether a contract has been formed. The expansive definition of usage of trade, *see infra* text accompanying note 79, supports the argument that it should be used to help put the Code's rules on offer and acceptance into the context of the relevant industry. *See also Ore & Chem. Corp. v. Howard Butcher Trading Corp.*, 455 F. Supp. 1150 (E.D. Pa. 1978) (holding usage of trade relevant in determining the content of an offer and whether acceptance had occurred); Avery Katz, *The Strategic Structure of Offer and Acceptance: Game Theory and the Law of Contract Formation*, 89 MICH. L. REV. 215, 220-21 (1990) (citations omitted):

> Beyond the necessarily general language of black-letter formulations, American contract law also allows contracting parties considerable leeway to choose the form of their agreement in practice. This is especially so for contracts governed by Article II of the Uniform Commercial Code, which in large part reflects the view of Llewellyn and his colleagues that commercial

terms contained in the shrinkwrap. Simply put, "Everybody does it." More technically, "A usage of trade is any practice or method of dealing having such regularity of observance in a place, vocation or trade as to justify an expectation that it will be observed with respect to the transaction in question."[79] It is common practice in the software industry to contract in the manner which ProCD adopted, as well as to employ the terms which it did. This method of contracting facilitates a mass market that might otherwise not exist by saving the transaction costs of face-to-face bargaining. The particular terms help the provider recoup its investment while not forcing it to charge an exorbitant price.

Of course, merely because "everybody does it" does not make it right. The Code's willingness to incorporate trade practices is based on an economic argument. The drafters assumed that commercial parties would not long persist in an inefficient practice.[80] The mere fact that a trade practice is time-tested is evidence that it is "efficient" and therefore desirable from an economic perspective.

This contention is less persuasive in cases in which one party is a consumer-buyer who does not bargain with the seller. In such situations, the seller, in the interest of maximizing its own gain from contracting, may foist inefficient terms off on the buyer on a "take it or leave it" basis. For this reason, the Code contains an array of safety valves to help guarantee that buyers are not bound by onerous terms.

For example, the relevant usage of trade binds only those who should be aware of it.[81] This, however, may not assist the consumer. The shrinkwrap has been so pervasive for so many years that even a novice buyer should probably be aware of the usage of trade. Still, even if the usage of trade is binding, § 2-302 provides for court reformation of unconscionable contracts.[82] This section, though, is also unlikely to assist

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> law should be grounded in the expectations of the community of traders. Aside from its variety of specific provisions referring to trade usage, course of dealing, course of performance, good faith, and commercial reasonableness, Article II directs courts generally to defer to private usage in adjudicating formation issues.

But see Wichita Sheet Metal Supply, Inc. v. Dahlstrom & Ferrell Constr. Co., 246 Kan. 557, 565, 792 P.2d 1043, 1049 (1990) ("Clearly, usage of trade is limited to explaining language used in an existing contract or filling in some gap in the contract. It cannot be used to create a contract where none previously existed.").

79. U.C.C. § 1-205(2) (1996).

80. *See generally* Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765, 1803 & n.128 (1996) (explaining the rationale for Code reliance on trade usage and questioning the advisability of this practice).

81. U.C.C. § 1-205(3) (1996) ("A course of dealing between parties and any usage of trade in the vocation or trade in which they are engaged or of which they are or should be aware give particular meaning to and supplement or qualify terms of an agreement.").

82. U.C.C. § 2-302 (1996) ("Unconscionable Contract or Clause"); *see also* U.C.C. § 1-205 cmt. 6 (1996) ("The policy of this Act controlling explicit unconscionable contracts and clauses . . . applies to implicit clauses which rest on usage of trade and carries forward the

the consumer since, as the court of appeals noted, the use restriction was reasonable under the circumstances.[83]

The court of appeals' analysis concerning the time of contract formation is equally, if not more, persuasive than the argument that the shrinkwrap constitutes an enforceable contractual modification. The Code, in effectuating its goal of flexibility, encourages the parties to arrange their contractual relations as they see fit. The rules of offer and acceptance as set forth by the Code are not rigid but rather are subject to contrary agreement of the parties. The method employed by ProCD—an offer to be accepted by the user's continued use of the software—is reasonable and, as discussed above, reflects the relevant usage of trade.

Additionally, there is a tenable argument that § 2-606(1)(b), which provides for inspection prior to acceptance of goods, offers direct rather than merely tangential support for the Seventh Circuit's holding. As the court noted, "[t]erms of use are no less a part of 'the product' than are the size of the database and the speed with which the software compiles listings."[84] The user therefore should have a right to inspect those terms before accepting the goods. Section 2-606(1)(b) affords that right. Nothing in the Code states that acceptance of an offer cannot occur simultaneously with acceptance of the goods.

From a systemic perspective then, the UCC seems to support the enforcement of a shrinkwrap as a valid method of contracting. Again, this conclusion is relatively neutral with respect to the enforcement of particular terms of the contract.[85] Neither court was completely clear on this distinction. Upholding the shrinkwrap as a valid method of contracting seems desirable from a policy perspective and consistent with decisions in other contexts upholding contracts which the buyer discovers after purchase. However, merely stating that the shrinkwrap is a valid contract in the abstract says little or nothing about whether particular provisions would be enforceable. For example, a reasonable choice of law provision would probably be enforceable[86] while a clause limiting time for complaints might be set aside in the case of a latent defect.[87] The relevant questions are: (i) as a general matter, how does the law decide

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policy underlying the ancient requirement that a custom or usage must be 'reasonable.'"); U.C.C. § 1-203 (1996) ("Every contract or duty within th[e] Act imposes an obligation of good faith in its performance or enforcement.").

83. *See infra* text accompanying notes 87-91 (discussing unconscionability in more detail).

84. *ProCD II*, 86 F.3d at 1453.

85. Of course, the more defective the formation process, the more likely particular terms will be unenforceable.

86. *Cf.* Carnival Cruise Lines, Inc. v. Shute, 499 U.S. 585 (1991) (upholding the enforceability of a forum-selection clause in a boilerplate contract).

87. *See* Kansas City Wholesale Grocery Co. v. Weber Packing Corp., 93 Utah 414, 73 P.2d 1272, 1275 (1937); U.C.C. § 2-302 cmt. 1 (collecting unconscionability cases).

which contractual clauses should be enforced and which should not; and (ii) where on that spectrum of enforceability does the ProCD use limitation fit?

Under UCC § 2-302, the courts can use unconscionability as the primary mechanism to police contractual terms. Section 2-302 grants a court broad discretion in deciding whether or not, and how, to enforce a contract that contains an unconscionable clause. Unfortunately, it offers little guidance to courts on how to make the threshold determination of whether a particular clause is unconscionable.[88] According to the Official Comments, "The principle is one of oppression and unfair surprise . . . and not of disturbance of allocation of risks because of superior bargaining power."[89] The question then often reduces to an assessment of what the buyer's expectations were under all the facts and circumstances.[90] Unfortunately, this inquiry is inherently speculative. To inject some certainty, courts have often attempted objectively to determine what the reasonable expectations of the buyer would be given the relevant market.[91]

The market factors which the Seventh Circuit considered in upholding the contract itself and the use restriction it contained are applicable in the unconscionability assessment. The court emphasized the fact that the use restriction was reasonable under the circumstances—price discrimination between commercial and consumer users allowing the seller to market the product at a lower price. In other words, the court implied that for the price the buyer paid, the buyer should have expected the use restriction and therefore should be held to it despite the fact that, as a practical matter, it may never have read the license agreement.

The importance of this market inquiry cannot be overemphasized. The UCC is based on an economic rationale and clearly contemplates the introduction of relevant market evidence in Code cases. Thus, the market inquiry in the context of contract formation is obviously an appropriate

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88. *See generally* Peys, *supra* note 77, at 908-10 (discussing the malleability of the unconscionability inquiry).

89. U.C.C. § 2-302 cmt. 1 (1996).

90. *See* Williams v. Walker-Thomas Furniture, 350 F.2d 445, 448-50 (D.C. Cir. 1965) (interpreting unconscionability under § 2-302 of the Code to require primary concern with the terms of the contract considered in light of the circumstances existing at contract formation); Henningsen v. Bloomfield Motors, Inc. 32 N.J. 358, 387-88, 161 A.2d 69, 85-86 (1960) (discussing the pre-Code equitable doctrines used to avoid unconscionable results in the enforcement of standardized commercial contracts); WHITE & SUMMERS, *supra* note 45, § 4-5, at 137 ("It is not possible to define unconscionability. It is not a concept, but a determination to be made in light of a variety of factors not unifiable into a formula.").

91. The cases finding unconscionability based on excessive price offer support for this proposition. They seem to be based on the courts' intuitive belief that the buyer did not get the benefit of its bargain—i.e., the buyer expected or should have expected more for the price which it paid. *See* WHITE & SUMMERS, *supra* note 45, § 4-5, at 140-45 (discussing various excessive price cases).

one for a court to make. That market inquiry suggests that the use restriction should be upheld as a matter of contract law. However, just as stating that the shrinkwrap is an enforceable contract says little or nothing about the enforceability of particular provisions, using market evidence to uphold a particular provision as a matter of contract law says little or nothing[92] about whether that provision should be upheld as a matter of federal copyright law.

B. The Enforceability of the Use Restriction Under Federal Copyright Law

The issue of whether the use restriction was unenforceable as preempted by the Copyright Act would have been rendered moot if the shrinkwrap were held unenforceable as a matter of contract law. However, the district court, which did in fact hold the agreement unenforceable, still commented on copyright preemption.[93] In contrast, the court of appeals had no choice but to face the preemption issue since it held the shrinkwrap enforceable, reversing the contractual holding of the district court.

In the *ProCD* case, the conflict between federal copyright policy and state enforcement of a private contract is easy to perceive. This conflict arises because of the Supreme Court's decision in *Feist Publications, Inc. v. Rural Telephone Service Co.*[94] The Court in Feist held that the particular compilation of data in the white pages directory at issue was not copyrightable.[95] Enforcement of the contract in *ProCD* seems rather obviously to be at odds with this holding as it gives copyright rights to noncopyrightable data. Thus, a review of *Feist* is helpful in framing the issue prior to discussing the respective courts' preemption holdings in *ProCD*.

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92. This statement depends in large part on one's perception of copyright's purpose. For example, adherents of the freedom of contract principle would say that if a provision is enforceable under contract law, it is not to be preempted by the Copyright Act. *See infra* notes 132-34 and accompanying text (contending that a freedom of contract perspective views copyright as a boilerplate contract which the parties are free to contract around; thus if a provision is enforceable under contract law, it is not preempted by the Copyright Act).

93. *ProCD I*, 908 F. Supp. at 644, ("I conclude . . . [d]efendants never assented to the license agreement included in the Select PhoneTM user guide and are not bound by it. Even if defendants had assented, the license agreement is preempted by federal copyright law to the extent plaintiff intended it to apply to uncopyrightable data."). While the court's discussion of the preemption issue is arguably dicta since it was not necessary to the disposition of the case once the court had held the shrinkwrap unenforceable, the court of appeals characterized the preemption discussion as a holding: "The district court held that, even if Wisconsin treats shrinkwrap licenses as contracts, § 301(a) of the Copyright Act, 17 U.S.C. § 301(a), prevents their enforcement." *ProCD II*, 86 F.3d at 1453.

94. 499 U.S. 340 (1991).

95. *See id.*

In *Feist*, Rural Telephone Service Co. was a public utility which published a conventional phone book containing white pages listings of its subscribers.[96] Feist sought to publish an area-wide phone book which would encompass Rural's subscribers as well as those of other utilities.[97] Rural refused to license its white pages listings to Feist and sued Feist for copyright infringement when a number of its listings were allegedly copied into Feist's area-wide directory.[98]

The Court began its decision by noting that "[F]acts are not copyrightable . . . [while] compilations of facts generally are."[99] Facts are not copyrightable because they lack the originality which is constitutionally required before a work may merit copyright protection:

> "No one may claim originality as to facts." This is because facts do not owe their origin to an act of authorship. The distinction is one between creation and discovery: The first person to find and report a particular fact has not created the fact; he or she has merely discovered its existence.[100]

The Court went on to hold that while a compilation of facts may possess the requisite originality in the selection and arrangement of the data, Rural's "garden-variety white pages directory, devoid of even the slightest trace of creativity," lacked originality and therefore could not qualify for copyright as a compilation.[101]

In support of its decision, the Court interpreted the Copyright Act as embodying a strong policy of "encourag[ing] others to build freely upon the ideas and information conveyed by a work."[102] While it may "seem unfair" that a second-comer could reap the benefits of another's initial investment in gathering the particular facts, the Court stated that "[t]his result is neither unfair nor unfortunate. It is the means by which copyright advances the progress of science and art."[103]

The Court's decision in *Feist* effectively overturned a long line of judicial authority, often labeled as "sweat of the brow" cases.[104] Courts in "sweat of the brow" jurisdictions were willing to afford compilers copyright protection based on the expenditure of labor inherent in the

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96. *See id.* at 342.
97. *See id.* at 343.
98. *See id.* at 343-44.
99. *Id.* at 344. The statutory basis for the Court's statement that facts are not copyrightable is found in § 102(b) of the Act: "In no case does copyright protection . . . extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery." 17 U.S.C. § 102(b) (1994). "Section 102(b) is universally understood to prohibit any copyright in facts." *Feist*, 499 U.S. at 356.
100. 499 U.S. at 347 (1991) (citation omitted).
101. *Id.* at 362.
102. *Id.* at 350 (citation omitted).
103. *Id.*
104. *See id.* at 359-60.

effort to collect and arrange the particular facts.[105] In fact, interestingly, the Seventh Circuit (which upheld the ProCD contract) has been described as a "bastion of the 'sweat of the brow theory.'"[106] The Court in *Feist* rejected the "sweat of the brow" theory, stating:

> In summary, the 1976 revisions to the Copyright Act leave no doubt that originality, not "sweat of the brow," is the touchstone of copyright protection in directories and other fact-based works. Nor is there any doubt that the same was true under the 1909 Act.[107]

In *ProCD*, ProCD attempted by private contract to recover the copyright protection which Feist had clearly withdrawn. The preemption issue is thus rather sharply defined in *ProCD*: may a party create, by contract, copyright-type rights in data which is not afforded copyright protection under the Supreme Court's interpretation of the Act? Put another way, may a party by private contract alter the policy balance struck by Congress with respect to copyrightable subject matter?

1. *THE DIFFERING VIEWS OF THE DISTRICT COURT AND COURT OF APPEALS*

Both the district court and court of appeals addressed the question of preemption under § 301(a) of the Copyright Act.[108] Section 301(a)

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105. *See id.* at 352-53 (quoting Jeweler's Circular Publishing Co. v. Keystone Publishing Co., 281 F. 83, 88 (2d Cir. 1922)):

> The right to copyright a book upon which one has expended labor in its preparation does not depend upon whether the materials which he has collected consist or not of matters which are publici juris, or whether such materials show literary skill or originality, either in thought or in language, or anything more than industrious collection. The man who goes through the streets of a town and puts down the names of each of the inhabitants, with their occupations and their street number, acquires material of which he is the author.

106. William S. Strong, *Database Protection After Feist v. Rural Telephone Co.*, 42 J. COPYRIGHT SOC'Y U.S.A. 39, 56-57 (1994) ("The Fourth and Seventh Circuits now reverently cite *Feist*. . . . [R]eading their recent opinions one would never know they had once been bastions of the 'sweat of the brow' theory."); *see also* Theodore H. Davis, Jr., *Copying in the Shadow of the Constitution: The Rational Limits of Trade Dress Protection*, 80 MINN. L. REV. 595, 630 n.168 (1996):

> The Seventh Circuit's adherence to the sweat of the brow doctrine under the 1909 Act was such that the court in Toksvig v. Bruce Publishing Co., 181 F.2d 664 (7th Cir. 1950) enjoined the defendant from using facts from the plaintiff's work that were readily available from other sources in the public domain.

107. *Feist*, 499 U.S. at 359-60.

108. Preemption may also be constitutionally based. A particular cause of action may be preempted under the Supremacy Clause if its enforcement would "stand[ ] as an obstacle to the accomplishment of the full purposes and objectives of Congress." Hines v. Davidowitz, 312 U.S. 52, 67 (1941). *Hines* pre-dated the enactment of the specific preemption section of the Copyright Act but the constitutional inquiry may still survive. *See* Wendy J. Gordon, *On Owning Information: Intellectual Property and the Resitutionary Impulse*, 78 VA. L. REV. 149, 155 n.22 (1992) (stating that the inquiry of whether state law interferes with congressional intent should survive the enactment of § 301). It is unclear, however, what the constitutional inquiry would add to § 301. It is reasonable to assume

provides that "all legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright . . . and come within the subject matter of copyright . . . are governed exclusively by this title."[109] The issue which occupied most of the analysis of both courts was whether the breach of contract claim implicated rights "equivalent" to any of the exclusive copyright rights. The test for equivalence has often been stated as whether or not the noncopyright claim contains an "extra element" which renders it "qualitatively different" from a pure copyright cause of action; if it does not, then the noncopyright cause of action is preempted.[110]

According to the district court, ProCD's breach of contract claim was preempted by the Copyright Act. The court stated: "[ProCD's] breach of contract claim is nothing more than an effort to prevent defendants from copying and distributing its data, exactly what it sought to bar defendants from doing under copyright law."[111] In other words, the very act that breached the license agreement infringed the copyright. The district court rejected the argument that merely because the breach of contract claim requires a showing of the additional element of breach it is qualitatively different from a copyright claim.[112]

The district court also discussed copyright policy in its preemption holding. In particular, it characterized the use restriction as "an attempt to avoid the confines of copyright law and of Feist."[113] It found the use restriction to be fundamentally inconsistent with the copyright policy of favoring accessibility to information expressed in *Feist*:

> It is only when a contract erects a barrier on access to information that under copyright law should be accessible that § 301 operates to protect copyright law from individually crafted evasions of that

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that both courts would have arrived at the same conclusions they did even under a constitutional standard since the policy concerns they addressed would have been relevant in the constitutional inquiry. *But see* D.C. Toedt III, *COUNTERPOINT: Shrinkwrap License Enforceability Issues*, 13 COMPUTER L.J. 7, 8-9 (contending that the Seventh Circuit failed to address Supremacy Clause preemption and setting forth a case for such preemption).

109. 17 U.S.C. § 301(a) (1994). Note that both ProCD courts treated the data as falling within the subject matter of copyright—and thus subject to § 301—despite the fact that the data lacked the originality required to afford it copyright protection. *See ProCD I*, 908 F. Supp. at 656-57 (reviewing authorities and concluding that § 301 applies to works that "fit within the general subject matter of §§102 and 103, whether or not the works qualify for actual protection"); *see also ProCD II*, 86 F.3d at 1453 (ostensibly agreeing with the district court); *infra* text accompanying notes 111-12 (noting that in conducting part of its preemption query, the district court effectively considered whether the act of breach of contract would constitute copyright infringement if the data had been copyrightable).

110. *See, e.g.*, Trandes Corp. v. Guy F. Atkinson Co., 996 F.2d 655, 659 (4th Cir. 1993), *cert. denied*, 510 U.S. 965 (1993).

111. *ProCD*, 908 F.Supp. at 657.

112. *Id.* at 657-58.

113. *Id.* at 659.

> law. . . . Plaintiff cannot use a standard form contract to make an end run around copyright law.[114]

Transaction costs for ProCD itself would have been high if the compilers of each of the 3000 directories which ProCD used to assemble its database had included a similar use restriction.[115]

The court of appeals took a much different view of the preemption question, making much of the distinction between rights established by law and rights between parties. The court characterized copyright as a legal right against the world which "restrict[s] the options of persons who are strangers to the author."[116] Contracts, on the other hand, "generally affect only their parties; strangers may do as they please, so contracts do not create 'exclusive rights.'"[117] The court analogized to contracts involving trade secrets which often require the recipient of the trade secret to treat noncopyrightable data as if it were copyrighted.[118] The court characterized relevant Supreme Court precedent in the trade secret area as "hold[ing] that contracts about trade secrets may be enforced—precisely because they do not affect strangers' ability to discover and use the information independently."[119]

The court of appeals did not expressly use the "extra element" test to explain why it thought the breach of contract action to be qualitatively different from a copyright infringement claim. It emphasized, however, that daily transactions often involve promises involving intellectual property, and such promises are routinely enforced.[120] For example, video rental stores often limit the use of the rented tape to home viewing and require the tape's return in a specified number of days.[121] No one would suggest that the customer could keep the tape longer because § 301(a) renders the customer's promise unenforceable.[122] In a context closer to *ProCD*, the court noted that LEXIS-NEXIS often places use restrictions on the data it makes available.[123] The court compared the two, stating:

> ProCD offers software and data for two prices: one for personal use, a higher price for commercial use. Zeidenberg wants to use the data without paying the seller's price; if the law student [, using LEXIS under a license priced for educational use only, may not resell to law

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114. *Id.* at 658.
115. *See id.* at 659.
116. *ProCD II*, 86 F.3d at 1454.
117. *Id.*
118. *Id.*
119. *Id.*
120. *See id.*
121. *See id.*
122. *See id.*
123. *See id.*

> firms for commercial use,] neither can Zeidenberg [avoid the ProCD use restriction].[124]

The court stopped short of a per se rule that all contracts would survive a preemption analysis: "[W]e think it prudent to refrain from adopting a rule that anything with the label 'contract' is necessarily outside the preemption clause: the variations and possibilities are too numerous to foresee."[125] The court did attempt to answer the policy question of how the use restriction could be consistent with the copyright policy articulated in Feist of maintaining a viable public domain: "Enforcement of the shrinkwrap license may even make information more readily available, by reducing the price ProCD charges to consumer buyers."[126] It concluded by stating that "whether a particular license is generous or restrictive, a simple two-party contract is not 'equivalent to any of the exclusive rights within the general scope of copyright' and therefore may be enforced."[127]

2. *AN EVALUATION OF THE COMPETING VIEWS*

The confusion and inconsistency of preemption law makes preemption issues notoriously difficult to resolve. Preemption issues implicate broad policy questions and require courts to articulate the rationale for a particular legislative enactment and to decide how that enactment fits within the overall legislative plan and the common law generally. In part, the reason for the two courts' disparate holdings on preemption is that the district court concentrated primarily on the relationship between copyright and contract at an abstract level, while the court of appeals addressed these two areas from both a theoretical and practical perspective. In particular, the court of appeals considered how the preemption decision would impact the market as well as how the market should influence the preemption decision.

Commentators and courts have never definitively resolved the question of whether a breach of contract claim in which the act which constitutes breach is also the act which would infringe the copyright is preempted.[128] However, as a general rule, breach of contract claims are not preempted by copyright because the additional element of breach of promise distinguishes the contract claim from one sounding in

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124. *Id.*
125. *Id.* at 1455.
126. *Id.*
127. *Id.*
128. *See* O'Rourke, *supra* note 5, at 519-23 (discussing preemption law and conflicting judicial authority).

copyright.[129] The district court rejected precedent to this effect while the court of appeals characterized it as "sound."[130]

Thus, one may infer that the difference between the two courts' decisions was disagreement over the existence of an "extra element" that would render the breach of contract action qualitatively different from copyright and thereby save it from preemption. The district court saw no such extra element, stating that "[c]ontracts that seek to protect reproduction and distribution rights step into the territory already covered by copyright law."[131] In contrast, one may infer from the court of appeals' opinion that it found an extra element in the breach of promise. In the nonnegotiated shrinkwrap context, this promise or consent must be inferred by conduct since it is never expressly given. The court's discussion of market factors supports this reading of its decision. Market factors may help a court decide whether it is reasonable to assume that a purchaser either actually assented to the particular terms or would have assented had it been aware of them. However, the question remains as to whether such an inquiry is authorized under the Act.

III. A DEEPER ANALYSIS OF THE PREEMPTION ISSUE

The preemption decision is not as clear cut as either court presented it. In fact, it is a difficult issue with compelling arguments on both sides. Because of the importance of its resolution to the computer software industry, it merits further analysis. Specifically, lawmakers should identify and weigh competing policy considerations in an effort to form a consistent rule—even if that rule incorporates flexible standards rather than articulating a bright-line test. In the meantime, in the absence of legislative action, courts should continue to consider relevant market evidence in defining the relationship between copyright and contract in particular cases.

A. Two Competing Views of Copyright—Freedom of Contract v. Public Domain

The particular *ProCD* issue—defining the allowable range of contract with respect to noncopyrightable data—brings two extreme competing views of the purpose of copyright into focus.[132] One view (for simplicity, referred to as the "freedom of contract" view) contends that

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129. *See id.*

130. *ProCD II*, 86 F.3d at 1454.

131. *ProCD I*, 908 F. Supp. at 658.

132. Prof. I. Trotter Hardy was the first to set forth these competing views in the context of preemption. *See* I. Trotter Hardy, *Copyright, Contracts, and Preemption in a Digital World*, 1 RICH. J.L. & TECH. 2 ¶¶ 37-43 (1995) (noting changes in perception of the meaning of copyright over the years).

copyright merely provides a bundle of rights to copyright owners to help them avoid the transaction costs of contracting with each purchaser of the copyrighted material.[133] In this model, copyright functions much like Article 2 of the UCC—as a boilerplate contract to govern the parties' relationship in the absence of a contrary agreement.[134] Nothing prevents the parties from contracting around the rights granted by copyright or, in the case of data not protected by copyright, from creating their own property rights through private contract. In the freedom of contract model, any distinction between the contract and preemption inquiries collapses. As long as the contract passes muster under traditional common law contract and the UCC, its provisions—even those affecting copyright-type rights—are not subject to preemption.

Another view (for simplicity, referred to as the "public domain" view) argues that copyright represents a legislative scheme carefully balanced to advance the public interest by providing an incentive to authors to create while safeguarding the free flow of the information on which such creativity is based.[135] In this model, there are immutable rules

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133. *See id.* at ¶ 37 (arguing that the original intent of the Framers was that copyright would be like any other property right and thereby include the owner's right to transact as he saw fit).

134. *Cf. id.* at ¶ 38 ("[T]he traditional, property view sees the copyright statute as simply providing a backdrop for individual bargains and negotiations over licenses.").

135. Court cases and the literature present ample statements to this effect. *See, e.g.*, Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 349-50 (1991) ("The primary objective of copyright is not to reward the labor of authors, but '[t]o promote the Progress of Science and useful Arts.' . . . To this end, copyright assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed by a work." (quoting U.S. CONST. art. 1, § 8, cl. 8) (citing Harper & Row, Publishers, Inc. v. Nation Enterprises, 471 U.S. 539, 556-57 (1985)); Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 429 & n.10 (1984) (citing legislative history from the 1909 Act to the effect that copyright law is to advance public welfare and stating:

> As the text of the Constitution makes plain, it is Congress that has been assigned the task of defining the scope of the limited monopoly that should be granted to authors or to inventors in order to give the public appropriate access to their work product. Because this task involves a difficult balance between the interests of authors and inventors in the control and exploitation of their writings and discoveries on the one hand, and society's competing interest in the free flow of ideas, information, and commerce on the other hand, our patent and copyright statutes have been amended repeatedly.);

Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975) (stating:

> The limited scope of the copyright holder's statutory monopoly, like the limited copyright duration required by the Constitution, reflects a balance of competing claims upon the public interest: Creative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and the other arts.

(footnotes omitted)); *see also* Jessica Litman, *Innovation and the Information Environment: Revisiting Copyright Law for the Information Age*, 75 OR. L. REV. 19, 46 (1996) (arguing that "[c]opyright owners have no legitimate claim to fence off the public domain material that they have incorporated in their copyrighted works from the public from whom they borrowed it," and promoting the merits of a system that explicitly recognizes the public interest in public domain material); Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965,

around which the parties cannot contract because the public interest cannot be sacrificed on the altar of two-party agreements.[136] The problem is in defining exactly which provisions of the copyright law are immutable and which are not, in a manner more definitive than simply stating "We know immutable rules when we see them."[137] The public domain model thus distinguishes between the contract and preemption inquiries. Merely because a contract is enforceable under traditional contract law does not mean that it is not preempted by copyright law. The difficulty lies in identifying under what circumstances provisions of an otherwise enforceable contract are preempted.

B. An Evaluation of the Competing Views

The freedom of contract view has some intuitive appeal. The copyright system itself is primarily based on an economic rationale: correcting defects inherent in the market for public goods.[138] The motivating factor behind the pre-*Feist* sweat of the brow holdings[139] was in some sense market failure. The compiler of facts could invest a substantial sum in the discovery and collation of facts. Copyright provided a ready mechanism to allow the factual compiler to recoup its investment.

After *Feist*, the withdrawal of copyright protection for factual compilations resulted in a market defect in that compilers could no longer recoup their investments. To counteract that market imperfection, compilers began to enter into contracts privately, to establish the copyright protection that the public law had withdrawn. Adherents of the freedom of contract view would argue that, since copyright itself is a response to market imperfections, it should be permissible to use private contract to overcome a market imperfection caused by the withdrawal of that copyright protection.

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967 (1990) ("[T]he public domain is the law's primary safeguard of the raw material that makes authorship possible.").

136. *See* Hardy, *supra* note 132, at ¶ 38 ("[T]he modern view sees the statute as specifying what are essentially the actual quite specific terms of large classes of 'bargains' over the use of intellectual property.").

137. *See id.* at ¶ 44 (contending that wholesale adoption of the modern view of copyright would imply "a more aggressive interpretation of copyright's preemption clause").

138. *See* Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 612-15 (National Bureau of Economic Research eds., 1962); ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 108 (1988) (defining a public good as one "for which there is no rivalry in consumption"). For a general economic perspective on copyright law, see William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325 (1989).

139. For an explanation of the "sweat of the brow theory," see *supra* note 105 and accompanying text.

The supporters of the public domain model would respond in two ways, with both economic and non-economic arguments. From an economic perspective, while it is true that facts are public goods requiring some incentive mechanism to encourage their discovery, facts also constitute the building blocks for further creativity. If copyright protection extended to facts, some creative expression would be foregone. Second-comers would be unable to build on those facts without incurring the transaction costs of locating the copyright owner, negotiating with her and paying her a license fee. From a systemic perspective, then, the refusal to protect facts may be economically justified because protection may result in a decrease rather than increase in creative activity. To allow parties to contract otherwise would frustrate the carefully crafted balance which Congress has constructed.

Noneconomic justifications may also be offered for refusing to enforce use restrictions applicable to facts. The decision to withhold copyright protection from facts is based, in part, on the belief that they should be free for all, irrespective of whether protection would encourage or discourage creativity at the end of the day. Individual parties should not be free to create barriers to this information which Congress has deemed should be readily accessible. Another way to put it is that copyright law is based on other policy considerations in addition to economics. Therefore, any particular contract which is enforceable under, for example, Article 2 of the UCC, may still be subject to preemption if, under the particular circumstances, other policies trump those of freedom of contract.

The concerns of the public domain theory are particularly evident in the shrinkwrap context. Because the forms are both standard in content and pervasive, they resemble private copyright law. A state clearly could not enact a valid statute which extended copyright protection to facts, yet by enforcing ProCD type provisions in its courts, the state effectively achieves the same result. The rights set up by the shrinkwrap thus begin to resemble copyright rights against the world rather than mere contractual rights between two parties.

Moreover, a long-standing doctrine of intellectual property law states that the purchaser of a product is free to do with it as he wishes, except for engaging in acts which would violate intellectual property rights.[140] For example, no one would suggest enforcing a boilerplate

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140. *See, e.g.*, 17 U.S.C. § 109 (1994) (codifying the "first-sale" doctrine, which provides that the purchaser of a copyrighted work is free to do with it as he or she pleases subject only to the copyright owner's § 106 exclusive rights). However, note that the first-sale doctrine is limited in the case of software. While other purchasers are free to dispose of other copyrighted works as they see fit, since the Computer Software Rental Amendments Act of 1990, § 109 prohibits "any person in possession of a particular copy of a computer program . . . [from,] for the purposes of direct or indirect commercial advantage, dispos[ing]

contract for a new car that provided for breach if the car were used on the Massachusetts Turnpike or a label on a Coke can that prohibited reverse engineering. More to the point, it seems likely that if the conventional phone book were distributed with a tear-off strip containing a clause that attempted to limit the recipient's use of the book, such a clause would not be enforced. Why then can't the purchaser of the factual database use and dispose of the facts it just bought in the same way that the car purchaser can drive the car on the Massachusetts Turnpike, the Coke purchaser may reverse engineer the soda, and the recipient of the hard copy phone book may do with it as he pleases? This illustration encapsulates the essence of the public domain argument—enforcement of the shrinkwrap use restriction frustrates fundamental intellectual property doctrine.

C. Alternative Approaches

The optimal position on the spectrum running from the freedom of contract model to the public domain model probably lies somewhere in between the two. To reach this position, courts must descend from the realm of the purely theoretical to decide concrete cases and reconcile competing interests. In so doing, they must use a decision-making model that integrates considerations such as economic and other public policy concerns. The following discusses the decision-making models that courts could use in deciding whether to enforce contractual terms which restrict the copyright rights that purchasers would otherwise have.

1. *THE EASTERBROOK APPROACH*

Obviously, one model is that which Judge Easterbrook employed. Under this model, contractual terms are generally not preempted since they affect only their parties and do not create rights against the world in the same manner that the public copyright law does. Thus, there would be little reason to preempt provisions of contracts modifying copyright rights where those contracts are entered into by two knowledgeable, informed parties.[141] Such a freely bargained contract would, as Judge

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of, or authoriz[ing] the disposal of, the possession of that... computer program... by rental, lease or lending." 17 U.S.C. § 109(b) (1994); *see also* Thomas M. S. Hemnes, *Restraints on Alienation, Equitable Servitudes, and the Feudal Nature of Computer Software Licensing*, 71 DENV. U. L. REV. 577 (1994) (comparing the development of software licensing to the feudal system of land tenure and arguing that the law on restraints on alienation and real estate law on equitable servitudes may assist courts in determining what covenants should run with the software). Note also that the textual proposition seems to undercut Easterbrook's argument that the purchaser should expect the use restriction given the price it pays. *See supra* section II.A.2. The user's expectations with respect to the rights it obtains for a particular price are based not only on contract but also on longstanding copyright principles, which include the right to use facts.

141. *See* O'Rourke, *supra* note 5, at 523-28.

Easterbrook said, "generally affect only its parties"[142] and would not set up by private contract a copyright scheme that competes with federal law.

Standard form contracts are more troublesome because they come closer to establishing a competitive private copyright scheme. Yet standard form contracts are not invidious in and of themselves, but may simply be a mechanism enabling a mass market to evolve where otherwise one might not exist. Under the Easterbrook model, a court assessing restrictive terms contained in a standard form contract should analyze relevant market factors as Judge Easterbrook did in *ProCD*.[143] If the restriction is reasonable under the circumstances, the court should infer the purchaser's consent. This consent would provide the "extra element" which would save the agreement from preemption under § 301. As Judge Easterbrook said, paraphrasing the Supreme Court:

> Terms and conditions offered by contract reflect private ordering, essential to the efficient functioning of markets. Although some principles that carry the name of contract law are designed to defeat rather than implement consensual transactions . . . the rules that respect private choice are not preempted by a clause [such as § 301 which is aimed at] prevent[ing the] states from substituting their own regulatory systems for those of the national government.[144]

Under the Easterbrook model, where the particular term modifying copyright rights is reasonable, it is not preempted even if it is not bargained for and even if the party whom that term is to bind is unaware of its existence.

Presumably, if a party could demonstrate that a market is not functioning efficiently, a court could make a deeper inquiry into enforceability. Judge Easterbrook left the nature and extent of that inquiry unspecified. However, one may infer that it would focus on the flexible doctrine of unconscionability.[145] If a party could show that a market were inefficient, under the Easterbrook model, a court might set aside a contract or particular terms thereof as unconscionable.

The Easterbrook model embodies the freedom of contract approach to copyright by collapsing the contract and preemption issues. Courts should, however, recognize the fact that the theoretical underpinnings of

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142. *ProCD II*, 86 F.3d at 1454.

143. *See supra* text accompanying notes 33-57 (discussing the Seventh Circuit's use of economic considerations in upholding the shrinkwrap); text accompanying notes 123-27 (discussing the economic factors influencing the Seventh Circuit's preemption holding).

144. *ProCD II*, 86 F.3d at 1455 (citing American Airlines, Inc. v. Wolens, 115 S. Ct. 817, 824-25 (1995)).

145. *See supra* text accompanying note 57 (noting that Easterbrook contends that shrinkwraps are enforceable unless they fail some contractual test such as unconscionability).

contract and copyright are different. A more nuanced approach that takes this difference into account might therefore be preferable.

2. *THE "DEFAULT RULES" APPROACH*

Another decision-making model that a court might use in assessing use restrictions is one based on an analogy to the models described in the default rules literature.[146] This literature classifies rules as either default or immutable.[147] Parties are free to contract around default rules but cannot vary immutable ones.[148] Historically, the default rules literature has primarily been concerned with filling contractual gaps.[149] However, it could also be used to help address the issue of whether the norm for contractual provisions which purport to restrict copyright rights should be one of enforcement or nonenforcement.

An adherent of the public domain view would contend that the Act's refusal to provide protection for facts is an immutable rule. Generally, immutable rules may be justified when "unregulated contracting would be socially deleterious because parties internal or external to the contract cannot adequately protect themselves."[150] In other words, either paternalism or externalities can be used to justify classifying a particular rule as immutable.[151]

Neither of these two considerations offers a convincing case for branding the Act's rule against protection for facts immutable. Parties who agree to contracts which restrict copyright rights are usually protected in some manner. When parties are informed, they are protected by their own knowledge. When they are uninformed, they are protected by the impersonal workings of the market; the market helps to ensure that the provisions of even standard form contracts are reasonable. Paternalism, then, does not support labeling lack of protection for facts an immutable rule.

The externality argument for an immutable rule is somewhat stronger. Since facts constitute the building blocks for creative activity, restrictions on the use of facts (particularly if they become pervasive) could substantially increase costs. Any benefit from a use restriction

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146. This literature is extensive. *See* Randy E. Barnett, *The Sound of Silence: Default Rules and Contractual Consent*, 78 VA. L. REV. 821, 823-24 & nn.10-19 (citing default rules literature).

147. *See, e.g.*, Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L. J. 87, 87 (1989) ("The legal rules of contract and corporations can be divided into two distinct classes. The larger class consists of 'default' rules . . . while the smaller class consists of 'immutable' rules.").

148. *See id.*

149. *See generally id.*

150. *Id.* at 88.

151. *See id.*

would be offset by the costs of expression foregone. Unfortunately, this argument is inherently speculative. Virtually all contractual terms impose costs on someone or something. If this were the only criterion for making a rule immutable, then it would be a short trip down the slope to making all contract rules unchangeable. This result is not desirable generally or in this case. In the absence of empirical evidence on the impact of use restrictions which demonstrates that their costs exceed their benefits, labeling the copyright rule immutable seems unwise without evidence of congressional intent to that effect.

If the Act's rule against protecting facts is not immutable, then the issue devolves to the question of whether the default rule should be one which enforces use restrictions or not. At first glance, the default rules literature seems to argue for the Easterbrook approach. The conventional theory is that the default rule should be set at what the parties would have agreed to had they negotiated over the particular issue.[152] Evidence of usage of trade and considerations of economic efficiency help a court to decide what rule the parties would have agreed to had they bargained.[153] In this context, the conventional theory would argue for a default rule of enforcement. Usage of trade and economic efficiency both support the proposition that the parties would have agreed to the use restriction had they bargained over it.[154] Therefore, while standard form agreements may resemble private legislation, their terms in fact mirror what the parties would have agreed to in a negotiation and therefore should be enforced.

However, another principle revealed in the default rules literature is that the default should be drawn against the relatively informed party to give that party an incentive to reveal information.[155] In the *ProCD* context, this test may argue for a default rule of nonenforcement of use restrictions. The ordinary consumer purchaser of software is likely to be uninformed about the relevant law. To the extent that such purchaser is

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152. *See* SCHWARTZ & SCOTT, *supra* note 64, at 21, 23 (stating the textual proposition and contending that such a choice of default rule is desirable because it saves negotiation costs); *Cf.* Ayres & Gertner, *supra* note 147, at 89 (stating that "[f]ew academics have gone beyond one-sentence theories stipulating that default terms should have been set at what the parties would have wanted" and going on to question whether the "would have wanted" theory should always apply in setting default rules).

153. *See* Barnett, *supra* note 146, at 906-07 (identifying express terms, course of dealing and usage of trade as important sources to aid in understanding the parties' intent).

154. *See supra* text accompanying notes 51-56 (setting forth the economic rationale of the Seventh Circuit in upholding the shrinkwrap); notes 78-83 (arguing that usage of trade supports both the manner of contracting and the particular terms).

155. *See* Ayres & Gertner, *supra* note 147, at 91 (calling such default rules "penalty defaults" and stating "[i]n contrast to the received wisdom, penalty defaults are purposefully set at what the parties would not want—in order to encourage the parties to reveal information to each other or to third parties (especially the courts)"); *see also* Barnett, *supra* note 146, at 888-89 (using a consent theory to explain penalty defaults).

informed, its expectations are likely to be set by reference to the bargain struck by the Copyright Act[156]—a bargain which permits the free use of facts.[157] If purchasers expect copyright to apply to the data they purchase and fail to notice the use restriction, they may pay too much for the product. A penalty default of nonenforcement would correct this market imperfection of asymmetric information by encouraging sellers to disclose information. The use restriction would generally be enforceable if the seller brought it to the purchaser's attention. In a negotiated contract, the seller would expressly bring the desired term to the buyer's attention in the course of writing it into the contract. In the case of the standard form contract, the seller could not expressly make the buyer aware of the use restriction but could put the buyer on notice of it by making the term conspicuous. The default rules model, then, would support a rule of nonenforcement unless the use restriction were conspicuous.

3. *OBJECTIONS TO THE DEFAULT RULES MODEL*

There is an objection to this suggestion of a nonenforceability norm, which Judge Easterbrook noted in assessing the use restriction's enforceability. In rejecting the argument that the license or its terms should have been conspicuous, he stated, "Competition among vendors, not judicial revision of a package's contents, is how consumers are protected in a market economy."[158] In other words, in an efficient market, there is no reason to require conspicuousness as a legal rule. The terms which the seller offers are desirable from both the buyer's and seller's perspective, regardless of whether or not the buyer notices a particular term. The product price adjusts in light of the package of terms offered even where the buyer is uninformed.

Moreover, under certain conditions, the market itself will move sellers to make certain terms conspicuous. For example, sellers often bring warranties to the buyer's attention as a way to differentiate their products.[159] In the *ProCD* case, ProCD had an incentive to make the use restriction obvious. As the Seventh Circuit noted, the use restriction was the primary means through which ProCD put its price discrimination

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156. The Copyright Act, in one form or another, has been with us since 1790. Therefore, it is reasonable to expect that purchasers have some sense of what it is. Major revisions to the Act were enacted in 1831, 1870, 1909 and 1976. *See generally* WILLIAM F. PATRY, LATMAN'S THE COPYRIGHT LAW 2-15 (6th ed. 1986) (outlining the history of the Copyright Act).

157. *See supra* note 99 (setting forth the statutory basis for the free use of facts). Admittedly, *Feist* was decided relatively recently, in 1991. However, the Court emphasized that its statement that facts are not copyrightable has been the law at least since 1909. *See* Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340, 355-56 (1991).

158. *ProCD II*, 86 F.3d at 1453.

159. *See* SCHWARTZ & SCOTT, *supra* note 64, at 106 (explaining the signaling function of warranties).

strategy into effect.[160] ProCD therefore had an interest in making sure the purchaser understood that restriction. Of course, ProCD could always seek to enforce the restriction judicially after breach by a purchaser; hence the suit against Zeidenberg. However, litigation is expensive and damages are not always compensatory. Moreover, the damage may be irreparable. Electronic information is much easier to copy and make broadly available than hard copy publications. A user can upload data to the Internet and make it accessible to millions of users in just a few keystrokes, substantially decreasing the size of the information originator's market.[161] ProCD therefore had a strong incentive to inform purchasers of its CD-ROM that such activity would not be tolerated.[162] If the market functions to encourage the seller to disclose information then a legal rule with the same end seems at best superfluous.

These objections to a default rule of nonenforcement reflect different assumptions about the market. The default rules approach makes the most sense when the market is inefficient, while the Easterbrook approach is most suitable for an efficiently functioning market. Markets fall into both categories, but legal rules are usually cast in general terms. Thus, a default rule of nonenforcement might be preferable because it protects purchasers in inefficient markets while not materially raising costs or otherwise interfering with the operation of an efficient market.

The overall impact on litigation costs under the alternative rules is speculative. A default rule requiring a use restriction to be conspicuous could be cheaper because sellers who failed to comply with it would not survive a summary judgment motion; otherwise, both models would require some evidence regarding market condition. The Easterbrook model would enforce the terms in an efficient market and make a deeper market inquiry in deciding whether a particular term is unconscionable in the case of an inefficient market. The default rules model would also still consider market factors. Making the term conspicuous would not provide a safe harbor—other contractual doctrines such as unconscionability would continue to apply. The two tests might therefore often arrive at the same results.[163]

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160. *See supra* text accompanying notes 51-56 (explaining why ProCD adopted a price discrimination scheme and how it worked).

161. Zeidenberg's database containing ProCD's listings "was receiving approximately 20,000 'hits' per day on the Internet." *ProCD I*, 908 F. Supp. at 646. The effect on ProCD's market was unspecified.

162. How conspicuous ProCD made the use restriction is not clear. However, the license agreement was printed in a number of places in the package and appeared on the screen each time the user loaded the software. *See supra* text accompanying note 17.

163. One obvious difference between the two would be in the case of the nonconspicuous use restriction employed in an efficient market. The Easterbrook model would enforce it while the default rules model would not since it fails to comply with the mandatory requirement of conspicuousness.

However, other policy reasons may favor adopting the default rules analysis. Even if the market were efficient, it may be appropriate to put purchasers on notice of the fact that the copyright rights they are accustomed to in the hard copy world are being modified in the soft copy one. The default rules approach would further the Code philosophy of encouraging efficient contracting while also recognizing the copyright policy favoring the free use of facts. Under the default rules model, purchasers would be less likely inadvertently to surrender the rights they have under copyright law since their relinquishing such rights would be brought to their attention. This notice would help to make the private legislation of the shrinkwrap more closely resemble a true negotiated agreement in which parties have agreed to restrict their copyright rights in exchange for the product they purchased.

The default rules approach thus offers a flexible model for courts to use. At the outset, a court could consider whether the particular copyright rule around which the parties are contracting is immutable or not. If it is not, courts may still consider copyright policy in determining under what conditions the terms which vary the social bargain struck by the Copyright Act should be enforced.

4. *JUDICIAL AUTHORITY FOR ADOPTING A DECISION-MAKING MODEL*

Both the Easterbrook and default rules models have difficulties. Relevant market evidence would have to be introduced under both, as well as evidence of congressional intent under the default rules model. More troubling, however, is the issue of whether either a market or a detailed policy inquiry is an appropriate one for the judiciary to make. Normally, the balancing of competing interests is a matter for the legislature to consider when drafting a statute. The legislature has the institutional competence to weigh competing viewpoints and arrive at a conclusion. The unelected judiciary largely lacks such institutional competence.

Moreover, § 301 by its literal terms does not authorize a detailed market analysis.[164] Its inquiry is rather mechanical. However, in cases like breach of contract where the "extra element" is breach of promise, the market analysis cannot be avoided in the context of nonnegotiated agreements. The promise is not express, yet it may in fact be perfectly reasonable to infer it. Thus, unless § 301 is interpreted to allow market evidence as an aid in determining whether a real promise exists, the

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164. Note, however, that market analysis would likely be admissible in evaluating constitutional preemption if such preemption survives § 301. *See supra* note 108 (considering whether constitutional preemption survives).

provisions of most standard form agreements affecting copyright-type rights would be preempted. This result does not seem to be desirable in light of congressional silence on the topic.

In reality, courts have for years been conducting market analysis in copyright cases, suggesting that they do have the institutional competence to balance competing interests in cases like *ProCD*. In particular, courts historically have examined market evidence in assessing alleged infringers' claims of fair use under § 107 of the Act. Fair use is an equitable defense to an infringement claim, allowing a court to use public policy grounds to excuse conduct that would otherwise be infringing.[165] In conducting a fair use inquiry, a court is to balance the four non-exclusive statutory fair use factors:

> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.[166]

Although the Supreme Court has emphasized the necessity of weighing all four factors in light of the Act's statutory purpose before making a fair use determination,[167] courts have emphasized the first and the fourth.[168]

For example, a fair-use—type inquiry would ask whether the ProCD use restriction was reasonable in light of the market for fact-based databases. It would also ask if Zeidenberg's conduct were to become widespread, what impact would that have on the database market and the incentives of others to create similar works? These are exactly the types of considerations which the Seventh Circuit emphasized. The Seventh Circuit's decision in *ProCD* could be viewed as almost a "reverse" fair use inquiry.[169] Rather than using market factors to assess whether an infringer's conduct should be excused, the Seventh Circuit used market factors to determine whether a copyright owner's use of

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165. *See* NIMMER & NIMMER, *supra* note 4, §§ 13.05, 13-152 to 13-157; *see also* 17 U.S.C. § 107 (1994) (listing "purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research..." as nonexclusive examples of the types of uses which may be privileged as fair).

166. 17 U.S.C. § 107 (1994).

167. Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 578 (citing Stewart v. Abend, 495 U.S. 207 (1990)).

168. *See* Roxana Badin, Note, *An Appropriate(d) Place in Transformative Value: Appropriation Art's Exclusion From* Campbell v. Acuff-Rose Music, Inc., 60 BROOK. L. REV. 1653, 1678-79 (1995) (stating that the Court weighs the first and fourth factors "heavily in its fair use determination").

169. I am indebted to Prof. Hardy for suggesting that importing some or all of the fair use factors into a preemption inquiry may be appropriate. Letter from I. Trotter Hardy, Professor of Law, The College of William & Mary School of Law to Maureen A. O'Rourke, Assoc. Professor of Law, Boston University School of Law, November 25, 1996 (on file with the author). Any errors in the analysis are, of course, my own.

contract to buttress its copyright rights—or lack thereof as in *ProCD*—would constitute "fair use" under the Act and therefore survive preemption. Its analysis, rather than being revolutionary, seems fully justified given that § 301 must authorize a market inquiry or else many standard form contracts would be preempted. Moreover, the already existing § 107 market inquiry forms a principled basis from which the court could conduct its analysis. In other words, the Seventh Circuit, in balancing competing interests, was not exceeding its institutional competence but rather using the flexible approach already implicitly authorized in the statutory structure of the Copyright Act.

The default rules approach is more difficult to support under current statutory wording. There is scant authority in either § 301 or the UCC for a court to impose a requirement of conspicuousness on the parties. A court might seek to do so under the general requirement that "[e]very contract or duty within [the UCC] imposes an obligation of good faith in its performance or enforcement."[170]

There are, however, difficulties with this approach. Courts are split on the issue of whether a mere allegation of lack of good faith, without more, may state a cause of action under the UCC.[171] Second, using good faith to imply such a requirement seems fundamentally at odds with a vision of the Code as a comprehensive statement of the law. If courts may use good faith to imply new contractual duties, the certainty and concomitant cost reduction which the Code was designed to achieve may be seriously compromised. Moreover, it would be unfair to impose a new requirement on an unsuspecting seller, at least in the first instance.

Thus, implementation of the default rules approach may require an amendment to the UCC to make the conspicuousness requirement express. This amendment could be easily incorporated into the proposed

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170. U.C.C. § 1-203 (1996). Of course, a court might also imply a requirement of conspicuousness under § 2-302 on unconscionability or as a matter of statutory interpretation. *See e.g.*, Schroeder v. Fageol Motors, Inc., 86 Wis. 2d 256, 544 P.2d 20 (1975) (suggesting a limitation of remedy clause could be unconscionable if it were inconspicuous); Gindy Mfg. Corp. v. Cardinale Trucking Corp., 111 N. J. Super. 383, 268 A.2d 345 (1970) (reading into the UCC a requirement that an "as is" disclaimer be conspicuous to be enforceable despite the lack of statutory language to that effect). Neither of these approaches is likely to be availing in the case of use restrictions. As argued earlier, they are generally not unconscionable, *see supra* notes 87-91 and accompanying text (discussing unconscionability). Also, there is no section in the UCC on use restrictions that would provide a basis from which a court could read in a conspicuousness requirement.

171. *See* 1 WILLIAM D. HAWKLAND, UNIFORM COMMERCIAL CODE SERIES § 1-203:01, n. 1 (1995) (collecting cases on both sides of the issue); *see also* Fred H. Miller, *The Obligation of Good Faith and the New PEB Commentary*, 48 CONSUMER FIN. L. Q. REP. 54, 54 (1994) (reviewing issues associated with good faith and noting that the Permanent Editorial Board of the UCC issued a commentary indicating that "UCC section 1-203 does not create an independent cause of action because one cannot simply act in good faith; one acts in good faith relative to the agreement of the parties.").

Article 2B which addresses licensing.[172] In the meantime, however, the Easterbrook model, while perhaps not ideal, does provide room for protecting purchasers against unreasonable use restrictions.

IV. CONCLUSION

Electronic technology is different from the hard copy publications for which copyright law was designed. The sheer volume of academic commentary debating the merits of applying the existing copyright regime or devising some new form of protection for electronic works is testimony to the difficulties of adapting the law to deal with technology which did not exist at the time the law was enacted.[173] Where a genuinely new technology emerges, it may be appropriate to defer to the market in the absence of specific congressional intent to the contrary. Congress first comprehensively considered the impact of new technology on the copyright laws in 1979.[174] In computer science, 18 years is an eternity, encompassing a number of hardware and software generations. The technology and its uses have changed a great deal since 1979. It seems appropriate therefore for a court to consider the nature of the subject matter and how the market for that subject matter works, rather than blindly applying copyright principles that may no longer fit.

In fact, Congress has attempted to "catch up" with the technology. The recent report of the National Information Infrastructure Task Force[175] and flurry of legislative proposals[176]—including one to extend a new form of protection to on-line databases[177]—demonstrate that at least some members of Congress believe that adjustments should be made to the Copyright Act to clarify the manner in which its rules should be applied to electronic technology. Prior to congressional action, allowing parties to structure their deals as they see fit, within the confines of traditional contract law, seems reasonable.[178]

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172. *See supra* note 67 (discussing the Article 2B effort).

173. *See* Litman, *Revisiting Copyright*, *supra* note 135; Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2310-11, nn.1 & 5 (1994) (listing some of the extensive literature regarding the appropriate level of protection for computer software and also contributing to it).

174. *See* FINAL REPORT OF THE NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS (1979).

175. INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995).

176. *See, e.g.*, H.R. 2441, 104th Cong., 1st Sess. (1996) (proposed National Information Infrastructure (NII) Copyright Protection Act).

177. *See* H.R. 3531, 104th Cong., 2d Sess. (1996) (proposing a new form of legal protection for databases to safeguard the investment made in creating the database against exploitation by others); *Bill, Treaty Proposal Would Create New Protection of Databases*, 52 PAT. TRADEMARK & COPYRIGHT J. 141 (1996) (summarizing the proposal and citing *Feist* as creating interest in adopting a new form of database protection).

178. In fact, in introducing the database legislation, Rep. Moorhead seemed to assume

Moreover, allowing parties to enter into contracts is not synonymous with granting them a license to enforce all the terms of such contracts, no matter how onerous or how much at odds with public policy they may be. The governing law, be it common law contract or the UCC, has never been one of unfettered freedom of contract. The same limits that have always applied continue to apply to contracts involving electronic data. Additionally, even in making a market inquiry, the courts should be willing to look outside of contract doctrine—for example, to the antitrust laws—in making the determination as to whether or not a particular agreement or term thereof should be enforced given a particular market and its defects.[179]

Certainly, both the Easterbrook and default rules approaches lean much more toward the freedom of contract model than to the public domain model of copyright law. This seems appropriate for the reasons set forth above, but it also highlights the need for systematic treatment of the issue of how to define the contract/copyright boundary. In continuing to address legislative proposals dealing with electronic technologies, Congress should consider this question thoughtfully and perhaps offer more guidance to the judiciary than the current § 301. In particular, Congress should clarify its intent with respect to which copyright rules are immutable and which are subject to change by private agreement, either by amending the Copyright Act or by enacting new legislation to address electronic technology. In the absence of that clarification, courts should continue to inform their decisions with reference to market considerations and by analogy to other areas of law. This flexible inquiry seems consistent with the Copyright Act's overall approach and well within judicial expertise.

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that contract was a viable option for database owners, stating that state contract law remains an "essential tool" for protecting databases. *Bill, Treaty Proposal Would Create New Protection of Databases*, *supra* note 177, at 141.

179. *See, e.g.*, O'Rourke *supra* note 5, at 551 (contending that while decompilation provisions in software license agreements should generally be enforced, such provisions should be preempted when the licensor has market power sufficient to allow it to engage in exclusionary practices or to leverage its power into another market).

ARTICLE

COPYRIGHT POLICY AND THE LIMITS OF FREEDOM OF CONTRACT

NIVA ELKIN-KOREN†

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I. INTRODUCTION

The Seventh Circuit Court of Appeals recently heard one of the most significant cases defining the proper scope of federal copyright law—*ProCD, Inc. v. Zeidenberg*.[1] In this case, the court considered whether contractual restrictions that broaden the bundle of rights granted by copyright law are enforceable. Specifically, ProCD sought to limit

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1. 86 F.3d 1447 (7th Cir. 1996) [hereinafter "*ProCD II*"].

contractually the right of users to distribute information contained in a database.[2]

The *ProCD* case was significant because information of all kinds (scientific data, educational texts, financial data, music, movies, and even legal opinions) is increasingly being licensed to users online. Because the Internet reduces transaction costs, it conceivably allows vendors to license every bit of information they control. In fact, licensing arrangements, supported by technological means of monitoring, may entirely replace the copyright regime with private contracts.[3] While commentators generally assume that parties will reach an efficient bargain by freely negotiating their respective rights and obligations, private bargaining may sometimes produce inefficient outcomes.

This article revisits contractual relationships between copyright owners and users. It argues that contracts that attempt to expand federal copyright protection should not be enforceable. After briefly introducing the economic rationale for copyright law, this article reconsiders some of the controversial issues regarding contract formation that confronted the court in *ProCD*. The general validity of non-negotiated mass-market licenses is beyond the scope of this article; it does, however, touch upon questions of assent to the extent it affects copyright policy. In particular, this article argues that standard form contracts that require a very minimal level of assent for contract formation interferes with copyright policy. Finally, this article suggests several considerations that may affect freedom of contract in the context of copyrighted works.

II. THE *PROCD* CASE

Matthew Zeidenberg purchased copies of ProCD's SelectPhone CD-ROM, which combined a database of telephone listings with a computer program for accessing the listings.[4] Zeidenberg did not sign any contract, though the box containing ProCD's database did indicate that the CD-ROM was subject to a licensing agreement.[5] The terms of the license were given inside the box and also appeared on the user's screen every time the

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2. Databases cannot be protected by copyright law unless the database is sufficiently creative to meet constitutional standards. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co., Inc., 499 U.S. 340, 344-61 (1991). In essence, copyright law protects the creator's original and creative contributions, such as selection, coordination, and arrangement, but not the underlying facts. *See id.* at 358-59.

3. *See* Pamuela Samuelson, *Will the Copyright Office Be Obsolete in the Twenty-First Century?* 13 CARDOZO ARTS & ENT. L.J. 55, 60-61 (1994); *see also,* Maureen A. O'Rourke, *Copyright Preemption After the* ProCD *Case: A Market-Based Approach,* BERKELEY TECH. L.J. 53, 53-56 (1997).

4. *ProCD II,* 86 F.3d at 1449-50.

5. *See id.* at 1450.

user ran the software.[6] The license provided that users could not make the software and listings available to other users.[7] Zeidenberg uploaded the telephone listings stored on the CD-ROM discs to his computer, combined it with his own original search engine, and made the listings available to Internet users.[8] ProCD filed suit, seeking an injunction against continued violations of the licensing agreement.[9]

The license at stake was a "shrinkwrap license." Shrinkwrap licenses are standard form contracts attached to mass-market software.[10] The term "shrinkwrap" refers to the transparent plastic in which mass-market software is often sealed. Copies of mass-market copyrighted works were traditionally distributed without a license, simply carrying the familiar copyright notice.[11] The rationale for this practice was that copyright law sufficiently protected the interests of the publisher in such transactions. As new distribution technologies arose, licenses became more prevalent in mass distribution markets. Uncertainty regarding computer program copyrightability, and the scope of such copyrights, led vendors to use shrinkwrap licenses with mass-market software.[12]

Book publishers have also begun to use licensing agreements. A purchaser of a book may expect to read it as many times as she wishes, to quote its text, or to use its excerpts. Some may also wish to reproduce a few pages from a book in a library for later reading or reference. These types of uses reflect our expectations when we purchase a book, and they are all considered "fair use" under copyright law.[13] Yet books in recent years include statements that re-define the terms under which they are being purchased. For example, a book may include the following terms on its cover:

> Except for the quotation of short passages for the purposes of criticism and review, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior permission of the publisher.

Are we bound by such restrictions? When the terms on the book provide that "no part of this publication may be reproduced," are we obliged to obtain permission for every quote we wish to make, regardless

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6. *See id.*
7. *See id.*
8. *See* ProCD, Inc. v. Zeidenberg, 908 F. Supp. 640, 645 (W.D. Wis. 1996), *rev'd*, 86 F.3d 1447 (7th Cir. 1996) [hereinafter "*ProCD I*"].
9. *See ProCD II*, 86 F.3d at 1450.
10. Shrinkwrap licenses would normally include provisions regarding proprietary rights, warranties, and limitations on users' rights. *See generally* Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239 (1995).
11. For example, "Copyright © 1970 by Publishing House Inc. All rights reserved."
12. *See* Lemley, *supra* note 10, at 1241.
13. *See* 17 U.S.C. § 107 (1994).

of its scope, nature, or purpose? When the terms allow "quotation of short passages for the purposes of criticism and review," do we need permission for quoting a short passage for another purpose—say a birthday card? What if the inner cover of a cookbook provides that "no recipe in this book may be used unless royalties are paid to the publisher?" Is cooking subject to royalties? What is the legal status of publisher statements purporting to restrict use?

Shrinkwrap licenses and book licenses are both contractual arrangements regarding the intellectual property aspects of goods. While the purchaser of a book or a CD-ROM may acquire ownership of the physical copy of the work she has purchased, she receives only limited use privileges in the copyrighted materials.[14] Copyright law distinguishes between rights in a "work of authorship," the intangible aspect of a work, and rights in its tangible manifestations.[15] A book purchaser becomes the owner of the book, but receives no copyright in it. The publisher remains the copyright owner, and copyright law prevents any unauthorized reproduction or public distribution of the work. The question is whether the bundle of rights retained by the copyright owner may be redefined by the parties to a contract. Under what circumstances must users of copyrighted works obey contract provisions that supplement or expand copyright protection? Are copyright owners free to expand their rights beyond those available under copyright law by imposing contractual restrictions on the use of their works? To what extent are such licenses binding?

The district court in *ProCD I* found no binding contract between the parties. The court determined that Zeidenberg did not accept the terms of the license.[16] Furthermore, the district court decided the contract was

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14. *See* 17 U.S.C. §§ 106, 106A (1994). Note that some software vendors seek to avoid the provisions of section 117 of the 1976 Copyright Act by defining the transaction as a license rather than a sale of a copy. Section 117 authorizes owners of copies of computer programs to make copies to the extent it is an essential step in the utilization of the program. *See* 17 U.S.C. § 117 (1994).

15. *See* 17 U.S.C. § 202 (1994).

16. *ProCD I*, 908 F. Supp. at 644. The district court held that placing the package of software on the shelf is an offer and that paying the asking price and leaving the store with the goods is acceptance. *Id.* at 651-52. The contract formed by this exchange includes only the terms on which the parties have agreed, namely, the terms that were explicit at the time of the transaction. *Id.* at 652-55. Any terms that purchasers could not inspect were not binding. ("I conclude that because defendants did not have the opportunity to bargain or object to the proposed user agreement or even review it *before* purchase and they did not assent to the terms explicitly *after* they learned of them, they are not bound by the user agreement.") *Id.* at 655 (emphasis added). The court further noted that users should be given a fresh opportunity to review any terms to which they are bound. This is because licensors reserve the right to modify the terms of their shrinkwrap licenses in future versions. Therefore, the court did not consider prior purchases of the same product as a sufficient opportunity to inspect the terms of the license. *Id.* at 654-55. Finally, the court relied on the proposal of the American Law Institute to amend UCC § 2-203 to make standard form contracts enforceable under certain circumstances. The court concluded that

unenforceable because it conflicted with copyright policy. Licenses that prohibit the distribution of public information, the court held, "step into territory already covered by copyright law."[17] If such provisions were enforceable they "would alter the 'delicate balance' of copyright law" and "allow parties to avoid copyright law by contracting around it."[18]

The court of appeals disagreed. The appellate court found that the purchase of the software was subject to the license. The contract itself was formed when Zeidenberg accepted the terms of the license in the manner specified by ProCD—by using the software. In doing so, Zeidenberg was performing an act that ProCD (the offeror) proposed to treat as an act of acceptance.[19] The court held that "[t]erms and conditions offered by contract reflect private ordering, essential to the efficient functioning of markets."[20] The court recognized that "some applications of the law of contract could interfere with the attainment of national objectives," but concluded that the "general enforcement of shrinkwrap licenses of the kind before us does not create such interference."[21] As a general matter, the court found any "simple two-party contract" (whether generous or restrictive in its terms) to be enforceable.[22]

The conflicting opinions by the two courts in the *ProCD* case demonstrate the potential conflict between copyright policy and freedom of contract. They reflect different approaches to the regulation of

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under current law, and until the amendment is made effective, shrinkwrap licenses are not binding. *Id.* at 655-56.

17. *Id.* at 658.

18. *Id.* The legal doctrine under which the court held the license unenforceable was the preemption doctrine. *See* discussion *infra* Part III.A.

19. *ProCD II*, 86 F.3d at 1452:

> A vendor as a master of the offer, may invite acceptance by conduct, and may propose limitations on the kind of conduct that constitutes acceptance. A buyer may accept by performing the acts the vendor proposes to treat as acceptance. And that is what happened. ProCD proposed a contract that a buyer would accept by using the software after having an opportunity to read the license at leisure.

20. *Id.* at 1455.

21. *Id.*

22. *Id.* However, the court appeared to narrow its holding when it stated "[W]e think it prudent to refrain from adopting a rule that anything with the label 'contract' is necessarily outside the preemption clause: the variations and possibilities are too numerous to foresee." *Id.* Yet the court also stated, "But whether a particular license is generous or restrictive, a simple two-party contract is not 'equivalent to any of the exclusive rights within the general scope of copyright' and therefore may be enforced." *Id.* In a later decision, Judge Easterbrook further elaborated this doctrine regarding contract formation. In *Hill v. Gateway 2000*, Inc., 105 F.3d 1147 (7th Cir. 1997), the court held that "[a] contract need not be read to be effective; people who accept take the risk that the unread terms may in retrospect prove unwelcome." *Id.* at 1148. This article does not argue that no bargain should be enforced unless both parties had the opportunity to read the terms before the transaction became effective. It does suggest, however, that the low level of assent recognized by the court as sufficient for contract formation makes contract claims equivalent to copyright claims. Therefore, standard form contracts that rely upon this low level of assent should be subject to the preemption doctrine.

information. The approach taken by the district court perceives copyright law as a comprehensive, mandatory arrangement that restricts the freedom of the parties to contract around it. The opinion of the court of appeals, by contrast, reflects a perception of copyright law as a set of "default rules" that in most cases should allow the parties to replace the statutory scheme with a contractual arrangement of their choice.[23] While the first approach is concerned with preserving the "social bargain" regarding the use of information as reflected by copyright law, the latter emphasizes "freedom of contract" as a means for reaching efficient functioning of the information market.

To understand better this controversy, an examination of the fundamental principles that govern copyright law and contract law is necessary.

III. THE ECONOMIC RATIONALE FOR COPYRIGHT LAW

Copyright law defines initial endowment in "original works of authorship"[24] such as books and computer programs. The law specifies the respective rights of owners and users in copyrighted works. Copyright owners are provided with a set of exclusive rights to authorize the reproduction, adaptation, public distribution, public display, and performance of their works.[25] They may sell these rights or license them to others for a fee. Users are free under the law to make any use of the work that copyright law does not otherwise exclude.

The economic rationale for copyright law is reasonably intuitive. Copyright law seeks to remedy a market failure in the dissemination of information,[26] commonly referred to as the "public good" problem. Information is a "public good" in the sense that its creator cannot

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23. As I shall argue below, I disagree with this perception of copyright law. The primary function of copyright law is to define initial endowment. Copyright law is not a default rule in the economic sense. First, it does not reflect the most efficient allocation among the parties. Default rules are designed to reflect the parties' expectations in order to minimize transaction costs. *See* David Charny, *Hypothetical Bargains: The Normative Structure of Contract Interpretation*, 89 MICH. L. REV. 1815, 1841-42 (1991). *But see* Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87, 126 (1989) (suggesting that in particular contexts penalty default rules are likely to be more efficient, since they are designed to give at least one party—typically the party with superior information—an incentive to contract around the default rule and therefore to choose affirmatively the contract provision both parties prefer). Copyright law cannot reflect the most efficient bargain of the parties. This is because of the potential for a "public good" market failure in any market for information. Such market failure, on which copyright policy rests, prevents efficient transactions from occurring. Second, copyright law defines initial endowment. Whether these rights should be governed by the law of property or the law of torts is a question addressed below.

24. 17 U.S.C. § 102 (1994).

25. *See* 17 U.S.C. § 106 (1994).

26. I use the term "information" to refer to any "work of authorship," namely works that are the "subject matter" of copyright law. *See* 17 U.S.C. § 102 (1994).

efficiently exclude its use.[27] The costs of producing information—such as writing a book or developing a computer program—tend to be high, while the costs of copying—such as copying a program on a floppy disk—are often low. If creators must invest substantial money in producing a work but cannot efficiently exclude non-payers, they may not reap the value of their efforts.[28] Free-riding may reduce incentives for investment in creation, and producers would under-supply information. Copyright law overcomes this difficulty and encourages creation by providing creators with a legal right to exclude others. It allows them to use the power of the federal government to exclude non-payers and to deter potential free-riders. By legally excluding non-payers, the law allows creators to collect fees for the use of their works and secure a return on their investment.[29]

However, copyright protection involves a deadweight loss: the owner's ability to exercise monopoly power allows it to set the price for works at a level greater than the marginal cost of a copy.[30] Consequently, potential purchasers who value the work at more than its marginal cost, but less than its monopoly price, will not purchase it, leading to the deadweight loss.[31] In other words, while copyright law is designed to remedy the market failure of the "public good," it causes another type of a market failure by creating a monopoly.[32]

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27. "Non-excludability" means that excluding non-payers (free-riders) from using the information is either impossible or inefficient. In other words, given a good for which the marginal exclusion cost is greater than the marginal cost of provision, spending resources to exclude non-payers is inefficient. *See* Peter S. Menell, *Tailoring Legal Protection for Computer Software*, 39 STAN. L. REV. 1329, 1337 (1987) [hereinafter Menell, *Tailoring Legal Protection*]; *see generally* William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325 (1989); Peter S. Menell, *An Analysis of the Scope of Copyright Protection for Application Programs*, 41 STAN. L. REV. 1045, 1059 (1989).

28. *See* Menell, *Tailoring Legal Protection*, *supra* note 27, at 1337.

29. According to the neoclassical economic model, government intervention in the market is justified only to the extent that it is necessary to remedy a market imperfection. Information products, such as books or computerized telephone listings, exhibit one of these market imperfections. Specifically, information products are "public goods." A "public good" has two distinct characteristics: non-excludability and non-rivalrousness. *Id.*

30. If everyone is allowed to copy ProCD's software, then the marginal cost per copy will be low since the cost of a floppy disk and the time necessary for copying are negligible. Therefore, if competitors are allowed to copy the product freely, then its price would go down to the marginal cost. This price drop would allow many users who value the product at such a cost to use it. As noted by the court, however, the product cost $10 million to develop. *ProCD II*, 86 F.3d at 1449. ProCD would need to charge more than the marginal cost of creating a copy in order to recoup such an investment. Copyright law allows ProCD to prevent unauthorized copies and to sell at a price higher than the marginal cost.

31. *See* William W. Fisher III, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1659, 1702 (1988) ("'[D]eadweight loss' is measured by the total of the consumer surplus that would have been reaped by the excluded consumers and the producer surplus that would have been reaped by the copyright owner had he sold that work to them.").

32. Other societal costs include maintaining the copyright system (registration) and using the legal system to deter copyright infringements and to enforce owners' rights. *See* Menell, *Tailoring Legal Protection*, *supra* note 27, at 1340.

The deadweight loss is amplified by another aspect of information. Information is non-rivalrous in the sense that once a work is created, its use by one user does not detract from the use of the same information by others.[33] This quality of information suggests that once producers create information, maximizing its use would be optimal. Thus, a monopoly granted under copyright law should be limited to the scope necessary to provide incentives to create and should minimize restrictions on access to works.

Furthermore, because information is created incrementally, copyright protection increases the costs of creating new works.[34] Information stimulates the creation of more information, as newly created works make use of prior art.[35] Existing information becomes the building blocks of the information products of the future. A copyright monopoly may restrict further creation because royalties and transaction costs incurred in gaining access to prior art increase the cost of expression involved in producing new works. Limiting access to information may thus further inhibit innovation stimulated by existing works.

Given these basic qualities of information, copyright law seeks to balance the level of incentives to create and the interest in maximizing access to information once created. Finding the correct balance between access and incentives is the central task of copyright policy.[36] Copyright monopoly induces production of information by allowing non-payers to be excluded and information to be marketed at a monopoly price. At the same time, however, copyright law limits this monopoly to serve the ultimate purpose of maximizing access to information. The law thus regulates access to information by balancing incentives to create and accessibility of information.[37]

These conflicting considerations under copyright law affect the nature of rights granted by the law. Copyright monopoly is contingent, instrumental, and limited to the level necessary to provide incentives. It is restricted under the statutory provisions and legal doctrines such as "fair use."[38] This instrumental perception of copyright monopoly

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33. *See id.* at 1337.

34. Landes and Posner refer to this phenomenon as "cost of expression." *See* Landes & Posner, *supra* note 27, at 327. Compare this analysis with Landes and Posner's similar discussion of the consequences of providing copyright protection to ideas, which they argue may increase the cost of creating works and consequently may reduce the number of works being created. *Id.* at 349.

35. This proposition may generally explain the development of arts and science, but the extent to which new creation uses prior art may differ from one market to another. The refining of existing programs or the use of prior art may be more common in the software industry then in the visual arts.

36. *See* Landes & Posner, *supra* note 27, at 326.

37. *See* Robert A. Kreiss, *Accessibility and Commercialization in Copyright Theory*, 43 UCLA L. REV. 1, 2-4 (1995).

38. *See* 17 U.S.C. §§ 107-120 (1994).

suggests that users are free to access any information that falls outside the scope of copyright monopoly. Copyright law does not simply define the copyright owners' rights, but rather draws the boundaries between privately and publicly accessible information. It defines both owners' exclusionary rights and users' access rights. Users are allowed unrestricted use of any information that has not been explicitly excluded from the public domain.[39]

Copyright law includes many provisions that establish users' rights. Some of these provisions define those rights explicitly, such as the right to receive a compulsory license[40] or access privileges for libraries.[41] Other access rights derive from restrictions on the scope of the exclusive rights granted to owners. The monopoly granted to copyright owners under the law is limited. It lasts for only a set period of time and is restricted by statutory provisions.[42] Similarly, the fair use doctrine defines permissible usage. When a use is found to be "fair," the user is exempt from copyright liability, and this permissible usage provided by law thereby restricts the scope of the owner's copyright.[43]

Let us now return to our question: to what extent may individual contract provisions supplement or expand federal copyright protection? We have seen that rights granted under copyright law reflect a delicate balance between an owner's monopoly and a user's privilege to access information. It follows that any attempt to change the balance struck by copyright law may distort federal policy. Contractual arrangements that provide owners with rights not granted to them under copyright law confine access to information in a way not intended by the law.

Two major objections may be raised against this argument, both essentially claiming that the argument fails to acknowledge the difference between contract law and copyright law. One possible objection is that a contractual right differs from a copyright because it cannot constitute a right against the world. Another objection is that copyright defines initial endowment while contract law governs only transferability of entitlements already determined. Therefore, a contractual claim may not change initial endowment. A contract only reflects subsequent bargains.

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39. The concept of the "public domain" refers to the entire universe of works and uses that are not protected by copyright law.

40. The 1976 Copyright Act imposes compulsory licenses in several industries. *See, e.g.*, 17 U.S.C. §§ 111, 115, 116 (1994). For example, copyright owners cannot prohibit the preparation of a phonorecord using a composition once it has first been authorized for distribution on a phonorecord. A performer may obtain a compulsory license to make a phonorecord using the composition. *See* 17 U.S.C. § 115 (1994).

41. One such provision under the 1976 Copyright Act provides special privileges to libraries. *See* 17 U.S.C. § 108 (1994).

42. *See* 17 U.S.C. §§ 107-120 (1994).

43. *See* 17 U.S.C. § 107 (1994) ("Limitation on exclusive rights: Fair Use").

A. Contractual Arrangements Create Rights in Personam While Copyright Law Creates Rights in Rem

How can contractual arrangements distort copyright policy? After all, copyright law defines entitlements protected under a property rule, and therefore creates rights in rem, that is rights against everyone else. Contract law, by contrast, only creates rights against parties to the contract.

The *ProCD II* court addressed the issue of potential interference with copyright policy under the preemption doctrine.[44] Federal copyright law preempts any state law claim that conflicts with the federal copyright policies embedded in the Copyright Act.[45] One purpose of this statutory arrangement is "to prevent states from giving special protection to works of authorship that Congress has decided should be in the public domain . . . ."[46] Rights in the subject matter covered by copyright are preempted if they are "equivalent to any of the exclusive rights within the general scope of copyright . . . ."[47] One issue in *ProCD* is whether rights created by a contract can be equivalent to any exclusive copyrights.

The district court answered affirmatively. The possibility of "individually crafted evasions" of copyright law concerned the court. The court found that when "a contract erects a barrier on access to information" that would otherwise be accessible under copyright law, it alters the "delicate balance" created by law.[48] In such a case, the district court held, the contract should be preempted.[49]

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44. *ProCD II*, 86 F.3d at 1453.

45. *See* 17 U.S.C. § 301 (1994). Preemption doctrine guarantees a homogeneous federal copyright law system that does not leave any vague areas between state and federal protection. Similar considerations led to parallel provisions under the European Economic Community Directives. Preemption doctrine also seeks to prevent modification of the federal regulatory scheme by state legislation. The following discussion will focus only on the second consideration.

46. *ProCD II*, 86 F.3d at 1453. Recently, the Second Circuit gave an expansive reading to the preemption doctrine under § 301. In rejecting a partial preemption theory whereby the district court held that plaintiff could assert both federal copyright claims for infringement of a broadcast and state law misappropriation of rights in the underlying event, the Second Circuit held that:

> Congress, in extending copyright protection only to the broadcasts and not to the underlying events, intended that the latter be in the public domain. Partial preemption turns that intent on its head by allowing state law to vest exclusive rights in material that Congress intended to be in the public domain and to make unlawful conduct that Congress intended to allow.

National Basketball Ass'n v. Motorola, Inc., 105 F.3d 841, 849 (2d Cir. 1997). Under this approach, copyright law defines not only rights in copyrighted works, but also the appropriate scope of the public domain.

47. 17 U.S.C. § 301(a) (1994).

48. *ProCD I*, *908* F. Supp. at 658.

49. The district court found the ProCD license to be "an attempt to avoid the confines of copyright law and of *Feist*." *ProCD I*, 908 F. Supp. at 659 (citing Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991)). In *Feist*, 499 U.S. at 362, the Supreme Court held

The court of appeals disagreed. The court held that rights created by contracts cannot be equivalent to copyrights.[50] A right created by a contract is a right in personam—a right that may be asserted only against a party to the transaction; a contractual arrangement may not create an exclusive right against the world—a right in rem. When strangers are able to access the work there is indeed a significant difference between restrictions created by copyright law and restrictions created by contract. Copyright law allows owners to impose restrictions only on a party to the contract; rights in rem allow owners to impose restrictions on strangers. As demonstrated by the court in *ProCD II*:

> Someone who found a copy of SelectPhone . . . on the street would not be affected by the shrinkwrap license—though the federal copyright laws of their own force would limit the finder's ability to copy or transmit the application program.[51]

However, the significance of the distinction between copyrights and contractual rights depends on the inability of owners to limit unlicensed use. In other words, the more a producer can prevent access to unlicensed copies, the less significant the distinction becomes. Thus, if ProCD were able to eliminate unlicensed use by technological or legal means, there would be no "stranger" who was not bound by a license and was free of any contractual restrictions.

Such elimination of unlicensed use is not an abstract idea discussed here for the sake of argument. It was, in fact, enabled by the decision of the court of appeals. Recall that the court accepted the view that a contract is formed when the software is being used.[52] In fact, a contract may be formed whenever the potential licensee acts in a way defined as an acceptance by the offeror (the master of the offer). If that method of acceptance is defined by ProCD to be the use of the software, then any stranger who finds the CD-ROM in the street and uses it would become a party to the license agreement. In other words, if the standard of assent

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that telephone listings are not protected by copyright law. ProCD tried to achieve, through a contract, the protection denied by the copyright law.

50. Because contractual rights affect only the parties to the bargain and "strangers may do as they please," contracts cannot create "exclusive rights." *ProCD II*, 86 F.3d at 1454. The court of appeals makes somewhat contradictory statements on this issue. At one point, the court states:

> [W]e think it prudent to refrain from adopting a rule that anything with the label 'contract' is necessarily outside the preemption clause: the variations and possibilities are too numerous to foresee. *National Car Rental* likewise recognizes the possibility that some applications of the law of contract could interfere with the attainment of national objectives and therefore come within the domain of § 301(a).

Id. at 1455 (citing National Car Rental System, Inc. v. Computer Associates Int'l, Inc., 991 F.2d 426 (8th Cir. 1992)). Nevertheless, at another point, the court states that "whether a particular license is generous or restrictive, a simple two-party contact is not 'equivalent to any of the exclusive rights within the general scope of copyright' and therefore may be enforced." *Id.* (quoting 17 U.S.C. § 301(a) (1994)).

51. *Id.*

52. *Id.* at 1452.

necessary to form contractual relationships is minimal, then no unlicensed access to works will be possible. The outcome will be very similar to the effect of a right in rem.

Furthermore, the introduction of new distribution technologies blurs the distinction between rights in personam and rights in rem. The availability of direct communication with users and the technical ability to prevent any unlicensed access by technological fencing facilitate a regime that is very similar in its nature to a property regime.

On-line dissemination substantially enhances the capabilities of licensing. The Internet allows direct communication between sellers and buyers and thereby facilitates contractual relationships between vendors and end users in mass distribution. Networking establishes direct communication between publishers and users. It provides the means for negotiating and entering into licensing agreements for different uses of works. Because on-line providers control the physical access to their works, they are able to make access contingent upon accepting the terms of their license. Technology also provides the means for monitoring and enforcing contractual provisions. On-line distribution allows owners fully to control access to their works and facilitates the collection of fees on a pay-per-use basis. Thus, the Internet tends to reduce transaction costs by allowing authors and publishers to collect royalties directly from the users, and in precise proportion to the use being made. Charges may be based on the time spent on a document, or on the type of usage (search, downloading, or just browsing).[53]

When all access to the work is controlled and contingent upon agreement to a standard form license, the terms of the license govern all relationships between the content owner and anyone who acquires access to the work. This outcome is again very similar to a regime of exclusive rights. Even though this right is established "merely" against a party to a contract, no one may gain access to the work without being subject to a contract. With on-line dissemination, contractual arrangements converge with physical means of exclusion, monitoring, and control to create a de facto property right.

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53. The metaphor used by Goldstein to describe this environment is the:
> celestial jukebox, a technology-packed satellite orbiting thousands of miles above Earth awaiting a subscriber's order—like a nickel in the old jukebox, and the punch of a button—to connect him to any number of selections from a vast storehouse via a home or office receiver that combines the power of a television set, radio, CD player, VCR, telephone, fax, and personal computer.

PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX 199 (1994).

B. Contractual Arrangements Cannot Distort the Initial Endowment Defined by a Property Rule

Another objection to the claim that contracts may threaten the delicate balance achieved by copyright law is that contracts cannot distort the initial endowment defined by a property rule. This objection relates to the different functions of copyright law and of contract law. The argument states that copyright law defines initial endowment in works of authorship,[54] while contract law governs only transferability of entitlements already determined by a property rule. The relative complexity of the issue stems from the mixture of property rights and contract modes of protection that is typical of any copyright case. Copyright law is a mixed regime of property law and contractual arrangements.[55]

Determining the transferability of property rights is principally a function of contract law.[56] Contract law governs bargaining—namely, the transferability of rights. Private exchange operates upon the initial endowment as determined by copyright law. Therefore, a contractual arrangement cannot change initial endowment and can only reflect subsequent bargains.

While contractual arrangements may not change initial entitlements, they may change the final outcome of bargaining over these rights. If copyright law is viewed as law that regulates production of and access to information, then such contractual bargains should be examined from a copyright policy perspective. The question is whether policy considerations under copyright law support (or even require) limiting the freedom of contract when copyright transactions are involved. Under what circumstances would limiting freedom of contract be justified when contractual arrangements expand copyrights?

One assumption underlying copyright law is that owners of works (information) are not able to use technology to exclude non-payers. If this assumption is not valid, this undermines the justification for copyright law. Contractual arrangements backed by technological fencing may replace copyright law.

The availability of technological and contractual means of exclusion may further suggest that copyright law should be transformed into a body of law that not only defines owners' rights, but also explicitly guarantees

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54. The rights of owners are protected by a property rule—no one can take the entitlement of a copyright owner to her work unless she sells it willingly and at the price she finds appropriate. Copyright owners are able to receive injunctive relief to prohibit any intervention in their rights. *See* 17 U.S.C. § 502 (1994).

55. *See* Wendy Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343, 1416-17 (1989).

56. *See* MICHAEL TREBILCOCK, THE LIMITS OF FREEDOM OF CONTRACT 9 (1993).

users' rights. Securing those rights in a contractual regime may involve determining that some users' rights are inalienable. It may also involve other limitations on the freedom of parties—copyright owners and users—to contract. These issues are discussed in the next section.

IV. COPYRIGHT LAW AND THE FREEDOM OF CONTRACT

While part III of this paper demonstrated that a very low standard of assent makes contractual provisions essentially equivalent to copyright protection, the following discussion examines whether society should allow parties to contract around copyright provisions. The *ProCD II* case demonstrated how copyright owners may expand their copyrights by using a license. The following discussion begins by analyzing such transactions and examines whether licenses which contract away users' rights should be enforceable.

A. Defining the Bargain

Private exchange operates upon the initial endowment determined by copyright law. Owners are able to license their exclusive rights to willing users. Copyright owners of the cookbook discussed earlier may license the reproduction of the recipes for a fee or sell their exclusive right to make public distribution of the book to a publisher. However, copyright owners may not license a use that lies outside the scope of the monopoly granted under copyright law. Thus, the owner of the cookbook's copyright is unable to license the right to cook according to the book's recipes simply because he has no exclusive right over such cooking. In other words, he has no right to prevent others from doing so. Whether or not a copyright owner licenses readers to cook, everyone is free to use the recipes for cooking (although a person may not, without permission, distribute copies of the recipes).[57] Copyright law provides owners with a monopoly over the copyrights in the work, namely, the exercise of rights that fall within the scope of the owners' exclusive rights. It does not empower owners to control any use of their works.[58]

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57. That is, of course, unless another law provides the owner with a monopoly over the use of a recipe (such as patent law).

58. For a discussion of this distinction, see L. RAY PATTERSON & STANLEY W. LINDBERG, THE NATURE OF COPYRIGHT, A LAW OF USERS' RIGHTS 181-86 (1991). Publishers, however, seek to expand their power by "acting on a belief that any use of the work is the use of the copyright and vice versa." *Id.* at 182-83. Patterson and Lindberg demonstrate their argument by analyzing the provisions of common copyright licenses and copyright notices, including the license of the Copyright Clearance Center ("CCC"). The CCC license purports to license *any use* of published works notwithstanding the provisions of § 107 ("Fair Use") and § 108 ("Limitations on Exclusive Rights: Reproduction by Libraries and Archives"), which specifically exclude certain uses from the monopoly of the copyright owner. *Id.* at 183-84.

In *ProCD*, ProCD-licensed[59] CD-ROMs included copyrighted software and telephone listings on which ProCD had no copyrights. The user agreement provided that:

> You will not make the Software or the Listings in whole or in part available to any other user in any networked or time-shared environment, or transfer the Listings in whole or in part to any computer other than the computer used to access the Listings.[60]

While ProCD had the legal power to authorize unilaterally the reproduction and distribution of the software, it had no such proprietary right in the telephone listings. The listings were not protected by copyright law since they were not sufficiently original.[61] The listings were thus in the public domain and everyone was free to use them. The listings, however, were the only thing copied by Zeidenberg.[62]

As we have seen, seeking to control authorization for uses that fall beyond the monopoly of the copyright owner is in fact an attempt to make a bargain using legal rights which belong to someone else—the user. If users are free to use recipes in a cookbook, a copyright owner may not limit their right to do so. If users are free to reproduce or distribute telephone listings, since they are in the public domain, ProCD may not unilaterally restrict their rights by a license. Dissemination of information that society has chosen to make publicly accessible under copyright law cannot become restricted merely via a unilateral license imposed by the copyright owner.[63]

Nevertheless, ProCD may offer users a bargain in which users give up their use privileges, in return for access to the work. In such a transaction, ProCD does not license its copyright, but instead licenses the use of the listings. ProCD controlled access to the tangible medium that carried the listings and was therefore able to make access subject to restrictions. For such a bargain to be valid, it must be bilateral. As such, it is not merely an unwarranted exercise of power by the copyright owner, but rather an exchange of contractual obligations that creates rights and

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59. "License" refers to the legal permission to engage in some activity. A license may be unilateral. Licensing the copyrights should, however, be distinguished from licensing the use of a work.

60. *ProCD I*, 908 F. Supp. at 645.

61. *See supra* note 49.

62. *ProCD II*, 86 F.3d at 1450.

63. Compare this to the analysis of the district court in the *ProCD I* case regarding the application of the preemption theory:

> Rightful owners should be able to define the limits of permissible copying or modification of their works. It is only when a contract erects a barrier on access to information that under copyright law should be accessible that section 301 operates to protect copyright law from individually crafted evasions of that law.

ProCD I, 908 F. Supp. at 658.

duties and requires the consent of both parties. Users are selling their use privileges to the copyright owner when they choose to use the CD-ROM.

No matter how we describe the transaction, the fact that ProCD sought to expand its copyright by contractual provisions is apparent. The question is therefore whether such contractual provisions are enforceable; that is, under what circumstances should parties be allowed to contract around copyright provisions?

B. Should Parties be Allowed to Contract Around Copyright Provisions?

The question of whether copyright owners may expand their copyrights by contracts must involve not only the rights of owners but also those of users. Limiting the legal power of copyright owners to contract around some copyright provisions correspondingly restricts the power of users to contract away their fair use rights granted under copyright law. It makes users' rights, at least to some extent, inalienable. Is such inalienability justifiable?

Freedom of contract suggests that parties should be allowed to bargain freely over their rights. It assumes that assenting parties who voluntarily enter a private exchange have reached a bargain that makes them both better off, or else they would not have entered into it.[64] In other words, if a copyright owner and a user agree to restrict the user's privileges, the presumption is that such transactions are pareto superior.[65] Users who place high value on receiving the information will be willing to accept restrictions on its use.

That conclusion holds true, of course, only in the absence of any market failure that would undermine the fundamental propositions on which the freedom of contract rests (for instance, the proposition that both parties acted voluntarily or that they were fully informed). In the absence of a perfect market, limitations on the parties' abilities to engage freely in transactions may be a more effective way of achieving economic efficiency.[66] Such market imperfections, and the resulting need for limitations, may occur when copyright owners use contractual provisions to expand their rights under copyright law.[67]

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64. *See* Trebilcock, *supra* note 56, at 6.

65. A transaction is considered *pareto superior* if it makes one party better off while making no other worse off.

66. *See* Guido Calabresi & Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1111 (1972).

67. Several commentators have attempted to suggest criteria for determining the validity of use restrictions in shrinkwrap licenses. *See, e.g.*, RAYMOND T. NIMMER, THE LAW OF COMPUTER TECHNOLOGY: RIGHTS, LICENSES, LIABILITIES ¶ 7.24 (1992) (the validity of restraints should be determined in light of the entire transaction); Maureen A. O'Rourke,

1. THE DANGERS OF USING CONTRACTUAL ARRANGEMENTS TO EXPAND COPYRIGHTS

Freedom of contract assumes that users are the best guardians of their own interests, and that if users did not believe that they would benefit from the transactions in which they waive their use privileges, they would not enter into such transactions. Thus, the court of appeals in *ProCD II* held that "[t]erms and conditions offered by contract reflect private ordering, essential to the efficient functioning of markets"[68] and should therefore not be subject to preemption. Terms of the contract, the court held, should be determined by competition:

> Terms of use are no less a part of "the product" than are the size of the database and the speed with which the software compiles listings. Competition among vendors, not judicial revision of a package's contents, is how consumers are protected in a market economy.[69]

However, users' choices in transactions regarding copyrightable materials are very limited, because copyright law provides "legal fencing" for works that are non-excludable. It prevents strangers from making copies of the work, and thus forces them to enter into a contract with the copyright owner in order to gain access. The user must accept the owner's demands or forego the product.

A license that expands the creator's rights in copyrighted subject matter is tied to a product that is already protected under copyright law. The copyright monopoly is thus being used to expand market power and prevent competition. The copyright owner in *ProCD*, for instance, used the licenses to reduce competition. A provision in the user agreement prohibited making the listings, or any part of them, available to any other users. The restrictions were broad enough to cover any distribution of the listings, either for free or for a fee.[70] The license thus limited ProCD's competition in the market for electronic telephone databases. It reduced the ability of users to access freely any data that was explicitly held by the Supreme Court to be in the public domain,[71] even though the free availability of this data is what enabled ProCD to develop its database in the first place.

Users are arguably always subject to restrictions when they use a copyrighted work. But restrictions imposed by copyright law are limited and reflect the balance between the need to induce creation and the need to guarantee public access to information. If copyright owners are free to use contractual arrangements to restrict use, and are then able to use

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Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms, 45 DUKE L.J. 479, 545-51 (1995) (antitrust considerations).

68. *ProCD II*, 86 F.3d at 1455.

69. *Id.* at 1453.

70. *Id.* at 1450.

71. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co. Inc., 499 U.S. 340, 363-64 (1991).

copyright to prevent any use that is not subject to these restrictions, owners are gaining absolute monopoly over their works.[72]

When owners exercise absolute monopoly, users' choices become very limited. Users must either accept the contractual restrictions or relinquish access to the work altogether. Although some works of authorship may have perfect substitutes, many works do not.[73] Even when substitutes are available, such as in the case of telephone listings, the likelihood of competition over the terms of the license is low. Terms that restrict users' privileges under copyright law, such as publishers' statements on books and shrinkwrap licenses, tend to be uniform. This uniformity may reflect the fact that many users do not value these privileges; for example, they do not want to reproduce a book other than for critical review or to reverse engineer a computer program.[74] Even valuable uses, for which some users may be willing to pay a special fee, may not be licensed. Owners may not license a use—such as reverse engineering a video game console—that may threaten their market for other products.[75] Owners may also refrain from licensing uses that are critical of their works, such as parodies.[76] Such valuable uses are privileged under copyright law, but they may not occur under a contractual regime.

Finally, the low standard of assent that *ProCD II* held to be sufficient for contract formation does not promote competition over the terms. When validating a transaction does not require informing users of the terms of the license prior to the completion of the transaction, owners have no incentive to reveal the license restrictions in advance. Indeed, in *ProCD II*, the court emphasized that users are able to reject the terms after purchasing the software and before beginning to use it.[77] Yet at this stage users have already incurred various costs such as search costs, loss

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72. This point was acknowledged by the court of appeals: "Someone who found a copy of SelectPhone (trademark) on the street would not be affected by the shrinkwrap license—though the federal copyright laws of their own force would limit the finder's ability to copy or transmit the application program." *Id.* at 1454.

73. *See, e.g.*, Landes & Posner, *supra* note 27, at 328.

74. Users' attitudes towards their use privileges may not be clearly deduced from their behavior because of lax enforcement by copyright owners. Therefore, users have not been required to advocate strongly their desire to retain their use rights. In fact, only recently have copyright owners sought enforcement, and *ProCD II* is the first opinion that explicitly holds such licenses valid. Consequently, users' attitudes may change. The uniformity of licenses may also reflect disparities in bargaining power. Individual users simply do not have the necessary bargaining power to change standard industry contractual provisions.

75. *See* Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510, 1520-27 (9th Cir. 1992) (holding that disassembly of the object code of a copyrighted computer program is "fair use" when disassembly is the only way to gain access to ideas and functions embodied in the computer program).

76. *See* Landes & Posner, *supra* note 27, at 359.

77. "Notice on the outside, terms on the inside, and a right to return the software for a refund if the terms are unacceptable (a right that the license expressly extends), may be a means of doing business valuable to buyers and sellers alike." *ProCD II*, 86 F.3d at 1451.

of other transactions, and costs of delivery and adaptation to the users' environment; consequently, users may be reluctant at this point to reject the terms knowing that they would not be able to recover these costs. By enforcing licenses that were not bargained for, the court may have reduced incentives for competition over the terms of the transaction.

2. *CONTRACTUAL ARRANGEMENTS THAT EXPAND COPYRIGHTS IN MASS-MARKET DISTRIBUTION MAY CONFLICT WITH GOALS OF PUBLIC POLICY*

We have seen that the combination of copyright law and the legal power to restrict the use of information by standard form contracts expands owners' monopolies far beyond those intended under copyright policy. However, the shift to on-line dissemination suggests that the role of copyright law in securing owners' interests may be dispensable. As noted above, on-line dissemination not only facilitates licensing, but also enhances the ability of owners to exclude physically non-payers. The prospects of replacing a copyright system with a contract-based system are improving.

The question is whether this system will leave any information for free bargaining between owners and users. This section suggests that even though users may agree to restrict their use privileges in return for access to information, such restrictions may impose costs on society as a whole. Such costs may not be internalized by parties to any specific transaction, and thus, the implementation of use restrictions across the board may affect the public at large. These costs may impair the balanced control over information, previously imposed by copyright law, which is essential for its production and dissemination.

Information is not a typical commodity. Its commodification was enabled, in fact, by copyright law. As noted above, information is non-rivalrous and its use by one does not detract from the ability of another to use it. Thus, once information is produced, it is socially optimal to maximize its use by the public. To the extent that on-line dissemination replaces current distribution channels such as books, television, and radio, this information could become subject to license restrictions. In the absence of alternatives to current channels for distributing free information (such as television or public libraries[78]), our current capacity to access information at low cost will be restricted.[79]

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78. *See* Robert Berring, *Chaos, Cyberspace and Tradition: Legal Information Transmogrified*, BERKELEY TECH. L.J. 189, 203-07 (1997) (discussing the possible decline of libraries in response to the wide availability of on-line information).

79. *But see* Eric Schlachter, *The Intellectual Property Renaissance in Cyberspace: Why Copyright Law Could Be Unimportant*, BERKELEY TECH. L.J. 16, 21-31 (1997) (discussing on-line distribution methods that give large amounts of information free to all users).

Furthermore, the creation of new information, to a large extent, depends on exposure to existing information. Making some information freely available to the public is essential for stimulating further creation. We refine our ideas about the world through interactions with others' ideas, feelings, beliefs, and discoveries. A licensing regime will not facilitate random access to information as well as the existing copyright regime. If owners are able to restrict any use of information, they could attempt to charge for each and every use of the work. If information owners are able to charge for every conceivable use of their works, fewer users will be able to afford to purchase such access to information, and this cost barrier may limit opportunities for further development. A regime that allows owners to charge for any such interaction is detrimental to any vision of learning and growth. Even if price discrimination is available, many of the acts we currently do for free (and indeed take for granted), such as reading a book borrowed from the public library, will be subject to a licensing fee.

Random access to information is essential not only for stimulating further creation, but also for individuals' ability to shape their preferences. If every use of information involves a fee, users are required to choose in advance what information they seek to access. But how could we know in what we are interested before we even know what is available? How can our expectations be shaped in the absence of random observation of what is available to us? The need to choose our areas of interest in advance may narrow our experience of the world and of ourselves. Information is essential for self-actualization. Political opinions and preferences depend upon our ideas and understandings about the world, upon our values and our concept of the good. Preferences are affected by information about what is available to us and to others. The type of information we are able to access will determine the options we perceive as available to us. Therefore, our ability to access information (surveys, movies, historical texts, legal opinions) and to use it when interacting with others is crucial for self-actualization.

Finally, a licensing regime may have social and political consequences by causing information deprivation and information inequality. Collecting fees for each and every use means that some people will be deprived of information because they cannot afford it. The power to control every conceivable use of information places a privilege never enjoyed by the public under private control. It therefore enhances the ability of owners to exclude access to cultural forms and to limit access to information on the basis of economic power. Information in the broad sense of the term—comprising data, books, movies, music—constitutes culture. Depriving access to cultural artifacts may have political consequences. It may severely restrict the ability of people to react and

respond to cultural symbols. In addition, it may hamper the ability of people to participate in political deliberations and social dialogue.

The special nature of information that allows it to be shared at minimal cost and makes existing information essential for future creation suggests that information dissemination and use should be maximized. A contractual regime that allows owners to commodify information may raise use barriers to an extent that would be socially undesirable.

V. CONCLUSION

Today, more than ever before, we need a theory that defines the boundaries of the freedom of contract in the context of copyright law. In the past, copyright law was limited to contexts in which contracting was impossible or was prohibitively expensive; in fact, copyright law arose to address the inability of contractual means of exclusion. On-line dissemination and other technological methods of licensing allow the replacement of copyright law by a contractual regime, which suggests that copyright may no longer play a central role in protecting owners' rights.[80] However, copyright may now become crucial for defining the balance between owners and users. Just as legal intervention in the market for information was originally necessary to allow the exclusion of non-payers, legal intervention in the market is now necessary to allow the inclusion of non-payers. The need to secure general access to information will require maintaining copyright schemes in contractual regimes.

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80. *See* Samuelson, *supra* note 3, at 60-61 (suggesting that technological and contractual fencing may replace copyright protection for intellectual property).

ARTICLE

THE END OF FRICTION? PROPERTY RIGHTS AND CONTRACT IN THE "NEWTONIAN" WORLD OF ON-LINE COMMERCE

ROBERT P. MERGES†

TABLE OF CONTENTS

I. INTRODUCTION

Law on-line, or in cyberspace, is a big topic. This essay discusses one aspect of it: the respective roles of contract and property rights. In particular, I will concentrate my remarks on two particular issues. First, I will discuss why property rights are necessary in cyberspace. Second, I will examine the role of the "fair use" doctrine in copyright law. Conditions in cyberspace at least partially undermine the prevailing "market failure" theory that informs this doctrine. Instead of abandoning the doctrine, which I believe serves some important goals, I advocate an

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alternative proposal. At least where markets are robust, we should return to the doctrine's redistributive roots, in effect giving small subsidies for certain users of copyrighted works.

Before moving on, I must clarify some background issues.

A. Varieties of Transaction Costs

Arguing, as some have, that transaction costs are negligible in the on-line environment is an oversimplification.[1] This position ignores many important types of transaction costs.[2] The conventional account lists four such costs:

- Identifying potential buyers and sellers;
- Negotiating deals;
- Measuring performance (e.g., metering use); and
- Enforcing agreements.[3]

Cyberspace does not eliminate all of these sources of transaction costs. In many cases, it eliminates the first; the on-line environment effectively brings buyers and sellers together, regardless of their location. The early success of such on-line businesses as sports scores and information, flower delivery, and stock photography attests to the dramatic lowering of this first type of transaction cost. But that still leaves the other three types of costs.

While the on-line environment is theoretically capable of facilitating the bargaining process between buyers and sellers, existing commerce does not reveal much promise. Parties conduct almost all commerce on a "take it or leave it" basis. Transactions that require negotiation, such as the consummation of an offer to purchase a car, stock, or franchise, usually occur off-line. Of course, using the Internet, both parties can cheaply discover alternative deals that may be available. But this exerts only an indirect effect on negotiations, presumably making it more difficult to bluff or take advantage of information asymmetries. In general, cyberspace does not appear to lower negotiation costs in most cases.

Cyberspace does lower the cost of enforcing deals, sometimes radically. I refer to the plethora of technological systems, some in place, many more proposed, designed to prevent the use of digital content without authorization. These systems take various forms, but at the risk

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1. *See, e.g.*, Richard Allan Horning, *Has Hal Signed a Contract: The Statute of Frauds in Cyberspace*, 12 SANTA CLARA COMPUTER & HIGH TECH. L.J. 253, 256 (1996) ("By linking buyers and sellers electronically and eliminating paperwork, . . . transaction costs should drop dramatically.").

2. *See generally* OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM (1985); Howard A. Shelanski & Peter G. Klein, *Empirical Research in Transaction Cost Economics: A Review and Assessment*, 11 J.L. ECON. & ORG. 335 (1995).

3. THRAINN EGGERTSSON, ECONOMIC BEHAVIOR AND INSTITUTIONS 14-16 (1990).

of oversimplification I will briefly discuss only two: (1) encryption, and (2) self-reporting content.[4]

B. Encryption

Encryption, hailed as the keystone in the architecture of cyberspace, is the technology that will supposedly drive this powerful new engine of commerce. These claims, however, are exaggerated. Alone, encryption guards only one link of a potentially very long commercial chain: the original exchange between seller and buyer. To be sure, a chain with one titanium link is stronger than an entire chain made of weaker metals. Conversely, if the chain is vulnerable at several points, a single titanium link might not prevent a break in the chain.

The vulnerability inherent in encryption technology arises when the digital content is decrypted, which is a necessary step in its use. Once decrypted, the digital content may be subsequently transferred in an unencrypted form. This new but weaker link in the chain of possession represents another point of vulnerability for the digital content owner.[5] Below, I will discuss how to prevent uncompensated uses further along the chain of possession.

C. Self-Reporting Content

Imagine a chain with sensors on every link. If a link were weakened, it would send a warning signal to an operator for restoration or replacement. This is one analogy for what I label the self-reporting content model. Alternatively, the model could be designed not to warn of failure, but simply to report each use. The analogue in the chain example is a link that reports every time it goes around a sprocket, which would assure the rightful owner full compensation for the chain's use.

In sum, if the self-reporting content and encryption technology systems worked perfectly, they would dramatically lower the monitoring and enforcement costs associated with information exchanges.[6]

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4. *See generally* Mark Stefik, *Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 BERKELEY TECH. L.J. 137 (1997).

5. I do not mean to argue that encryption does not strengthen the de facto protection available to a seller of content. The point is simply that the enhancement is not complete; the content may still be subject to misuse down the line.

6. Not to zero, of course; these systems are expensive to design and implement (for instance, consider the costs of embedding self-reporting features in every piece of digital content).

II. PROPERTY RIGHTS AND CONTRACT IN CYBERSPACE

The on-line community is highly intolerant of any conventional wisdom. One item of conventional wisdom, however, has emerged regarding the role of contracts in digital commerce: contracting will be ubiquitous.[7] This assessment reflects somewhat the notion conveyed in Grant Gilmore's famous little book[8] regarding the death of property, regulation, and taxation. Gone, all of them; all replaced by contract.

One might be tempted to dismiss this view as the ranting of over-caffeinated Generation Xers, or a typical first approximation political theory from an elite cadre of technically trained pioneers.[9] Yet there is more to it than that. Unlike other contexts, where the contract form may be inappropriate, the use of contracts in cyberspace seems natural. The on-line medium is textual, and affirmative steps are already required to "surf" web sites or to access information. This environment is conducive to reading, contemplating and responding to message screens that contain a variety of terms and conditions. If a user elects to "click here to accept," the user continues to the next screen.[10]

The premise that property rights will become irrelevant in cyberspace stems from this ease of contracting. Property rights will become irrelevant in the on-line environment because every transaction can and will be mediated by a contract. Because the contract form allows parties greater flexibility in tailoring the terms and conditions of an agreement, its use will render the more static property category obsolete. In fact, significant pieces of information are already transferred strictly by contract, without the aid of background property rights.[11]

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7. *See, e.g.*, J.H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data?*, 50 VAND. L. REV. 51, 70 (1997) (describing this view, and citing sources critical of it):

> By restricting access to identifiable online subscribers, for example, and by "placing conditions on access and [using technology] to monitor . . . customer usage," the publisher can largely restore the power of the two-party contractual deal that the advent of the printing press had appeared to destroy. In effect, publishers in this position may not need copyright law at all, even if they qualify for protection.

Id. at 70 (quoting Jessica Litman, *After Feist*, 17 U. DAYTON L. REV. 607, 611 (1992)).

8. GRANT GILMORE, THE DEATH OF CONTRACT (1974).

9. Libertarianism was certainly no stranger to the Silicon Valley of fifteen years ago, either.

10. *See* Diana J.P. McKenzie, *Commerce on the Net: Surfing Through Cyberspace Without Getting Wet*, 14 J. MARSHALL J. COMPUTER & INFO. L. 247, 254 (1996) ("[O]n-line contracting is moving toward a system where users simply log on, point, and click—and a contract is formed.").

11. Genetic information, for example, is available by contract. *Cf. Face Value: Genes and T-Shirts—Selling Information Rather Than Drugs is the Key to Making Swift Profits in Biotechnology*, THE ECONOMIST, Jan. 4, 1997. Contract is the only option since fragmentary gene data is generally not patentable. *See* Rebecca S. Eisenberg & Robert P. Merges, *Opinion Letter as to the Patentability of Certain Inventions Associated with the Identification of Partial cDNA Sequences*, 23 AM INTELL. PROP. L. ASS'N Q.J. 1 (1995).

One crucial assumption informs this view of the future: under ideal circumstances, contracts afford parties everything property rights do and more. Stated another way, property rights are viewed as creating a pre-determined, "off-the-shelf" legal relationship, while contracts are presumed to be highly flexible and adaptable. Contracting parties are free to specify the contract's subject matter, the parties' respective rights and duties, the termination events, and (to some extent) the remedies.

A. The Problem of Privity

Contracting involves one potential problem: it is a relationship premised on voluntary consent. Although what may constitute consent changes over time,[12] one element is still required. Parties must be in privity with each other for a contract to be formed. This privity requirement makes contracting in cyberspace problematic.

Clearly, two parties can, if they wish, enter into a contract in cyberspace. The flexible apparatus of offer and acceptance undoubtedly incorporates this form of deal-making. For contractual duties to remain enforceable, however, privity must exist between an original contracting party and each successive transferee along the chain of possession. Putting aside the special cases of intended third party beneficiaries[13] and defective product warranties, in order for some party (*A*) to sue another party (*C*) for breach of contract, *A* and *C* must have entered into an agreement at some point. If *C* buys an asset from *B* (who contracted with *A*) and does something to harm *A*, *A's* cause of action normally is against *B*, not *C*.

Party *A* may try to protect itself from this risk in the original contract with *B* by, for examples, imposing restrictions on subsequent transfers, through indemnification, or by protecting itself against liability for third party (*C's*) actions. Each of these examples, however, is dependent on *B's* ability to adhere to its promises vis-à-vis third party activity. If several *Bs* exist, one could be insolvent, another unreachable in jurisdictions open to *A*, or the like. Under contract law, *C* is unreachable, except through *B*.

Given the speed at which information (and associated contractual obligations) changes hands in cyberspace, the chain of possession in a typical case could be much longer than *A*, *B*, *C*. If other parties are

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12. *See, e.g.*, Hill v. Gateway 2000, Inc., 105 F.3d 1147 (7th Cir. 1997) (enforcing warranty included inside box containing computer bought by plaintiff); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996) (terms inside a box of software bind consumers who use the software after an opportunity to read the terms and to reject them by returning the product); *cf.* Carnival Cruise Lines, Inc. v. Shute, 499 U.S. 585 (1991) (enforcing a forum election clause that was included among three pages of terms attached to a cruise ship ticket).

13. *See infra* note 14.

involved—say, *D* through *J*—the aforementioned problem becomes even more intricate. Just one weak link in the chain can leave *A* in the lurch. Generally speaking, all parties entering the picture after the weak link will be off the hook. The attendant risks to *A* are obvious.

B. Overcoming A Break in the Chain of Privity

Might the law develop a policy to deal with breaks in the chain of privity? It would not be the first time. The privity requirement has been alleviated or eliminated in other fields.[14] Why not in cyberspace?

Dispensing with the privity requirement could make sense for two reasons. The first is related to quasi-contracts: if everyone expects digital content to be transferred with conditions on use, anyone who receives information without any contractual restrictions might be obligated to investigate the matter more carefully. Perhaps the recipient of information could check the original source or spot clues from the material's author or original compiler. The law of cyberspace might evolve into a regime of restitution writ large, where no one expects to receive a benefit of commercial advantage for free.[15]

The second plausible reason to dispense with the privity requirement would be simple pragmatism. Authors of digital works might need "super-contractual" means of protection to earn a fair reward. Extending the contract form might be deemed essential to protecting the investment in digital content.

A move in this direction, whether based on these policies or others, would not be unprecedented. For example, the law of warranties has been heading in this direction for some time.[16] Contract doctrine is, after all, continually updated, most recently to take account of transactions where contract terms are presented only after a consumer makes a purchase. Why not stretch privity for the benefit of digital commerce?

The answer essentially lies in the difference between stretching and breaking. Contract law has always resisted efforts to do away with the

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14. *See, e.g.*, William K. Jones, *Economic Losses Caused By Construction Deficiencies: Competing Regimes of Contract and Tort*, 59 U. CIN. L. REV. 1051 (1991). Indeed, William Prosser authored a widely cited article on "The Fall of the Citadel," celebrating the end of the privity requirement in products liability cases. *See* William L. Prosser, *The Fall of the Citadel*, 50 MINN. L. REV. 791 (1966). I do not include third-party beneficiary contracts in this discussion because (1) they are an anomaly even in the common law tradition, and (2) the requirement that third parties must be intentional beneficiaries of a contract amounts to a sort of quasi-privity in any event. *See* VERNON V. PALMER, THE PATHS TO PRIVITY: THE HISTORY OF THIRD PARTY BENEFICIARY CONTRACTS AT ENGLISH LAW (1992).

15. On the general notion that much of intellectual property law can be derived from simple notions of restitution, see Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 VA. L. REV. 149, 156-57 (1992).

16. *See* Richard E. Speidel, *Warranty Theory, Economic Loss, and the Privity Requirement: Once More into the Void*, 67 B.U.L. REV. 9 (1987).

privity requirement entirely. Areas which have already abolished privity requirements, most notably warranties under the Uniform Commercial Code (UCC), are properly considered exceptional.[17] This reluctance is perfectly understandable when an obligation is based squarely on a party's consent. Indeed, the few categories of quasi-contract obligation not based on consent—restitution, for example—have always had a restless, Procrustean feel in the basic course on Contracts. Pushing contract law in that direction when it seems unwilling to do so makes little sense in this case.

Besides, as mentioned earlier, our legal system already has a well developed category of obligation to govern relations between parties not in privity, called "property." Any contractual scheme that sufficiently binds non-parties would, in essence, become some sort of property right. With all deference to the notion of social construction of legal categories, why not call it that?

C. The Property-Contract Interface

Traditionally, to gain the advantages of a state-backed property right, some of the advantages offered by a regime of free contract must be sacrificed. Some agreements possible under the latter system will be unenforceable under the former. I call this a property-contract "tradeoff." In intellectual property, for example, a party could lose some degree of contractual freedom when it abandons a trade secret in favor of a copyright or patent. Consider further the requirements to convert a bilateral agreement between adjoining landowners into a covenant running with the land. Because the restraint on alienation doctrine represents one of the rare common law doctrines whose function is to police the contract-property boundary, it is worth examining.

1. THE PROHIBITION AGAINST RESTRAINTS ON ALIENATION

Restraints on alienation are largely considered undesirable. We are taught as much in law school Property courses. First year Contracts courses, on the other hand, involve agreements to restrain the post-transaction behavior of the contracting parties. The difference is that a

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17. The usual warranty case where lack of privity is ignored involves a manufacturer, a distributor, and a consumer. Traditionally, the consumer cannot sue the manufacturer for breach of warranty due to lack of privity. Numerous cases have set aside contract law's privity requirement under these circumstances. *See generally* Speidel, *supra* note 15, at 9. The rationale is straightforward: consumers are the intended beneficiary of a product warranty (distributors usually don't use the product themselves), and they expect a warranty to be binding. Ignoring privity thus comports with the expectations of the parties.

bilateral agreement applies only between contracting parties, whereas a restraint on alienation "runs with the property," and hence interferes with all potential future parties as well.

The frequently voiced rationale for the prohibition of restraints on alienation centers on the need to keep markets functioning smoothly.[18] If the system allows too many bundles of rights that have been modified in idiosyncratic ways, both the speed and certainty of exchange will be diminished. The basic idea is that well functioning markets for land require fairly standardized bundles of rights to work efficiently.

Richard Epstein has argued that this rationale is weak even in markets for real property.[19] The recording of servitudes and easements, according to Epstein, will take care of any third party notice problems, and thus freedom of contract should prevail.[20]

If a lack of market fluidity is the main objection to customized property rights, Epstein's argument applies with even greater force in cyberspace. While the efficacy of third-party notice in markets for real property interests is debatable, cyberspace seems entirely different. Unlike an easement (or servitude), evidence of which does not normally appear on the face of the land, digital content is quite capable of providing notice concerning the ownership rights retained by its creator or other parties. As we saw earlier, the technology already exists to embed such information directly into digital content. Less ambitious devices can also be employed, such as an embedded pointer that refers users to the creator or a central source of ownership information and use restrictions. Even where such information has been stripped out—such as after a break in the chain of privity, alluded to earlier—the law might create a duty to investigate the ownership status of disembodied information that one comes across. For all these reasons, allowing use restrictions on digital content does not appear to threaten severely fluid markets for

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18. For example, if use restrictions affect marketability of property by unreasonably limiting the class of persons to whom the property may be transferred, such restrictions have been held invalid as unreasonable restraints upon alienation. Falls City v. Missouri Pac. R.R. Co., 453 F.2d 771 (8th Cir. 1971); Grossman v. Hill, 122 A.2d 69 (Pa. 1956), *overruled in* Central Delaware County Authority v. Greyhound Corp., 563 A.2d 139 (Pa.Super.Ct. 1989), *rev'd*, 588 A.2d 485 (Pa. 1991).

19. Richard A. Epstein, *Notice and Freedom of Contract in the Law of Servitudes*, 55 S. CAL. L. REV. 1353, (1982).

20. *See id.* at 1354, 1358 ("[U]nder a unified theory of servitudes, the only need for public regulation, either judicial or legislative, is to provide notice by recordation of the interests privately created .... My thesis is simple: With notice secured by recordation, freedom of contract should control."). *But see* Susan F. French, *Toward a Modern Law of Servitudes: Reviewing the Ancient Strands*, 55 S. CAL. L. REV. 1261, 1281-1304 (1982); Uriel Reichman, *Toward a Unified Concept of Servitudes*, 55 S. CAL. L. REV. 1177, 1186-1211 (1982).

digital content.[21] In other words, under the traditional policy, wide-ranging restraints on alienation might be permissible.

On the other hand, some interesting theory from Professor Margaret Radin points in the other direction. Professor Radin defends the traditional common-law rule in the face of Epstein's critique:

> Assuming that it is efficient to maintain a market with a large scope forever (the long run), then it is efficient to impose enough restraints now to prevent grantors from tying up resources for the future in ways that seriously reduce the scope of the free market. And it seems prima facie cost-effective to disallow endless proliferation of different bundles of sticks which would cause a great amount of uncertainty and transaction costs . . . .[22]

Radin illustrates the general point with an example, one that may prove telling for our digital future. If all capital assets are entailed or otherwise nontransferable, holders of complementary assets—labor, for example—will be frustrated in their efforts to extract value from those assets.[23] Similarly, many assets in the digital economy will conceivably become so encumbered that potential value-adding future users will be frustrated.[24] In the alternative, Professor Radin's work demonstrates that common law doctrine (including the prohibition on restraints on alienation) is available for casting into a new yet familiar role in the digital economy.

2. *OTHER LIMITS TO CONTRACT*

Thus, if market fluidity is the prevailing concern, and restraints on alienation the only relevant legal principle,[25] open-ended contracting

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21. This statement is a generalization. Where the creator of a work merely requires compensation when someone uses the work, and where the compensation mechanism is built into the content, additional transaction costs are minimized. Assuming the new use makes economic sense after paying the required compensation, the condition on reuse will not substantially impede the market for the work. In some cases, however, restrictions on use may not be so simple. Where, for example, the creator of a digital work attaches a condition that subsequent users must seek his or her permission before reuse is permitted, transaction costs increase, since such a restriction creates additional bargaining and negotiation costs.

22. MARGARET JANE RADIN, REINTERPRETING PROPERTY 114 (1993).

23. *Id.* at 115.

24. This frustration may suggest an occasion to apply a renewed fair use doctrine. *See generally infra* part III.

25. Actually, there is one legal principle in intellectual property law that appears to embody the policy against restraints on alienation: the so-called "first sale" rule. Under this rule, which has been codified for copyright (*see* 17 U.S.C § 109) but not patent law, the owner of intellectual property rights may not restrict a buyer's post-sales activity along a number of dimensions, most importantly with respect to resale prices or restrictions on the class of subsequent purchasers. This is not the place for a full-scale explication of "first sale" doctrine. For present purposes it is enough to note that few "first sale" cases are concerned with market fluidity. These cases are centered primarily on extensions of rightholders' power "beyond" that conferred by the property right, and the notion that it would be unfair for rightholders to receive compensation beyond the initial transaction. *Cf.* Neel Chatterjee, *Imperishable Intellectual Creations: The Limits of the First Sale Doctrine*, 5

makes the most sense in cyberspace. Before accepting this conclusion, however, we must examine two intellectual property doctrines that limit contractual freedom for reasons other than market fluidity. These are (1) misuse, which limits the ability to extend a property right along several dimensions, and (2) federal preemption, which limits state law analogues to federal property rights in the interest of uniformity. In this brief overview, I draw on these doctrines to construct a list of immutable attributes that are not traditionally alterable by contract.

Misuse is a concept best explained in this context as an effort to contain externalities from contracting.[26] Misuse is similar to other doctrines, such as the common law rule against unreasonable restraints on trade.[27] In the prototypical misuse case, the holder of a federal intellectual property right extracts an agreement with a licensee to recognize the right for a term that exceeds the statutory term of protection.[28] This type of agreement has been consistently prohibited, on

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FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 383 (1995). Both rationales are poorly articulated; the latter is especially weak. Most importantly, the rule is not particularly important, since it is easily evaded by simply characterizing a transaction as a license rather than a sale. *See, e.g.* Microsoft Corp. v. Harmony Computers & Elecs., Inc., 846 F. Supp. 208 (E.D.N.Y. 1994); *cf.* Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 CONN. L. REV. 981, 984 n.3 (1996) ("Consistent with the planned extraction of royalties on a per-use basis, copyright owners and developers of copyright management systems refer to the initial transaction in the copyrighted work as a 'license' rather than a sale.").

26. *See* ROBERT P. MERGES, PATENT LAW AND POLICY (2d ed. 1997), at Chapter 11.

27. Indeed, like misuse, the law against unreasonable restraints on trade emerged before federal antitrust law and persists alongside it in a sometimes uncomfortable tandem arrangement.

28. *See, e.g.*, Brulotte v. Thys Co., 379 U.S. 29 (1964). *See also* MERGES, *supra* note 26, at 116:

> The question in the case of private patent term extensions (beyond 17 years) . . . is whether parties "external to the contract" need to be protected. In general, it would seem to depend on a number of factors: (1) the market power of the licensor; (2) the strategic significance of the patented item; (3) the identity of the licensee; and (4) the overall structure of the industry, among others.

One can imagine scenarios where these factors suggest the need for a mandatory (or immutable) rule. Consider the case where a licensor controls a key technology in an industry dominated by it and a licensee, and the two agree on a private patent term extension. Unlicensed competitors could avoid the effects of the licensor-licensee private extension simply by remaining unlicensed. This might put them to a difficult choice (at the margin)—take a license and stay alive (though burdened with royalty obligations for more than 17 years), or try to survive and prosper in the post-expiration period. NB: This analysis assumes they will not be able to invent cost-effectively around the patent for at least as long as the extended term lasts; it also assumes unrealistic discount rates, insofar as the present value of the post-expiration period is quite low whether the patent term is extended or not. In some circumstances, this might be too harsh a choice to place on licensees. *See generally* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 221 (1988) (reciting the standard Cournot model, where monopolist has incentive to contract with potential entrant, rather than co-exist as duopolists; implies possibility of using licensing as opportunity for monopoly-splitting agreement).

Note that Tirole's discussion applies whether a patent term is extended by contract or not (though presumably the longer the period of monopoly the greater the incentive to play

the grounds that it undermines the incentive/welfare loss balance struck by Congress.[29] A similar line of cases concerns tie-ins, which in this context are characterized as contractual efforts to extend the scope of the federal property right—or, to use the now-controversial phrase, to "leverage" that right.[30]

Preemption law bears some similarities to misuse, though it has only recently been discussed with respect to bilateral contracting. Traditionally, in cases ranging from *Sears, Roebuck & Co. v. Stiffel Co.*[31] and *Compco Corp. v. Day-Brite Lighting, Inc.*[32] in 1964 to *Bonito Boats, Inc. v. Thundercraft Boats* in 1989,[33] the United States Supreme Court has addressed the validity of state intellectual property laws in terms of statutory preemption, questioning whether the state law conflicts with the federal scheme of patent and copyright statutes enacted by Congress.[34] The Court has often concluded that state statutes aimed at protecting an aspect of intellectual property are in fact preempted by the federal scheme of protection.[35]

This principle has recently been applied to bilateral contracts. One commentator has argued that federal law should preempt contractual restrictions on "reverse engineering," which some courts have found to qualify for the "fair use" defense under copyright law.[36] A wide-ranging debate on the matter is under way. An important focal point of the discussion is the need to preserve copyright's "fair use" defense in the

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the split-the-monopoly game). On the other hand, agreements such as those in *Brulotte* are arguably nothing more than extended payment plans, in which case they look much more benign. *See* Frank M. Caprio, *The Trouble with* Brulotte*: The Patent Royalty Term and Patent Monopoly Extension*, 1990 UTAH L. REV. 813.

29. *See, e.g.*, Merges, *supra* note 26, at Chapter 1.

30. *See generally* Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813 (1984).

31. 376 U.S. 225 (1964).

32. 376 U.S. 234 (1964).

33. 489 U.S. 141 (1989).

34. Preemption has been located at various times in copyright and patent law in a statute (*see* 17 U.S.C. § 301 (Supp. 1991) (copyright preemption)) and in the United States Constitution (*see* Bonito Boats, 489 U.S. 141).

35. *See* Bonito Boats, 489 U.S. 141; Sears, 376 U.S. 225; Compco, 376 U.S. 234.

36. David A. Rice, *Public Goods, Private Contract, and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543 (1992).

Under United States copyright law, infringers escape liability if their activities constitute "fair use." Fair use has been described as an "equitable rule of reason, as it must be flexible in order to allow judges, on a case-by-case basis, to make individual determinations of the copyright balance." Meeropol v. Nizer, 560 F.2d 1061, 1068 (2d Cir. 1977). For a history of the fair use doctrine, see WILLIAM F. PATRY, THE FAIR USE PRIVILEGE IN COPYRIGHT LAW 6-17 (1985). Congress codified the fair use doctrine and outlined four factors for fair use. 17 U.S.C. § 107 (1994). These four factors are: (1) the purpose and character of the use, including whether such use is of commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work. *See id.*

face of contractual restrictions that would undermine it. One side of the discussion looks to the Constitution for support; that is, to the extent that certain aspects of fair use are seen as embodying First Amendment principles (such as in cases preserving the defense for parodies of copyrighted works), neither state legislation nor contract can cut into the scope of fair use.

This is not the place for a full-scale critique of these immutable rules. Instead, I will limit myself to two remarks and a proposal.

The first remark concerns fair use. I argue in another paper that if terms restricting fair use become ubiquitous in licensing agreements in an industry, preemption may apply.[37] In other words, a dominant contractual form can operate as a form of "private legislation"[38] that restricts federally conferred rights every bit as much as a state statute. However, the ubiquitous contract term must appear in an industry where the licensors have at least some degree of market power, and where licensees can credibly be shown to object to the term.[39] For example, if no licensee is well placed to create adaptations of the licensors' product, or if good substitutes to the licensed products are available, it is difficult to see why the sheer ubiquity of an anti-reverse-engineering term is a problem; where market entry is already difficult or unlikely, the prohibition against reverse engineering would be irrelevant.

The second remark concerns extension of property rights, either in time or into related markets. Most cases of temporal extension are relatively benign. If a licensee wants to give up its future right to use information in exchange for the present right to use it, why not permit such action? Unless third parties are harmed, this tradeoff seems reasonable. At any rate, the law should at least entertain the idea. Extension into related markets seems equally acceptable, again with the caveat of no serious third-party effects. The literature and case law on tie-ins is sufficiently well developed to give a fair reading on when such practices will be deleterious.

These two remarks lead to the following proposal. Unless serious third-party harm or constitutional rights are implicated, intellectual property holders should be free to craft contracts as they see fit. Per se rules in this area—or at any rate, the current rules—simply do not make

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37. Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570 (1995).

38. The term is, of course, Kessler's. *See* Friedrich Kessler, *Contracts of Adhesion—Some Thoughts About Freedom of Contract*, 43 COLUM. L. REV. 629 (1943) (defining notion of "private legislation" in context of adhesion contracts).

39. *See* Maureen O'Rourke, *Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms*, 45 DUKE L.J. 479, 557 (1995) (stating that copyright preempts contract only where the contract environment gives the seller monopoly power).

much sense. While this is true for all intellectual property to some extent, it seems doubly so for rights in digital content. The low transaction costs in this market make search and negotiation quite easy, which means an alternative source for a given piece of content will almost always exist, thus reducing the chance that a party will have to accept onerous terms.

3. *STRUCTURING PROPERTY RIGHTS TO MAKE CONTRACTING EASIER*

Contract and property can thus coexist comfortably in cyberspace with very few exceptions. In fact, property rights can be structured to make contracting easier in a variety of ways. For example, the much-maligned National Information Infrastructure Report recommends legislation to encourage use of embedded copyright ownership and management information, to accompany digital content wherever it goes.[40] This proposal calls for a variety of punishments for people who strip away this information from content. This protection would obviously be a great help to the systems of self-reporting content described in the Introduction to this essay; it would create confidence in the power of information (including self-executing contract terms) embedded in content. Among other things, it creates an additional remedy against someone who breaks the chain of privity between content creator and subsequent users.

From the perspective of transaction costs, it is difficult to criticize policies aimed at encouraging use of copyright management information.[41]

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40. The National Information Infrastructure Copyright Protection Act, S. 1284 & H.R. 2441, 104th Cong., 2d Sess. (1995) [hereinafter NIICPA], introduced in both houses of Congress in September 1995, draws on the "White Paper" issued by the Clinton Administration's Information Infrastructure Task Force. *See* U.S. DEP'T OF COMMERCE, INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 10-12, 177-78, 230 (1995) [hereinafter WHITE PAPER]. Section 4 of the NIICPA, titled "Copyright Protection and Management Systems," would establish comprehensive protection for copyright owners' decisions regarding copyright management in cyberspace. *See generally* Pamela Samuelson, *Intellectual Property Rights and the Global Information Economy*, 39 COMM. OF THE ACM 23 (1996); Julie E. Cohen, *Some Reflections On Copyright Management Systems and Laws Designed to Protect Them*, 12 BERKELEY TECH. L.J. 161 (1997). Under the NIICPA, Section 1201 of the Copyright Act would prohibit the importation, manufacture, or distribution of devices or services "the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent . . . any process, treatment, mechanism or system which prevents or inhibits the violation of any of the exclusive rights of the copyright owner under section 106" of the Copyright Act. Section 1202 would prohibit tampering with "copyright management information" appended to a digital work by the copyright owner.

41. Legitimate privacy concerns and the like may, however, arise in the details of particular proposed systems. One might argue in this connection that a default rule should compensate victims of informational misuse, such as those who are reported against their wishes as readers of certain information or visitors to certain sites. At a minimum, this type of rule would require that anyone who does record such information about the users of information or visitors to a site must report that fact to users and visitors, and in effect

Indeed, I have recently argued elsewhere that post-grant recontracting should be taken into account when entitlements are being designed.[42] Such information will help potential licensors and licensees identify each other, and might also contain some bare-bones terms of agreement. After all, information about ownership generally facilitates market-making. And where information about the terms of use and compensation is added, these systems raise the tantalizing prospect of almost negligible transaction costs. They are, in a sense, the ultimate in Newtonian law-making. Even so, my earlier comments should make clear that no punishment reasonably likely to be enacted will deter everyone from stripping away ownership and/or contracting information. Hence, I believe the off-the-shelf property rights regime will continue to be important.

Amidst this clear trend toward market facilitation in intellectual property law, one recent development stands out. In conjunction with its adherence to the international copyright treaty known as the Berne Convention, the United States substantially weakened the incentive for all copyright holders to register their copyrights. This development is unfortunate. Just at the moment when electronic databases make such registered information highly useful, we have moved away from universal registration. For the same reasons that real property recording systems are considered efficient, we should reconsider this policy.[43] One approach might be to increase incentives to register, possibly by decreasing liability when infringement involves material unregistered on a centralized electronic copyright database.

D. Digression on Informal Restrictions in Cyberspace

Thus far, we have discussed property and contract. Property, I have argued, is distinctive because it allows enforcement against third parties not in privity with the rightholder. Creators can then use contracts to craft individualized restrictions on use in bilateral relations built on property rights. In this section, I briefly consider a third regime: informal (i.e., not legally enforceable) restrictions on digital content. This is currently, and will likely continue to be, an important source of norm-based rights in the on-line world.

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ask them to waive their right to compensation. This would have the familiar "information-forcing" effect of the Ayres-Gertner default rule model.

42. *See* Robert P. Merges, *Contracting Into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293 (1996).

43. *See* Joseph T Janczyk, *An Economic Analysis of the Land Title System for Transferring Real Property*, 6 J. Leg. Stud. 213 (1977); *cf.* RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 79 (4th ed. 1992) ("It would improve efficiency to institute a system of paper water titles analogous to the systems used to record land titles.").

Property is a recent introduction into cyberspace. In the beginning, and still in many communities, the prevailing norm was free exchange.[44] This freedom of exchange is a manifestation of the prevailing norm from the early days of software.[45] One prominent organization, the Free Software Foundation, promotes this norm today through the institution of "copyleft," a copyright license that requires transferees of free software to promise not to incorporate it in a commercial product and to pass it on, even if embedded in a larger program, to others free of use restrictions.[46]

By its own terms, the copyleft agreement is an unusual license; at the most basic level consider the problem of determining damages when the licensee frustrates the licensor's expectation of zero profits under the contract. But what is most significant about the agreement is that it purports to restrict subsequent transferees who receive software from a licensee, presumably even if the licensee fails to attach a copy of the agreement. As this new transferee is not in privity with the original copyleft licensor, the stipulation seems unenforceable.

Even so, copyleft no doubt carries some moral force in the on-line community. It therefore serves as an example of a non-binding, informal norm in cyberspace. The copyleft license in this community is the equivalent of a statement of good practices. Surely some programmers dutifully pass along the license and police cases where subsequent transferees receive code without such a license. In short, the notice is aimed at the perpetuation and enforcement of a norm that holds some force in this community, and it is therefore worth mentioning in a catalogue of rights in digital content.[47]

E. Summary: A Three-Tiered Regime.

In summary, a three-tiered information-protection regime exists in cyberspace comprised of property rights, contracts (many, but by no means all, involving property rights), and informal restrictions. The following chart (Table 1) briefly lists major costs and benefits for each.

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44. *See* Margaret Jane Radin, *Regulation of Computing and Information Technology: Property Evolving in Cyberspace*, 15 J.L. & COM. 509 (1996).

45. Indeed, the ongoing debate over software patents—pitting purist programmers against bottom-line-oriented business types—has many earmarks of a clash of cultures.

46. The copyleft agreement, or "General Public License," is available at <http://www.gnu.ai.mit.edu/copyleft/gpl.html> (visited May 2, 1997).

47. Many other communities operate with similar norms. Consider the accepted practice in academia of marking a draft research paper with the notice "Do Not Cite or Quote Without Permission of Author." Unless such a notice creates a unilateral contract—accepted when the other party reads the paper, perhaps—it is unlikely to be enforceable. Yet breach of the informal norm is considered a serious infraction in the academic community. Informal restrictions thus have some force in many realms, and cyberspace is surely one.

	Benefits	*Costs*
Formal Property Rights	Maximum enforceability (no privity required)	Limited term; lack of flexibility
Enforceable Contracts	More flexible, adaptable	Limits on enforceability (privity requirement, possibility of preemption)
Non-binding Preferences	Totally flexible	Cannot be legally enforced

Table 1.

III. FAIR USE: THE END OF THE "MARKET FAILURE" RATIONALE?

Digital networks call into question the assumptions that animate an important body of copyright law. In this section, I argue that because the contemporary fair use doctrine is predicated on a market failure rationale, and because an electronic exchange potentially eliminates this market failure for digital content, fair use law will significant shrink, or an alternative basis for fair use will be rediscovered. I hint at some possibilities along these lines at the end of this section.

The prevailing view of fair use was first spelled out in an influential article by Wendy Gordon.[48] Gordon described the fair use doctrine in terms of "market failure."[49] Market failure occurs when the transaction costs of a voluntary transfer are so high[50] that a consensual transfer is unlikely to take place spontaneously.[51] In such a case, the law provides users of copyrighted works with the statutory defense of fair use.

The great strength of Gordon's contribution was that she both rationalized fair use law and provided sensible limits to its application. As recent cases show, however, the market failure rationale left a few questions unanswered. These questions—which center on the likelihood of market formation—are the same ones raised by the new digital networks.

Gordon's key insight was that fair use makes sense where no functioning market for copyrighted works exists.[52] She did not dwell on a corollary issue, however: the likelihood of market development. In other words, how permanent was the market failure? Where market

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48. Wendy Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600 (1982).

49. *Id.* at 1614-15.

50. *See id.* at 1628-30.

51. *See id.* at 1614-15.

52. In all fairness, a re-reading of Gordon's article makes quite clear that this was only *one* of her chief insights. She also commented on the appropriateness of fair use as a vehicle to favor explicitly certain uses—an altogether distinct rationale, which I take up later.

development is unlikely, the fair use doctrine should be applied. But where a market could develop if copyrights are enforced, the absence of an initial market should not automatically lead to the implementation of the fair use defense. Indeed, finding fair use would be self-defeating in such a case; the market that might otherwise have been formed would be killed.

This line of thinking leads inevitably to a parallel consideration. If we are unsure whether a market for a certain use of copyrighted works will develop, why not fully enforce the rights and see whether the market follows? At the very least, we should grant the firms and individuals in the field an opportunity to explore the creation of a market mechanism. If, after some reasonable period of time, no potential market takes shape, then perhaps fair use is in order. I have made a very similar argument elsewhere, in stating a case against compulsory licensing in intellectual property law.[53]

The dominance of Gordon's market-failure principle is apparent from two recent cases. Both question the legality of copying scholarly works for inclusion in university course packets. In the first case, *American Geophysical Union v. Texaco, Inc.*,[54] the Second Circuit declined to uphold a fair use defense in favor of corporate photocopiers of plaintiff's scientific publications. Pointing specifically to the Copyright Clearance Center (CCC), an institution organized as a clearinghouse for photocopying royalties, the court emphasized that the existence of a market-making institution militated against a fair use finding:

> Though the publishers still have not established a conventional market for the direct sale and distribution of individual articles, they have created, primarily through the CCC, a workable market for institutional users to obtain licenses for the right to produce their own copies of individual articles via photocopying. The District Court found that many major corporations now subscribe to the CCC systems for photocopying licenses.... Indeed, it appears from the pleadings, especially Texaco's counterclaim, that Texaco itself has been paying royalties to the CCC.... Since the Copyright Act explicitly provides that copyright holders have the "exclusive rights" to "reproduce" and "distribute copies" of their works, see 17 U.S.C. § 106(1) & (3), and since there currently exists a viable market for licensing these rights for individual journal articles, it is appropriate that potential licensing revenues for photocopying be considered in a fair use analysis.
>
> Despite Texaco's claims to the contrary, it is not unsound to conclude that the right to seek payment for a particular use tends to become legally cognizable under the fourth fair use factor when the means for paying for such a use is made easier. This notion is not

53. *See generally* Merges, *supra* note 37.
54. 60 F.3d 913 (2d Cir. 1994).

> inherently troubling: it is sensible that a particular unauthorized use should be considered "more fair" when there is no ready market or means to pay for the use, while such an unauthorized use should be considered "less fair" when there is a ready market or means to pay for the use. The vice of circular reasoning arises only if the availability of payment is conclusive against fair use. Whatever the situation may have been previously, before the development of a market for institutional users to obtain licenses to photocopy articles, . . . it is now appropriate to consider the loss of licensing revenues in evaluating "the effect of the use upon the potential market for or value of" journal articles.[55]

Another recent case echoed the same theme. In an en banc decision reversing a prior finding of fair use, the Sixth Circuit emphasized the importance of the nascent institutional transactional apparatus for course packets in finding no fair use:

> Where, on the other hand, the copyright holder clearly does have an interest in exploiting a licensing market—and especially where the copyright holder has actually succeeded in doing so—"it is appropriate that potential licensing revenues for photocopying be considered in a fair use analysis." *American Geophysical*, 60 F.3d at 930. Only "traditional, reasonable, or likely to be developed markets" are to be considered in this connection, and even the availability of an existing system for collecting licensing fees will not be conclusive. *Id.* at 930-31. But Congress has implicitly suggested that licensing fees should be recognized in appropriate cases as part of the potential market for or value of the copyrighted work, and it was primarily because of lost licensing revenue that the Second Circuit agreed with the finding of the district court in *American Geophysical* that "the publishers have demonstrated a substantial harm to the value of their copyrights through [Texaco's] copying." *Id.* at 931.[56]

These recent opinions show that if fair use is strictly dependent on market failure, it is a concept with a very limited future. If the market-making capacity of institutions such as the CCC makes such a dent in market failure, digital technologies will obliterate the fair use defense entirely. Put another way, if the fair use defense arises only when transaction costs are prohibitive, the dramatic reduction in those costs will give the defense a very limited role in the future.

For some, this will be cause for celebration. Since fair use represents an end-run around the market, market-centric observers will enjoy its demise. For others, however, fair use is an important foundational concept in the law of copyright. To them, its elimination will mean only that the copyright system has lost sight of its true purpose.

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55. 60 F.3d at 930-31.

56. Princeton Univ. Press, Inc. v. Michigan Document Serv., Inc., 99 F.3d 1381, 1387 (6th Cir. 1996).

A. The Remnants of a Market Failure Rationale

Where market failure is based on factors other than locating a right holder and proposing a deal, the logic of fair use still makes sense; some varieties of market failure exist beyond the simple case of costly market-making.

Two examples in this vein are the market for parodies and the breakdown of bargaining under bilateral monopoly conditions.[57] In both cases, market exchange fails to occur for reasons other than because buyers and sellers cannot cost-effectively find each other. Indeed, to call these instances of market failure may seem a stretch, since the real problem is that the parties simply fail to agree. But the failure to agree occurs for reasons that a rational party would not entertain. A parodist willing to pay reasonable compensation may be turned away, or bargaining between bilateral monopolists might break down for strategic reasons, such as disagreement over the splitting of a sizable surplus.

Of course, in both instances a judge would have to be fairly presumptuous to conclude that the parties have failed to agree to an exchange for the "wrong" reasons. Ultimately, what would justify such a conclusion is the harm that befalls third parties from a lack of agreement. In the case of a stillborn parody, the stock of social commentary is depleted. For bargaining breakdown, society loses out (at least temporarily) on a socially useful composite product requiring the integration of independently owned property rights. From these instances, we can glean the workings of an important policy: a well functioning market serves important social goals. We all benefit from the robust pattern of private transfers in the intellectual property market. Public benefit is such an important consideration, in fact, that when markets fail for reasons unrelated to "legitimate" reservation prices, the law will coerce a transfer. A voluntary bilateral exchange, in other words, is important—but exchange itself (which might better be called dissemination) is more important still.

B. Towards A New (Old) Conceptual Foundation?

Like many technological advances before it, the digital network revolution offers an opportunity to rethink practices and concepts that have become embedded in conventional technology over time, and hence become invisible. I believe such an occasion is at hand with respect to fair use. In this section, I very briefly sketch a defense of a "new" conceptual

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57. *See* Robert P. Merges, *Are You Making Fun of Me? Notes on Market Failure and the Parody Defense in Copyright*, 21 AM. INTELL. PROP. L. ASS'N Q.J. 305 (1993); Robert P. Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75 (1994) (focusing on bargaining breakdown in one-shot, as opposed to repeat-play, intellectual property rights transactions).

foundation for the doctrine, in line with my comments on the importance of dissemination. As will become clear, the quotation marks are intentionally ironic; the new foundation is in fact the traditional one, which had merely been obscured by the brilliance of Professor Gordon's reformulation.

Fair use will revolve less around market failure, and more around the idea of favoring certain classes of users with a statutory privilege. In economic terms, the new foundation will represent a shift from emphasizing transaction costs to emphasizing redistribution, pure and simple. Since markets are possible and feasible between all parties in a digital environment, the relevant policy questions will center on when it makes sense to do an "end run" around the market.

C. A Brief Word on Intellectual Property and Subsidies

As a positive matter, various features of intellectual property law—especially copyright—can best be explained as an attempt to subsidize creative people. Thus, the Copyright Act allows artists, writers, and others who license copyrighted works to renege on those licenses in mid-stream. Whether explained as a countermeasure to the weak bargaining position of creators early in their careers, or as outright efforts at ex post fairness, the effect is the same: wealth is redistributed from film studios, publishers, etc.—and ultimately consumers—to the creators of copyrighted works.

Thus, starting from this positive stance, arguing for redistributive underpinnings for fair use is quite defensible. Less clear, and therefore worthy of a momentary diversion, is the normative question: should intellectual property doctrine be used as a redistributive technique?

To engage this important issue fully would bring me farther afield than even I am accustomed to traveling. Instead, I will limit myself to two comments. Both depart from the well known argument in the law and economics literature that redistribution is best served by direct taxes and subsidies, rather than by the structure and application of non-tax-related legal rules.[58]

First, one of the standard arguments against redistribution by legal rules is that it is too random: it takes place only when the legal rule is invoked. This principle is easiest to see in the field of torts, a discipline that has spawned much in-depth analysis of the redistribution issue.[59] Only when (a) an accident takes place, and (b) a court sets compensation

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58. For a good statement of the conventional view, see Louis Kaplow & Steven Shavell, *Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income*, 23 J. LEGAL STUD. 667 (1994).

59. *Id.*; *see also, e.g.*, Thomas J. Miceli & Kathleen Segerson, *Defining Efficient Care: The Role of Income Redistribution*, 24 J. LEGAL STUD. 189 (1995).

(or in the shadow of such compensation) will the legal rule serve its purpose.[60] This type of legal argument is obviously an unreliable instrument of social policy.

Rules governing intellectual property are clearly different. Rules that favor creators will operate in all cases involving creative works. Indeed, putting aside those close cases that must be litigated, these rules will be applied automatically by the parties involved. The mid-stream termination license in copyright, mentioned above, is an example; it favors all creators whose works are licensed on a long-term basis. Termination is an accepted part of the terrain in licensing practice. Thus, in these areas, the chance events so necessary for tort doctrine to serve its redistributive goal, are simply not a prerequisite to operation of the rule.

A second argument made against redistribution through judicial rules is that it would plunge courts into areas best left to legislatures.[61] Obviously, when a redistributive policy is built into a statutory scheme, this argument evaporates. This is precisely the case with many areas of intellectual property law. When legislating on fair use, for example, Congress very intentionally meant to favor the special needs of certain classes of users. Indeed, the whole history of intellectual property law points toward redistribution as an important policy. While the basic economic theory of intellectual property is most often pitched in terms of allocative efficiency,[62] a strong redistributive element remains in the law. I see no reason why we should not make this explicit in those cases where it appears to make sense.

Fleshing out the scope of the fair use doctrine is not the purpose of this section. Such an undertaking would be as difficult as determining what is a fair tax rate. Indeed, since fair use can profitably be understood as a tax on copyright holders for the benefit of certain classes of users, the analogy is a close one. Essentially, my point is that in the realm of cyberspace we need to abandon the reasoning of *Texaco* and related cases. Rather than focusing on whether a market might form for the copyrighted work, we should assume it will. The only relevant questions are: (1) which class(es) of users should be allowed to bypass the presumptive market; and (2) how much revenue should the copyright holder be forced to forego to serve the goals of fair use?[63]

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60. *See* Kaplow & Shavell, *supra* note 58, at 674-75.

61. *See id.* at 675.

62. That is, intellectual property rights are required to call forth the optimal amount of investment in products embodying creativity; lower levels of investment yield suboptimal levels of creativity and innovation.

63. *Cf.* Niva Elkin-Koren, *Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace*, 14 CARDOZO ARTS & ENT. L.J. 215, 283-94 (1996) (on fair use in copyright).

IV. CONCLUSION

The reference to Newton in the title is meant to invoke the conventional image of a mechanical "clockwork" universe where friction plays no role. This is the image that comes to mind when cyber-enthusiasts tout the contractarian basis of exchange in the on-line economy were all sources of transactions costs have been eliminated. This essay contends that the image, while powerful, is incomplete. Bilateral contract will be ubiquitous in cyberspace, but it is unlikely to displace completely state-backed property rights for two reasons. First, breaks in the chain of privity mean that the "safety net" of a property right may still be necessary to protect adequately investment by creators of digital content. Second, certain limits on the rights of intellectual property owners are best seen as immutable, i.e., outside the ability of contracting parties to waive or vary.

While elegant, the Newtonian world came to be seen as incomplete. In the same way, the notion of purely contract-based commerce in cyberspace, while appealing, is too simple to be true. The complexities of enforcement costs and contracting externalities inevitably intrude. Like classical Newtonian mechanics, the world of pure contract must remain only a starting point.

TECHNICAL PERSPECTIVE

SHIFTING THE POSSIBLE: HOW TRUSTED SYSTEMS AND DIGITAL PROPERTY RIGHTS CHALLENGE US TO RETHINK DIGITAL PUBLISHING

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†† This paper is based on a keynote address given March 14, 1996 in Washington, D.C. at the meeting of Professional and Scholarly Publishers Group of the American Association of Publishers.

I. INTRODUCTION

In a widely circulated article about rethinking copyrights,[1] John Perry Barlow said that "everything you know about intellectual property is wrong." Ideas want to be free. Once works are digital, they will become free because anything put in a digital bottle will necessarily leak out. According to Barlow, in the digital medium commercial publishing as we know it is impossible.

Barlow was correct in thinking that we are on our way to a new economy of ideas. He was wrong, however, in thinking that copyright and other forms of author and publisher control over works in digital form are outmoded. Although he recognized some potential for technological protection of works, he greatly underestimated how great the potential was. With the development of trusted system technology and usage rights languages with which to encode the rights associated with copyrighted material, authors and publishers can have more, not less, control over their work. Barlow was in good company among those who did not understand the ideas, doubted them, or did not like them. In 1994 the ideas of digital rights and trusted systems were jolting and unexpected.

The situation today is much changed. First, there has been a technological shift that changes what is possible in property rights and commerce for digital works. Second, our society includes many stakeholders in digital property including authors, publishers, distributors, consumers, librarians, lawmakers, copyright lawyers and standards bodies in different countries. Collectively, society does not understand the shift yet. The ideas challenge common sense about computers and information. They need to marinate. This article aims to demystify the technological shift and to show how it enables new ways of thinking about computers, information, and digital publishing.

This is an interesting time to rethink digital publishing. The technology companies are, for the most part, still pre-competitive. The active digital publishers are early adopters, to follow Geoffrey Moore's term from *Crossing the Chasm*[2] and *Inside the Tornado*.[3] Other people articulating positions include librarians and others interested in issues of copyright and fair use. People are trying to sort out rights and commerce associated with digital works and the picture is getting clearer.

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1. John P. Barlow, *The Economy of Ideas: Rethinking Patents and Copyrights in the Digital Age*, WIRED, March 1994, at 84, 129.

2. GEOFFREY A. MOORE, CROSSING THE CHASM: MARKETING AND SELLING HIGH-TECH PRODUCTS TO MAINSTREAM CUSTOMERS (1995).

3. GEOFFREY A. MOORE, INSIDE THE TORNADO (1995).

II. BASIC TECHNOLOGY REQUIRED FOR DIGITAL PUBLISHING

A. Trusted Systems

A trusted system is a system that can be relied on to follow certain rules. In the context of digital works, a trusted system follows rules governing the terms, conditions and fees for using digital works. Suppose that you have a digital work stored on a trusted system, and you do not have a right to copy the work. Then if you ask the trusted system to make a copy, it simply will not do it. Instead, it will give you an error message. If you do have a right to copy and, for example, exercising the right requires paying a fee and certification that you are over 18 years old, then the trusted system would first make sure that the conditions are satisfied. Only then would it make the copy.

Suppose that a customer then wants to buy the digital work. In a typical case, he would use a network browser to select the digital work from an on-line distributor. At this point, the two systems—the consumer's system and the distributor's system—need to establish that they are both trusted systems and to determine their security levels and billing methods. One way to do this is with a challenge-response protocol. This protocol is similar to what you might imagine in a "spy versus spy" scenario when two secret agents who are strangers to one another first meet.

The security of the communications between the computers relies on the use of public key cryptography.[4] In public key systems, there are two keys used by a system for encryption: a public key and a private key. Each computer keeps its private key secret and its public key known. The keys are inverses. Anything encrypted in the public key can be decrypted by the private key. Anything encrypted in the private key can be decrypted by the public key. Assuming that the keys are long enough, decoding a message without having the proper key is very difficult, and it is difficult to derive one key from the other.

The consumer system begins by saying the digital equivalent of "I'm a trusted system and here is my certificate." The distributor system looks at the certificate. The certificate itself is encrypted in the private key of a well known digital registry, such as a trusted system of the American Association of Publishers (AAP) or another appropriate body. The distributor system decrypts the certificate and obtains the public key of the consumer's system. Following the "spy versus spy" analogy, the distributor's system has now determined that there is a valid certificate,

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4. *See generally* BRUCE SCHNEIER, APPLIED CRYPTOGRAPHY: PROTOCOLS, ALGORITHMS, AND SOURCE CODE IN C (2nd ed. 1995).

that it corresponds to a particular consumer system, and that the consumer system has a particular public key.

But how does the distributor system know that the system offering the certificate is bona fide? After all, the system on the other end of the communication channel may merely be masquerading as the consumer's genuine trusted system. The digital certificate might be copied, obtained perhaps through wiretapping or packet snooping. To remove these uncertainties, the distributor's system creates a "nonce", a one-time message made up for the occasion using bits from a suitable random source. It encrypts the nonce in the public key from the consumer system and sends it. Roughly, it says, "if you are really who you claim you are, then you can decrypt this message because only you will have the secret private key." The consumer system then decrypts the nonce and sends it back in the clear. There are several more exchanges in the protocol. These exchanges establish one-time session keys that the two trusted systems can use for efficient and secure communication on a possibly insecure channel.

There are variations on this approach. One way of organizing commerce in digital works is in terms of "digital envelopes" where the digital work is encrypted together with rights and sometimes a program ("applet") for interpreting the rights. This variation shrinks the boundaries of trust from enclosing the consumer's entire computer system to just enclosing particular software that accesses information inside the digital envelope. Other variations rely on a combination of hardware and software on the consumer's system. Different approaches have different costs, vulnerabilities and degrees of practicality.

For the purposes of this discussion, I will lump all of these approaches to commerce in digital works together. Generally, the technical differences are much less important than the similarities. I will use the term "trusted system" generically since any system for commerce in digital works must have some part that is trusted.

B. Digital Rights Language

A trusted system is aware of the rights associated with a digital work because the rights come with the work. Every approach to digital property rights requires a means of expressing rights. They can be attached to the work itself or can be stored in a database. Digital rights fall into several natural categories. For example, transport rights include the rights to copy, transfer, or loan. Render rights include the rights to play and print. Derivative work rights include the rights to extract, embed, and edit.

Rights and conditions can be expressed in a formal language that can be precisely interpreted by trusted systems. Several companies,

including Folio, International Business Machines (IBM), Intertrust (formerly Electronic Publishers Resources), NetRights, Xerox, and Wave Systems are developing digital rights languages.

To illustrate the use of digital rights languages, in a typical situation an author would create a digital work using any authoring tool of interest. Digital property rights are neutral to data format and interpretation; that is, they can potentially work with any digital representation of text, pictures, databases, music, or video. Once a work is created, a publisher could import it into a trusted system. He would decide the rights with which to associate the work, and encode them using the rights editor of a publishing program. He could then make the work available on a server for sale online.

What rights can be expressed in a digital property rights language? This is a key issue in understanding the technical possibilities and what could constitute fair use. In the Xerox digital rights language, for example, there are currently sixteen distinct kinds of rights. In the following section, I focus on a few rights that illustrate the possibilities created by the technological shift. I consider various transport rights, rendering rights, derivative work rights, and backup rights.

C. Digital Billing

Different approaches to billing have been proposed.[5] These fall into two broad categories: approaches for off-line use and approaches for on-line use. Off-line approaches are approaches that can support mobile and intermittently connected operation and billing. Off-line approaches typically involve secure storage and processing on the trusted system itself, using extra hardware such as SmartCards™ or PCMCIA™ cards. These cards can function as debit cards or credit cards and must communicate once per billing period with an on-line financial clearinghouse. An example of an on-line approach is NetBill, which coordinates purchases between a consumer system, a supplier, and a financial clearinghouse. Approaches like NetBill are intended to keep the overhead of transaction aggregation and billing quite low.

Digital licenses and digital tickets can also be used for billing. Digital licenses are digital certificates that indicate membership in a group, such as a book club, business organization, or university. Some transactions require presenting proof of membership before particular rights or discounts can be exercised on certain works. For example, one might need to have a subscription certificate before a certain work could

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5. *See, e.g.*, Cross Industry Working Team, *Electronic Cash, Tokens and Payments in the National Information Infrastructure* (describing an electronic cash payment system), *available at* (visted May 9, 1997) <http://www.xiwt.org:3000/XIWT/documents/dig_cash_doc/ElecCashToC.html>.

be read. For licenses and tickets to work reliably, there must be some means to prevent counterfeiting and unauthorized use, such as secure storage, transport restrictions, and passwords.

Digital tickets are like the coupons found in a local paper that give discounts on the purchase of grocery products. Issued by a publisher, they correspond to prepayment or discounts for using works by the publisher. For example, a work might come with three tickets, each of which can be used for printing a hard copy of the work. Once the digital tickets have been "punched" by a digital ticket agent, they cannot be reused; a repository must obtain more tickets to exercise that right again.

A work can have different versions of the same kind of right, each with different fees and conditions. For example, a musical work could have a right to play it for a fee charged by the hour. Another right to play that piece may have a fixed fee for unlimited playing. Yet another right to play the piece may give special discounts to members of a music buying club. A publisher may give promotional tickets as part of an introductory offer. When a user elects to play the music, he exercises one of the rights matching his set of licenses and tickets, and his desires, against the various options offered by the publisher.

Some observers of digital publishing have predicted that prices and discounts for digital works may become as complex as the array of special prices and ticketing in competitive airline fares. They worry that this may lead to complex user interfaces on media systems. One way around this complexity is to include simple computational agents in trusted systems that simplify a user's choices. For example, a boom box interface may present nothing more than a play button, where the user has already established a policy of minimizing the cost of a play. A user may need only to choose between listening to the work once or buying the right to listen to it as often as desired.

D. Trusted Printers

Even trusted systems cannot prevent all copying. If you can print a digital page, you can photocopy it. If you can watch a digital movie, you can record it with a camcorder. If you can listen to a piece of digital music, you can record it on an audio cassette recorder. It seems that anything that can be rendered and experienced by the human senses can be recorded. But all of these copies are subject to noise and degradation in the process of rendering and re-recording. What trusted systems prevent is the wholesale copying and distribution of perfect digital originals. They can also embed hidden and visible "watermarks" in renderings that make it possible to trace unauthorized copies.

Most documents for sale over the Internet are short—under twenty pages. For some publishers, the risk of unauthorized print copies for

lengthy documents is too high. They do not want to risk distributing valuable assets in digital form lest they lose control of them. If the situation could be shifted to reduce the risk of loss of control in printing, content providers would distribute many more documents digitally. This leads to a desire for trusted printers.

Trusted printers combine four elements: print rights, encrypted on-line distribution, automatic billing for copies, and digital watermarks for marking copies that are printed. When assigning rights to a digital work, a publisher uses a digital property rights language to distinguish between viewing (or playing) rights and printing rights. Play rights are used to allow the making of ephemeral, temporary copies of a work such as an image of text on a display or the sound of music from a loudspeaker. Print rights allow the making of durable copies, such as pages from a laser printer. Furthermore, a publisher can assign particular fees and conditions to the rights. For example, printing might be allowed only by certified members of a subscription club or by employees of a particular institution.

To reduce the risk that a digital copy will be stolen by wiretapping or packet snooping, a trusted system encrypts the document when sending it to a trusted printer.

Whenever a document is printed, the trusted system automatically logs the billing transaction. This contrasts with the situation of a typical patron at a photocopy machine in a library. If a fee is required to make a copy of a work, the patron faces the inconvenience of trying to locate the rights holder, determining the fee, and making acceptable payment. This makes it difficult for honest people to act honestly. In contrast, trusted printing handles billing automatically, making it easy to log and pay for uses of a work.

Finally, a trusted printer can mark each copy with watermarks as it is printed.[6] Watermarks can either be highly visible or hidden. They can contain information identifying both the rights holder and also describing the printing event. Watermarks can give transaction data about the printing of the work and also indicate whether additional copying is permitted. Visible watermarks serve a social function, reminding people about copyright infringement and fair use. Glyph technology, an approach to marking paper with tiny symbols, can be used to carry hundreds of bits per square inch in various gray patterns on a page. With careful design, glyphs can be integrated as graphical elements in a page

6. *See, e.g.*, Jack T. Brassil et al., *Electronic Marking and Identification Techniques to Discourage Document Copying*, 13 IEEE J. ON SELECTED AREAS COMM. 1495 (1995), (technique for embedding hidden watermark within text documents); INGEMAR J. COX ET AL., SECURE SPREAD SPECTRUM WATERMARKING FOR MULTIMEDIA (1995) (NEC Research Institute Technical Report 95-10) (technique for embedding hidden watermark within audio and image data).

layout. To foil unscrupulous users who would cover up visible watermarks so as to prevent tracing a copy back to them, hidden watermarks can also be employed. There are many techniques for hiding information in the spacing of words and lines of text, or hiding it redundantly in the dot patterns of images. Information in both visible and hidden watermarks can be recovered by a scanning program. Furthermore, special patterns of material can be made by printers that are distorted in predictable ways by scanners and copiers, making it possible to tell whether a given sheet is a printed original or a copy. Thus, watermarks can be used as a social warning, to carry information, and to leave digital fingerprints for detecting and tracing unauthorized copying.

Trusted printers offer a new way to read large documents of commercial interest that currently do not appear on the net. They change the practical usefulness of networks for distributing large documents digitally. The risks of theft of digital works is reduced by encrypting all transmissions of content to the printer and by embedding watermarks in the printout. Since payment systems are automatic, a publisher can rely on a revenue stream that is more dependable than the stream from reprint requests today. The required level of traceability of copies can be obtained by specifying in the rights the kind of trusted printer which may be used and watermarking.

III. SOCIAL AND LEGAL IMPLICATIONS OF DIGITAL PUBLISHING

I have now reviewed the basic technology required for digital publishing: trusted systems, attached rights, and electronic billing. The promise of digital publishing has significant social and legal implications. Digital publishing not only raises new issues, but also can make moot old ones. I will address these issues in the following sections.

A. Legal Standard for a Copy

Much of the confusion about digital publication centers around the question of what it means to make a copy. For works on paper, the steps in the operation of a photocopier offer an analogy. The content is expressed by marks on each page. A photocopier creates an image of the marks and puts corresponding marks on another piece of paper.

The idea that copying marks on a medium amounts to making a copy has led to confusions in electronic media. Although this analogy works pretty well for describing what it means to make a copy of a video cassette, it does not work so well for digital copies in computers. The extrapolation of the analogy says that even copying bits into computer memory amounts to "making a copy" and thereby infringes copyright. But modern architectures of computers do not have one simple,

undifferentiated "memory." In a typical case, when a computer receives data from some input device, the bits first are loaded into an input buffer. They might then be copied to main memory, and then into a high speed cache that parallels main memory. They would then typically be copied into a display buffer prior to rendering on a screen. In an extreme interpretation, copyright would be infringed several times by any computer with a reasonably modern architecture before any person could even see the work.

Although the legal force of this extrapolation is open to question on the issue of whether marks in computer memory are "fixed,"[7] what is really needed is a way of talking about copying that takes into account how the information is used.[8] To return to the example of paper, what makes a new copy on paper a potential infringement is that it can be used like the original. If I take a published work on paper and run it through a modern copier, I can create a physical artifact that is just as useful as the original. Unregulated use of a copier increases the number of usable copies in the world without compensating the publisher or creator. This copying potentially reduces sales and undermines the ability of the publisher or creator to make a living, thereby undermining their incentive to create new works. Therefore, the usability of a copy and its potential for destroying potential revenues of rights holders need to be taken into account when defining what it means to make a copy on a computer.

B. Copy Versus Transfer

The Xerox digital property language distinguishes between two different rights, both of which transfer information between repositories. These rights are a right to copy, and a right to transfer. To copy a digital work is to make a new, usable digital copy on a repository without deleting the original. To transfer a digital work is to make a new usable copy on a repository and then delete the original. In copyright law, the term "distribute" is closely related to "transfer." The crucial difference between exercising a right to copy and a right to transfer is that the former increases the number of usable copies in the world and the latter does not. A transfer right mimics what happens when I give a friend a copy of a book purchased at a bookstore. Once I have given the copy away, I can no longer read it. Similarly, once a repository transfers a

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7. *See, e.g.*, MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511, 517-18 (9th Cir. 1993), *cert. dismissed*, 510 U.S. 1033 (1994) (loading software into RAM causes a "fixed" copy to be made).

8. "The test of reproduction, as the software courts [sic] have suggested, should be simply usefulness to the reproducer." Ira L. Brandriss, *Writing in Frost on a Window Pane: E-mail and Chatting on RAM and Copyright Fixation*, 43 J. COPYRIGHT SOC'Y U.S.A. 237, 275-76 (1996).

copy to another repository, the copy on the first repository can no longer be read. A transfer transaction does not increase the number of usable copies in the world.

A transfer transaction of a digital work is like a bank transaction with money. When you use an automatic teller machine and transfer funds between accounts, the money simultaneously disappears from one account and appears in the other. A transaction has the property of completing its operation entirely, or not performing the action at all. If a user interrupts a transfer process, he does not end up with two partial copies. Rather, both repositories go through a standard cleanup procedure. The sending repository restores the work to usable status and reports the transaction failure. The receiving repository deletes its partial copy and reports the transaction failure.

This distinction between transfer and copy rights gets to the heart of what matters about copying for copyright infringement. It's not so much the communication of bits that matters; it's the creation of useable copies.

For typical use of paper documents, the transfer right is governed by the "first sale doctrine."[9] In the absence of contracts saying otherwise, if you buy a book at the store, you can generally give it away. What you own is a particular physical copy and you can dispose of it as you please. The first sale doctrine modifies the distribution right by dictating that after the first sale of a copy to the public, the copyright owner cannot control further distributions.

Not all printed documents are governed by the first sale doctrine. For example, the purchase of an expensive industry report from a consulting company can be conditioned on the proviso that it not be distributed to any organization beyond the one that purchased it.

With digital works, it need not be the case that transfer rights are free or universally granted. Publishers could charge a small fee whenever a work is transferred between repositories. The same mechanisms that prohibit copying without a right to copy could prohibit transferring without a right to transfer. The same billing mechanisms for a copyright work for a transfer right. The technology itself is neutral on this point. Trusted systems could enforce either policy.

C. Shades Of Gray In Fair Use

Issues of fair use[10] are sometimes argued as being black and white. Digital property rights introduce shades of gray. Convenience of billing

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9. 17 U.S.C. § 109(a) (1994).

10. 17 U.S.C. § 107 (1994). In codifying the fair use doctrine, Congress has recognized that certain otherwise-infringing uses of a copyrighted work may be excused based on equitable factors. Courts have developed a four-factor test to determine whether a use is "fair." *See, e.g.*, Campbell v. Acuff-Rose Music, Inc., 114 S. Ct. 1164 (1994).

and a moderated scale can turn a fair use issue into a negotiation about price, rather than an all-or-nothing confrontation.[11]

In the past, when there has been a dispute about whether a use is fair, adherents of the two positions could line up their forces for a legal fight. Someone uses a work in a particular way, a publisher challenges the use as being an infringement, and the user defends the use as fair. If the court judges the use as "fair," then publishers will never realize any revenue from that use. If a use is judged not fair, then users are required to get permission and potentially pay for the use, no matter how incidental the use, or how inconvenient and expensive it may be to identify and locate the rights holders. This can present a substantial burden to potential users.

With low overhead, it is practical for publishers to establish very low fees for simple and even rare uses. With automated billing, they can make compliance relatively inexpensive and convenient. Since the fee to exercise a right can be large or small, the gap between fair use (free) and paying to exercise a right (possibly expensive) can be populated by many positions in between: nominal fees, low fees, medium fees, pretty high fees, and so on.

In a broad and healthy market, the availability and price of rights can become a point of commercial competition rather than a point of legal interpretation. Consider a hypothetical digital newspaper. One newspaper might disallow printing on the rationale that unregulated distribution of stories would undermine digital sales. Another newspaper might allow printing of any article more than one week old, on the rationale that printing old news amounts to advertising the newspaper. In this way, providing the most attractive suite of rights becomes an element of competition among publishers.

D. Digital Libraries

The right to loan illustrates another variation on how new digital rights influence how we think about fair use. It is common practice to loan books to friends, even if it is also a common experience that such books often are not returned. Lending is crucial in the operation of public lending libraries. In the digital realm, there has been much interest in understanding the role and operation of digital libraries.[12]

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11. Some scholars have suggested that a use should not be considered "fair" if the use could have been purchased through the market. *See, e.g.*, Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600, 1609 ("A court generally should engage in balancing costs and benefits only if market failure has left it the only institution able to do so.").

12. *See generally* MARK STEFIK, INTERNET DREAMS: ARCHETYPES, MYTHS, AND METAPHORS, 1-107 (1996).

A digital property language can specify a loan right, which is illustrated by the following example. Suppose that Larry buys a digital book. After he has read the book, Larry is approached by his friend Bob, who wants to borrow the book. Assuming that the publisher has granted the loan right, Larry (the loaner) agrees to loan the book to Bob (the borrower) for a week. Their two repositories communicate, and an encrypted copy is sent to Bob's machine, together with a specification of the digital property rights to be associated with the loaned copy. During the next week, both repositories have copies. However, Larry's copy cannot be read because it is marked as loaned out. Suppose that Bob goes on vacation and initiates no action to return the work. Both repositories have clocks. At the end of the week, Bob's repository deactivates his copy and Larry's repository reactivates his copy. No communication between the repositories is necessary for the work to be returned.

After the loan period is over, Bob may still want to read some unfinished portion of the book. Whether Bob's repository actually deletes the digital book is a policy question for how Bob's repository manages its storage. What matters from the perspective of preserving the number of usable copies is that the loaning and borrowing repositories not allow simultaneous use of the loaned work. However, it can be in the publisher's interest to allow Bob to purchase additional time to read the book after the loan period ends, or even to purchase a copy of the book—converting Bob the borrower to Bob the buyer. The same machinery that enforces fees, terms, and conditions could be called upon in this case to allow Bob to exercise a right to copy for a fee—essentially converting his expired loaned copy into a usable copy. In this scenario, any loaner or digital library is potentially a distributor.

The loan right gets to the heart of some of the issues that have been raised about the operation of digital libraries. One of the concerns about digital libraries is that in the absence of copy controls, digital libraries would amount to free distribution centers. The trusted system approach addresses that issue head-on. If some publishers do not desire works to be loaned out, they can simply not grant loan rights. Alternatively, suppose that they want to allow loaning but do not want copies to be made of any works that are loaned, based on the rationale that this competes unfairly with their other sales channels. In that case, they would arrange for works on loan to not have rights to copy. Suppose that publishers want to allow library patrons to copy the works, but for a fee and subject to certain conditions. The same trusted system elements that control fees, terms, and conditions for other copy transactions work the same way for loaned library copies. Thus, library patrons may be able to make copies providing that they can pay the fees and meet any other digital licensing requirements.

Libraries are consistently under pressure to reduce their expenses. Digital distribution offers some ways both to reduce costs and to provide new sources of income for libraries. Cost reduction comes from the automation of information services. New income comes from the ability of libraries to charge fees for on-line services and for distributing works.

Increasingly, libraries face issues of deciding which services to freely offer to the public and for which services to charge. The decision of how many copies of a digital work to buy for loaning illustrates one way to balance these values. Suppose that a library buys ten digital copies of a best seller to distribute for free to its patrons and ten more copies to distribute for a fee. Patrons that are more economically-minded can wait for free copies to become available. Patrons in a hurry and willing to spend more money can access the for-fee copies in lieu of waiting. Revenues from the for-fee copies can subsidize more for-free copies.

E. The Backup Issue

When I first presented the ideas of digital rights on trusted systems to colleagues at PARC, one of the criticisms was that the approach provided no means of making backup copies. Like most veteran computer users, my critics viewed the making of backup copies of software as an essential defense against media failure.

At first, I was perplexed by the backup issue. I felt that making backup copies was a legitimate user interest.[13] Backups can protect access to expensive information. Because the quality and reliability of the storage system is in the control of the user rather than the publisher, this should be a user responsibility.

The problem was that backups seemed to undermine the ability of repositories to maintain trust. A person could make a backup copy, sell the original, restore the backup copy, and then do it again. Uncontrolled backup copies could become an inexhaustible supply of unauthorized free originals.

The resolution of this apparent dilemma came when we realized that we could treat the making and restoring of backup copies in terms of rights, with the full range of fees and conditions. Making a backup copy is defined as making an encrypted copy that can be stored off-line. When a backup copy is read back into a repository, the only right on it is a restore right. The backup copy is not useful for anything else.

A restore right can have fees and conditions. A restore right can require contacting a publisher for permission. A publisher might give each user three "restore" tickets. A user who exhausts these tickets may still

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13. It is not an infringement for the owner of a copy of a computer program to copy it provided that the new copy is for archival purposes only. 17 U.S.C. § 117(2) (1994).

exercise a different restore right that requires the user's repository to communicate with the publisher's permissions server to obtain permission. When a permissions server sees too many requests for restoring the same copy, it can refuse to grant permission.

The backup and restore rights provide another example of how digital property rights convert polarized black-and-white arguments about fair use into shades of gray. By adjusting the fees and conditions, the interests of publishers and consumers can be brought into a point of balance that depends on the situation. This is another place where market competition may lead to a de facto right to make and restore backup copies.

F. Digital Reuse

Works are often made up of other works. A simple example of this is a set of readings for a college course, such as a collection of case studies used in a business school. Each case is written by a different person. Another example is a book of poems by different contributors. In music, there are collections of performances by different artists. A newspaper gathers elements from different sources—stories and photographs from the wire services, from archival services, and from local reporters.

Digital works can be composite, that is, made up of other works. For example, a digital newspaper might have stories from a wire service combined with photographs from various sources, local stories, and advertising. Different parts can have different rights. This means that the attachment of rights relates to components of a work. When a work is used, the repository must check the rights on each of the incorporated parts.

When a book editor wants to assemble a collection of articles, the process of obtaining permissions can be onerous. The rights holders must be located to obtain the necessary permissions and potentially to negotiate a fee. Often the permissions process operates out of a back room at the publisher. In many cases, common practice includes getting permission from both the publisher and the author. The general attitude is that reuse does not generate much revenue for the publisher so it gets little priority. The process of obtaining permission to use video or photographs can be much more complicated, potentially requiring not only permission of the photographer and publisher, but also permission from people who appear in the picture.[14]

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14. The subject of a photograph may have a tort action against unauthorized uses of his or her likeness, especially if the use is commercial, under right of publicity or right of privacy theories. *See generally* MARTIN P. HOFFMAN, THE RIGHTS OF PUBLICITY AND PRIVACY, SA71 ALI-ABA 209, 213 (1996).

In digital multimedia, photographs, sound recordings, video and text are all available in digital formats. In this regime, reuse of elements is potentially easy ("cut and paste") and potentially desirable. Imagine a group of artists, or for that matter, advertisers, creating a multimedia work: "Give me some ocean sounds here." "Do you have a picture of the Eiffel Tower?" "I need a video clip of a biplane flying over Manhattan." "I need a photograph of an idealized American housewife cleaning house in the 1950's." For such cases, the cost of developing the element from scratch would be high, creating a market opportunity for vendors of photograph and audio collections.

The digital property rights approach allows publishers to assign rights to works in their collections. These rights set forth various fees and conditions bearing on the use of the work. Specifically, the rights set forth the fees for making a copy or printing the work, as well as conditions on extracting from context, changing it, or embedding it in a larger work. An author or editor interested in reusing a work need only locate the work and use a trusted editing system to embed it in a larger composite work. Automatically, the rights travel with the work. When a consumer later buys a copy of the composite work, the rights holders of all the included works get paid automatically.

This example diverges from current practice in many ways. The most profound change is that it enables publishers to automate and streamline the permissions process. In current practice, when an editor wants to incorporate a previously published article in a book, the contract is typically a fixed fee in which the rights holder tries to guess how many copies of the article will be printed and to charge accordingly. The rights holder argues that the number of copies will be high, whereas the conservative editor argues that the number of copies will be low. In the digital rights approach, it is possible to eliminate the guessing by assigning a flat fee per copy.

Finally, it is worth mentioning another issue that often comes up in discussion of reuse. What is the smallest unit of a work?[15] Is it the entire work? A page? A paragraph? What are the units for a picture? Can a piece of a photograph be used? How small a piece? What about sampling in music? Copyright law refers to fair use of short sections of works for review purposes.[16] Across industries, various practices have evolved to set limits on the amount of material that can be used for quoting. Trusted systems can contribute to the balance of control by

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15. *See, e.g.*, E. Scott Johnson, *Protecting Distinctive Sounds: The Challenge of Digital Sampling*, 2 J.L. & TECH. 273, 274 (1987) (raising the issue in the context of digital sampling of music).

16. "[T]he fair use of a copyrighted work . . . for purposes such as criticism, comment . . . scholarship, or research, is not an infringement of copyright." 17 U.S.C. § 107 (1994).

providing concrete means for extracting and editing portions of works and embedding them in compound documents. If the dimensions and parameters of such use can be worked out by the various stakeholders, rights languages can express the terms and conditions and trusted systems can enforce the rules.

In summary, trusted systems enable publishers to pre-specify conditions and fees for derivative works and enables even small fees to be automatically aggregated and collected. Although automatic permissions in support of reuse are not appropriate for all situations, digital rights for reuse could unleash some niche markets and greatly increase the quantity of works available.

G. Copyright Expiration

There is some debate about how trusted systems should behave when the copyright in a digital work expires. The law addressing copyright term has evolved over time. At the time of this writing, copyrights for written works created after January 1, 1978 extend for a period of fifty years after the author's death.[17] There are special cases in which the term of copyright varies from this standard, for example, when there are multiple authors,[18] works published under a pseudonym,[19] and works for hire.[20] But the significant issues are about the technology rather than the special cases of the law. What should happen at the end of life for a copyright for works distributed on trusted systems? Could trusted systems effectively nullify the automatic passage of a work into the public domain after the period of time proscribed by law?

This concern frames the issue in terms of the behavior of trusted systems and the good will of publishers. In this framework, one answer is that free access to the work should become available on every trusted system, so that the work could then be used without charge or restriction. But this is not the only possibility. Another possibility is that different unencumbered copies of the work could become available through public institutions such as the Library of Congress, while fee-based copies of the work are distributed commercially as before. One argument for the second possibility is that convenience of access is worth something. People can choose to locate a free version or they can use a for-fee version promoted by a publisher. Furthermore, even leaving aside the issue of how a trusted system determines when an author died, programming copyright law into trusted systems raises its own issues.

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17. 17 U.S.C.S. § 302(a) (Law. Co-op., LEXIS through 11/12/96).
18. 17 U.S.C. § 302(b) (1996).
19. 17 U.S.C. § 302(c) (1996).
20. *Id.*

Suppose that vendors program trusted systems to model copyright law and to release digital works after a particular interval. Who is liable for the behavior of the systems if the copyright laws change during the lifetime of a work? Who is liable if a user of a trusted system liberates an unencumbered version of a digital work in one country when it goes out of copyright under local laws, and then distributes it in another country where the period of copyright is longer? These examples remind us of potential issues that can arise because of the dynamic nature of law, and the absence of national boundaries on the Internet.

H. Putting Boundaries into Cyberspace

The net makes the world seem smaller. People can interact with each other and exchange messages and works, whether they are in the same building or separated by great distances. In this way, the net overlays the physical and political world, crossing over national, city, school district, corporate, sales district, and other boundaries. Because the network crosses so many boundaries, it brings people from diverse cultures together who have different interests and values.

The crossing of boundaries leads to issues about restricting the copying of certain digital works beyond the considerations of copyright. To allow anyone to make a copy of any digital work, even for a fee, would violate many expectations of business practice as well as various laws and community standards. For example, sale or import of some works may be banned in certain countries.[21] Some works contain sensitive data, such as company trade secrets. Some countries have restrictions on the percentage of local content on certain kinds of works.[22] Some communities may choose to restrict sales of certain categories of works to children.[23]

As described already, the terms and conditions that govern the exercise of rights are expressed in a digital property rights language.

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21. For example, strong encryption software falls within Category XIII(b) of the United States Munitions List, and export out of the United States is prohibited by the International Traffic in Arms Regulations (ITAR). 22 C.F.R. § 121.1 (Michie, LEXIS through 4/18/97).

22. For example, the European Commonwealth has enacted local content requirements for television broadcasts whereby "member States shall ensure where practicable and by appropriate means, that broadcasters reserve for European works . . . a majority proportion of their transmission time, excluding the time appointed to news, sports events, games, advertising and teletext services." John D. Donaldson, *Television Without Frontiers: The Continuing Tension Between Liberal Free Trade and European Cultural Integrity*, 20 FORDHAM INT'L L.J. 90, 99 (1996).

23. The Communications Decency Act of 1996 provides that cable "distributor[s] shall limit the access of children to . . . sexually explicit adult programming . . . by not providing such programming during the hours when a significant number of children are likely to view it" unless the programming is fully blocked or scrambled. 47 U.S.C.A. § 561 (West, WESTLAW through 11/12/96).

These terms and conditions can restrict who can exercise a right on a particular document. They can also express requirements on a trusted system itself, such as its security level or its ownership. Since questions of identity must often be resolved over a communication channel, signed digital certificates are typically used as part of a secure process for establishing identity. In this way, licenses as digital certificates can put boundaries into the network, acting as identifiers for groups of people and gating the flow of information.

By certifying that someone is an employee of a particular corporation or a member of a work group, digital certificates can control the transporting and rendering of documents. Only someone who has the right kind of certificate can read documents with the restrictions. Similarly, certificates can be used to indicate membership in a book club, such as an on-line book club with purchase discounts for its members. Certificates can be used to certify someone as a member of an organization having a site license. They can be used to identify people with up-to-date subscriptions to a journal. They can be used to indicate professional status, such as a researcher at a library. They can be used to give cheap or free access to members of the public that would otherwise not be able to afford access to information.

In some commercial publishing settings, it is appropriate to control who can distribute works. For example, some distributors can be licensed to sell all copies of a work in a geographical region. For paper-based books, the definition of regions often follows national and geographic boundaries, respecting expenses of either language translation or government regulations. One rationale for granting a distributor a monopoly for a region is that it compensates for the costs of local advertising. With regard to computer software, some publishers demand that distributors be qualified to provide training and support.

The relationship of national boundaries to particular computers presents some interesting issues. Suppose that a piece of software is supposed to be restricted in some way when it moves between country A and country B. For example, an import tax might be required. If a person from country B travels to country A and loads the software onto his laptop computer, has he imported the software? Or is the software imported when he carries his laptop across the border? Does importing take place when a document is electronically transmitted across the border? What if a person from country A is visiting country B with his laptop and electronically loads software over the network onto his laptop, and then carries the laptop back to country A without ever giving a copy to anyone in country B? Has he exported the software twice, or not at all? All of these examples raise questions about enforceability of import and export restrictions on computers.

One approach to the import/export issue, not yet sanctioned by law or practice, would be to register computers in the same way that we register ships. Thus, a laptop registered in country A would be considered to be "country A registered" no matter where it is physically located at a particular moment. This is a bit like a "Panamanian registered ship" and a bit like a "Panamanian embassy." Importing between country A and B then occurs whenever a digital work is moved from a trusted system registered in country A to a trusted system registered in country B, independent of the physical locations of the two systems. The registration of a trusted system would be certified by a non-transferable and not-easily counterfeited license that it carries.

Recapitulating, many issues about transport and use of digital works lie outside the scope of copyright law. Digital rights rely on a combination of laws and contracts. Digital certificates can be used in a practical way to introduce representations of boundaries and identity into cyberspace, making control practically enforceable. There are several technical means to make digital certificates non-transferable, dated, and hard to counterfeit.

IV. COMPETITION AND COOPERATION

A. Achieving Balance

Trusted systems shift the balance and put more power in the hands of publishers. Publishers decide what rights to assign to a work and what fees to charge. If someone buys a work and wants to put it to a use not available as part of the rights attached thereto, they are blocked. It is not likely that designers of these trusted systems will put a button in the user interface which says "Just trust me. I intend to use this work in some different but fair way. Just give me a copy in the clear." It is significant that the user is denied a fair use defense because he cannot get a copy of the work. Reminiscent of the "Laws of Robotics" from Isaac Asimov's robot novels, we can ask what are the rules of good behavior for trusted systems that take into account the public good? And who determines the rules?

Stepping back from the argument about a shift in power to publishers, however, it is interesting to see how publishers view digital publishing in the absence of trusted systems. From a publishing perspective, uncontrolled digital technology itself shifts the balance in the social contract between those who create and distribute works and those who use them. For many kinds of digital works, it has become very easy to use and duplicate a work without having authorization or providing compensation. Untamed, the digital frontier is so wild that publishers cannot imagine how to make a living. The fundamental challenge is to

provide appropriate checks and balances for the interests of the various stakeholders.[24] The public is now getting its first experience with trusted systems. Trusted systems do not exist in a vacuum. They exist in a social framework. The search for balance involves the design of appropriate social institutions.

Many stakeholders are unwilling to assume that publishers will always act in the public interest. After all, copyright law itself has evolved over time to reset the balance of power between the public, authors, and publishers. In some historical cases, the law was changed because the public believed that publishers were charging too much. In a healthy market, competition may guide publishers toward policies that are in the public interest. In other markets, cartel behavior remains a possibility.

I believe that dedicated social institutions will be needed together with trusted systems in order to best serve the market and the public good. In discussion with various stakeholders, I have used the name "Digital Property Trust" (DPT) to refer to such an institution. The DPT would have as its objective the promotion of commerce in digital works. The DPT would augment the social framework so that stakeholders would have representation in a system with a high degree of automation. Given the greater efficiency that automation and trusted systems create, it is reasonable to handle the rare cases with human labor and human judgment. In my mind, the DPT itself would be governed by representatives of the various stakeholders—including publishers, trusted system vendors, financial institutions, lawmakers, librarians, and consumers—and would interact in an appropriate and organized way with governing bodies and law enforcement agencies in different countries. It would be funded by contributions from the stakeholders and by a small tithe on trusted system transactions.

Referring back to the fair use defense, the DPT could offer an arbitration and licensing service. Members of the public with special needs—such as librarians, researchers, and teachers—could have special licenses. To get such a license, a person might need only to demonstrate an understanding of the principles of fair use and copyright to a suitable authority. These licenses could have associated special discounts or free use for certain kinds of works and perhaps fewer limitations on rights. To balance the risk of substantial financial losses due to unauthorized digital publishing by licensed individuals, there could also be insurance associated with licenses that grant less-controlled use. Works released in this way might have special watermarks embedded in the digital data,

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24. *See* Pamela Samuelson, *Regulation of Technologies to Protect Copyrighted Works*, COMM. ACM, July 1996, at 17, 17.

used to track any source of unauthorized publishing or alteration. The licenses, insurance, and watermarks are mechanisms that can be used by the DPT to balance the competing interests and risks of the stakeholders.

B. Achieving Interoperability

An important concern being raised by publishers is whether trusted systems by different vendors will be compatible. Can digital works with rights assigned using one approach be used by a consumer who mainly uses another vendor's equipment? Publishers are aware of market confusion over competing standards, such as the Sony/Betamax battle to establish the dominant standard in the video cassette recorder market. Publishers are worried that incompatible standards will increase expenses and slow the growth of the digital publishing market.

At present, the trusted systems and rights encoding systems being developed by vendors are proprietary and incompatible. Providing for interoperability requires substantial cooperation among the vendors. One way that interoperability can be achieved is through the use of an established standard language for terms and conditions that works across platforms and systems. However, the real issues of interoperability go much deeper than the use of common formats.

Consider the following example. Someone buys a publisher's work using a trusted system supplied by vendor A. Later he copies it properly for a friend who uses a system supplied by vendor B. There is a chain of such transfers and loans. At some point, the work is copied without proper payment between a system supplied by vendor F to one supplied by vendor G, and furthermore, the consumer of G now begins to distribute the work for free without authorization.

This example raises several issues. What are the losses or potential losses for the publisher? To what level should the publisher be compensated for loss of revenues? Which consumers are liable? What vendors are liable? To what level of risk and liability is each vendor in the chain exposed?

There are many possible answers to these questions. The answers in force as the market develops will affect its growth and development. I think one approach that would be conducive for a lively market would involve an important role for the DPT, and I will now outline that approach.

The participation of a trusted system in commerce in digital works implies a fiduciary relationship between the vendor and several parties, including the rights holders, the consumers, and the financial clearinghouses. Offering a computer system to participate in this commerce involves more than just building systems that can interpret certain data formats. Trusted systems need to be certified. They cannot

be certified just by their vendors, and market competition gets in the way of certification by other vendors. The certifying organization needs to have certain skills and standards in order to verify that a system is compliant and can be trusted to follow instructions in the digital property language on all digital works. As a certifying organization, the DPT needs to be technically competent and independent.

The established way to manage and amortize risk is insurance. Each step in the chain of transactions in our example adds a separate risk and should have a separate insurance component. A practical way to manage this process is to have a small premium associated with each transaction that pays for the insurance. The premium would vary with the level of risk and with the amount of insurance coverage required by the rights holder. The DPT could act as a central clearinghouse for the insurance, as well as an issuer of the digital certificates that mark each repository as "trusted." The DPT would also be involved in maintaining and distributing hotlists of rogue repositories and would carry out other measures to ensure the smooth operation of commerce. This approach bounds risks faced by both publishers and vendors and provides a scaleable income stream to pay for the insurance. Restated, the DPT backs trust with insurance.

Over time, the standards for defining rights and conditions in the digital property language would change. An important role of the DPT would be to manage both the evolution of the standards, and also the expansion of the DPT into new areas. The governance of the DPT should reflect the strong interests of the different kinds of stakeholders: publishers of books, movies, newspapers, and music; vendors of computers, trusted players and trusted printers; financial clearing houses; governments; and consumers.

At present, no organization is empowered to act as the DPT. Indeed, individual vendor companies have been building patent portfolios in support of their own technological approaches. The path ahead could involve market confusion and patent fights or it could involve enlightened self-interest in establishing a healthy market in digital property. A well-organized movement to create the DPT, with appropriate representation and investment by stakeholders, would be the single most effective step in creating a lively market in digital publishing.

V. CONCLUSION

I am sometimes asked by publishers when I expect digital publishing to take off. At a recent publishing industry roundtable, representatives from several technology companies were asked this question and the answers ranged from late 1996 to 2001. I have been looking for a definitive moment to mark the beginning of digital publishing. When I

look closely, what I find is a fractal. Each period of time has many small beginnings.

At the time of this writing, several companies have trusted systems and software in alpha-test stages. Some early publishers are building their first applications. Some publishers are holding back, predicting that other models of revenue generation will dominate, such as advertising-based distribution. There are many conferences and discussion groups in which the issues of fair use, billing models and platform availability are being discussed. Momentum is building. More people are sensing the possibilities and are moving up the learning curve. More bits of the infrastructure are falling into place. The DPT does not yet exist physically, but increasingly, publishers and vendors are beginning to understand the issues that the DPT would need to address. There is little doubt that the market will develop. How quickly the market will grow and how well it will thrive depends on whether competitors in the relevant industries merely compete in offering their products and services, or whether they collaborate on actually creating the market for trusted systems, promoting standards and the use of the developing technology discussed in this article.

ARTICLE

SOME REFLECTIONS ON COPYRIGHT MANAGEMENT SYSTEMS AND LAWS DESIGNED TO PROTECT THEM

JULIE E. COHEN†

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I. INTRODUCTION

Copyright management systems (CMS)—technologies that enable copyright owners to regulate reliably and charge automatically for access to digital works—are the wave of the very near future. The advent of digital networks, which make copying and distribution of digital content

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quick, easy, and undetectable, has provided the impetus for CMS research and development.[1] CMS are premised on the concept of "trusted systems" or "secure digital envelopes" that protect copyrighted content and allow access and subsequent copying only to the extent authorized by the copyright owner.[2] Software developers are testing prototype systems designed to detect, prevent, count, and levy precise charges for uses that range from downloading to excerpting to simply viewing or listening to digital works.[3] In a few years, for example, an individual seeking online access to a collection of short fiction might be greeted with a menu of options including:

- Open and view short story A
  $0.50, or $0.40 for students doing assigned reading (verified based on roster submitted by instructor)
- Open and view short story B (by a more popular author)
  $0.80, or $0.70 for students
- Download short story A (encrypted and copy-protected)
  $1.35
- Download short story B *$2.25*
- Download entire collection *$15.00*
- Extract excerpt from short story A *$0.03 per 50 words*
- Extract excerpt from short story B *$0.06 per 50 words*

CMS also loom large on the legislative horizon. Copyright owners have argued that technological protection alone will not deter unauthorized copying unless the law provides penalties for circumventing

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1. *See, e.g.*, U.S. DEP'T OF COMMERCE, INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 10-12, 177-78, 230 (1995) [hereinafter NII WHITE PAPER]; Jon Bing, *The Contribution of Technology to the Identification of Rights, Especially in Sound and Audio-Visual Works: An Overview*, 4 INT'L. J. L. & INFO. TECH. 234, 235-36 (1996); CHRISTOPHER BURNS, INC., COPYRIGHT MANAGEMENT AND THE NII: REPORT TO THE ENABLING TECHNOLOGIES COMMITTEE OF THE ASSOCIATION OF AMERICAN PUBLISHERS 15-16 (1996); Mark Stefik, *Letting Loose the Light: Igniting Commerce in Electronic Publication*, *in* INTERNET DREAMS: ARCHETYPES, MYTHS, AND METAPHORS 219, 220-22 (Mark Stefik, ed., 1996) [hereinafter Stefik, *Letting Loose the Light*] ("[C]omputers need not be blind instruments of copyright infringement. Properly designed digital systems can be more powerful and flexible instruments of trade in publications than any other medium.").

2. *See* Charles Clark, *The Publisher in the Digital World*, *in* INTELLECTUAL PROPERTY RIGHTS AND NEW TECHNOLOGIES: PROCEEDINGS OF THE KNOWRIGHT '95 CONFERENCE 85, 97-101 (Klaus Brunnstein & Peter Paul Sint, eds., 1995); Stefik, *supra* note 1, at 226-34; Mark Stefik, *Shifting the Possible: How Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 BERKELEY TECH. L.J. 138, 139-40 (1997) [hereinafter Stefik, *Shifting the Possible*]; INTERNATIONAL FEDERATION OF REPRODUCTION RIGHTS ORGANIZATIONS, COMMITTEE ON NEW TECHNOLOGIES, DIGITAL RIGHTS MANAGEMENT TECHNOLOGIES, (visited April 17, 1997) <http://www.ncri.com/articles/rights_management/> [hereinafter IFRRO REPORT].

3. *See* Bing, *supra* note 1, at 261-66; BURNS, *supra* note 1, at 17-21, 30-35; Clark, *supra* note 2, at 97-101; Stefik, *Shifting the Possible*, *supra* note 2, at 142; IFRRO REPORT, *supra* note 2.

the technology.[4] Although a bill to protect CMS against tampering failed to reach a vote in Congress last year, the World Intellectual Property Organization's recent adoption of treaty provisions requiring protection means that Congress must revisit the question soon. Part II describes these developments.

The seemingly inexorable trend toward a digital CMS regime raises two questions, which I address in parts III and IV, respectively. First, broadly drawn protection for CMS has the potential to proscribe technologies that have indisputably lawful uses and also to foreclose, as a practical matter, uses of copyrighted works that copyright law expressly permits. How may protection for CMS be drafted to avoid disrupting the current copyright balance? Second, and equally fundamental, CMS may enable both pervasive monitoring of individual reading activity and comprehensive "private legislation" designed to augment—and possibly alter beyond recognition—the default rules that define and delimit copyright owners' rights. Given the unprecedented capabilities of these technologies, is it also desirable to set limits on their reach?

II. LEGISLATIVE AND TREATY DEVELOPMENTS

Emerging schemes for legislative protection of CMS have two components. First, they prohibit tampering with protective technologies adopted by copyright owners. Second, they prohibit the unauthorized removal or alteration of so-called "rights management information" (RMI) attached to copies of copyrighted works. Because RMI is defined to include the terms and conditions for use of the work, tampering with CMS (which enforce terms and conditions) may constitute an RMI violation, and vice versa.

The following three subsections lay out the various legislative proposals and treaty provisions that are likely to shape the domestic debate over CMS and RMI.

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4. *See, e.g., National Information Infrastructure: Hearing on S. 1284 Before the Senate Comm. on the Judiciary*, 104th Cong. (May 7, 1996) (testimony of Kenneth R. Kay, Executive Director, Creative Incentive Coalition), *available in* WESTLAW, USTestimony database; *Copyright Protection on the Internet: Hearings on H.R. 2441 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 104th Cong. (Feb. 7-8, 1996) (statements on Feb. 7, 1996 of Barbara A. Munder, Senior Vice President, The McGraw-Hill Companies, Inc.; Frances W. Preston, President and CEO, Broadcast Music, Inc.; Jack Valenti, Chairman and Chief Executive Officer, Motion Picture Association of America, Inc.; and statement on Feb. 8, 1996 of the Association of American Publishers), *available in* WESTLAW, USTestimony database; *see also* NII WHITE PAPER, *supra* note 1, at 230 (endorsing anti-tampering legislation for that reason).

A. The National Information Infrastructure Copyright Protection Act

In 1995, the Clinton Administration's Information Infrastructure Task Force released a "White Paper" on "Intellectual Property and the National Information Infrastructure," which included recommended changes to the Copyright Act to address perceived difficulties concerning the Act's application to digital works.[5] The National Information Infrastructure Copyright Protection Act (NIICPA), a verbatim rendering of the White Paper's proposals, was introduced in Congress in the fall of 1995.[6] However, the NIICPA's provisions engendered strong opposition from a variety of groups, including educators, librarians, Internet service providers, and manufacturers of consumer electronic equipment.[7] As a result, the bill remained stalled in committee when the 104th Congress adjourned. Of particular importance for this discussion, the NIICPA includes a proposed Chapter 12 for the Copyright Act, which was designed to protect CMS.

1. *TECHNOLOGICAL PROTECTION*

The anti-circumvention provision, proposed section 1201 of the Copyright Act, reads as follows:

> Section 1201. Circumvention of copyright protection systems.
>
> No person shall import, manufacture, or distribute any device, product, or component incorporated into a device or product, or offer or perform any service, the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent, without the authority of the copyright owner or the law, any process, treatment, mechanism, or system which prevents or inhibits the violation of any of the exclusive rights of the copyright owner under section 106.[8]

2. *RIGHTS MANAGEMENT INFORMATION*

Proposed section 1202 of the Copyright Act would provide protection for RMI:

> Section 1202. Integrity of copyright management information.
>
> (a) False Copyright Management Information—No person shall knowingly provide copyright management information that is false, or knowingly publicly distribute or import for public distribution copyright management information that is false.

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5. NII WHITE PAPER, *supra* note 1.

6. National Information Infrastructure Copyright Protection Act, S. 1284 & H.R. 2441, 104th Cong. (1995) [hereinafter NIICPA].

7. *See* Digital Future Coalition, collected position statements, letters, and press releases (visited April 5, 1997) <http://www.ari.net/dfc/>.

8. NIICPA, *supra* note 6, at § 4 (proposed § 1201 of the Copyright Act).

> (b) Removal or Alteration of Copyright Management Information—No person shall, without authority of the copyright owner or the law, (i) knowingly remove or alter any copyright management information, (ii) knowingly distribute or import for distribution copyright management information that has been altered without authority of the copyright owner or the law, or (iii) knowingly distribute or import for distribution copies or phonorecords from which copyright management information has been removed without authority of the copyright owner or the law.
>
> (c) Definition—As used in this chapter, 'copyright management information' means the name and other identifying information of the author of a work, the name and other identifying information of the copyright owner, terms and conditions for uses of the work, and such other information as the Register of Copyrights may prescribe by regulation.[9]

3. *REMEDIES AND DEFENSES*

The NIICPA would authorize a panoply of civil remedies for violation of sections 1201 and/or 1202. Monetary remedies available to the copyright owner include "damages suffered . . . as a result of the violation, and any profits of the violator that are attributable to the violation and are not taken into account in computing the actual damages,"[10] statutory damages up to $2,500 per violation of section 1201 and $25,000 per violation of section 1202,[11] treble damages for repeated violations,[12] and costs and attorneys' fees.[13]

In addition, the remedial provisions would allow courts to impound "any device or product that is in the custody or control of the alleged violator and that the court has reasonable cause to believe was involved in a violation."[14] After final judgment, the court could order the device or product destroyed.[15]

Finally, the NIICPA would authorize criminal penalties against persons violating section 1202 "with intent to defraud."[16]

B. The Geneva Connection: The WIPO Treaty

In December 1996, delegates to the World Intellectual Property Organization (WIPO) met in Geneva to craft a protocol to the Berne Convention regarding copyright in digital works. Notwithstanding the

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9. *Id.* § 1202.
10. *Id.* § 1203(c)(2).
11. *Id.* § 1203(c)(3).
12. *Id.* § 1203(c)(4).
13. *Id.* § 1203(b)(4)-(5).
14. *Id.* § 1203(b)(2).
15. *Id.* § 1203(b)(6).
16. *Id.* § 1204.

Clinton Administration's failure to generate domestic consensus behind the NIICPA, the United States proposal to WIPO substantially tracked the language of the NIICPA.[17] With respect to CMS, however, the treaty provisions ultimately adopted differ considerably from those initially urged by the United States government.

1. *TECHNOLOGICAL PROTECTION*

The anti-tampering provision originally proposed by Jukka Liedes, Chairman of the Committees of Experts (proposed Article 13) reads as follows:

> Article 13: Obligations concerning Technological Measures
>
> (1) Contracting Parties shall make unlawful the importation, manufacture or distribution of protection-defeating devices, or the offer or performance of any service having the same effect, by any person knowing or having reasonable grounds to know that the device or service will be used for, or in the course of, the exercise of rights provided under this Treaty that is not authorized by the rightholder or the law.
>
> (2) Contracting Parties shall provide for appropriate and effective remedies against the unlawful acts referred to in paragraph (1).
>
> (3) As used in this Article, "protection-defeating device" means any device, product or component incorporated into a device or product, the primary purpose or primary effect of which is to circumvent any process, treatment, mechanism or system that prevents or inhibits any of the acts covered by the rights under this Treaty.[18]

In accompanying comments, Chairman Liedes conceded that the proposed requirements were "more akin to public law obligations . . . than to provisions granting 'intellectual property rights.'"[19] He indicated that in implementing the proposal, parties should consider "the need to avoid legislation that would impede lawful practices and the lawful use of subject matter that is in the public domain."[20] However, he

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17. U.S. Department of Commerce, Protocol to the Berne Convention for the Protection of Literary and Artistic Works *(proposed)*, Submitted to Committees of Experts by Bruce Lehman, Ass't Sec. of Commerce and Commissioner of Patents and Trademarks, November 29, 1995 (on file with author); *see* Pamela Samuelson, *Big Media Beaten Back*, WIRED, Mar. 1997, at 61, 62-64 (quoting statement by Bruce Lehman, chair of the working group that produced the NII White Paper and head of the United States delegation to WIPO, that characterized the treaty process as "a second bite at the apple").

18. World Intellectual Property Organization, Chairman of the Committees of Experts on a Possible Protocol to the Berne Convention and on a Possible Instrument for the Protection of the Rights of Performers and Producers of Phonograms, Basic Proposal for the Substantive Provisions of the Treaty on Certain Questions Concerning the Protection of Literary and Artistic Works to be Considered by the Diplomatic Conference, Art. 13 (Aug. 30, 1996) [hereinafter WIPO Basic Proposal].

19. *Id.* Art. 13, cmt. 13.03.

20. *Id.* Art. 13, cmt. 13.05.

maintained that a primary-purpose-or-effect standard for identifying unlawful devices, rather than a narrower focus on devices "specifically designed or adapted to circumvent" technological protection, was the only way "[t]o achieve the necessary coverage."[21]

The primary-purpose-or-effect language met with considerable resistance. Many delegates expressed concern that the provision might restrict access to public domain materials and frustrate lawful uses of copyrighted works, such as fair use.[22] Several delegates also expressed concern that the provision as worded would reach a variety of devices capable of substantial and valuable noninfringing uses.[23] As finally approved by the delegates, the provision (now Article 11), is substantially altered:

> Article 11: Obligations concerning Technological Measures
>
> Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.[24]

The new language focuses on the need for protection against the act of circumventing CMS, rather than the nature of the device used to accomplish circumvention.

2. *RIGHTS MANAGEMENT INFORMATION*

Initially, the proposed treaty provision regarding RMI (proposed Article 14) read as follows:

> Article 14: Obligations concerning Rights Management Information
>
> (1) Contracting Parties shall make it unlawful for any person knowingly to perform any of the following acts:
>
> (i) to remove or alter any electronic rights management information without authority;
>
> (ii) to distribute, import for distribution or communicate to the public, without authority, copies of works from which electronic rights management information has been removed or altered without authority.

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21. *Id.* Art. 13, cmt. 13.06.

22. Seth Greenstein, *News from WIPO: Day Seven—The Audio Visual Debate, and What's Fair Is Fair Use* (visited Apr. 5, 1997) <http://www.hrrc.org/wr_12-10.html> (reporting comments by delegates).

23. *Id.*; John Browning, *Africa 1 Hollywood 0*, WIRED, Mar. 1997, at 61, 186 ("Japan and other Asian nations were up in arms about proposals that would effectively have turned the consumer electronics industry into a branch of publishing.").

24. World Intellectual Property Organization, *Provisional Treaty on Protection of Literary and Artistic Works*, Art. 11, 53 PAT. TRADEMARK & COPYRIGHT J. 155, 156 (1997) [hereinafter *WIPO Provisional Treaty*]. This language was drafted by the African delegates, who emerged during the negotiations as a critical, and thoughtful, voting bloc. *See* Browning, *supra* note 23, at 186.

> (2) As used in this Article, "rights management information" means information which identifies the work, the author of the work, the owner of any right in the work, and any numbers or codes that represent such information, when any of these items of information are attached to a copy of a work or appear in connection with the communication of a work to the public.[25]

Once again, the comments of Chairman Liedes stressed "the need to avoid legislation that would impede lawful practices,"[26] or that would impose "technically non-feasible requirements" on broadcasters and other authorized users.[27]

After many delegates requested that the RMI provision be modified to require some connection to infringing purpose,[28] the provision (now Article 12) was redrafted as follows (changes underlined):

> Article 12: Obligations concerning Rights Management Information
>
> (1) Contracting Parties shall provide adequate and effective legal remedies against any person knowingly performing any of the following acts knowing or, with respect to civil remedies having reasonable grounds to know, that it will induce, enable, facilitate or conceal an infringement of any right covered by this Treaty or the Berne Convention:
>
> (i) to remove or alter any electronic rights management information without authority;
>
> (ii) to distribute, import for distribution, broadcast or communicate to the public, without authority, works or copies of works knowing that electronic rights management information has been removed or altered without authority.
>
> (2) As used in this Article, "rights management information" means information which identifies the work, the author of the work, the owner of any right in the work, or information about the terms and conditions of use of the work, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a work or appears in connection with the communication of a work to the public.[29]

As revised, this provision requires not only knowing performance of a prohibited act, but also knowledge (or at least reasonable basis for knowledge) that the act will facilitate an act of copyright infringement. In addition, liability for distribution of altered works is imposed only if the distributor also knows that RMI was removed without authority.

However, the scope of Article 12 was broadened in one crucial respect. The definition of RMI was expanded to include information

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25. WIPO Basic Proposal, *supra* note 18, Art. 14.
26. *Id.* Art. 14, cmt. 14.04.
27. *Id.* Art. 14, cmt. 14.05.
28. *See* Greenstein, *supra* note 22.
29. *WIPO Provisional Treaty*, *supra* note 24, Art. 12, at 156.

about the terms and conditions set by the owner for use of the work, as well as "numbers or codes that represent such information." As noted above, because CMS necessarily incorporate this information, a single act of tampering may implicate both Article 12 and Article 11.

C. The 105th Congress: WIPO or "WIPO Plus"?

As of this writing, no bill implementing the provisions of the new WIPO copyright treaty has been introduced in either house of Congress. Many of the new treaty provisions would require little or no change to existing United States law.[30] However, at least some of the provisions concerning CMS will require implementing legislation if Congress ratifies the treaty.[31]

Articles 11 and 12 of the WIPO copyright treaty leave substantial room for variation in the implementing legislation crafted by member states. Of particular significance for the United States, the provisions require merely a threshold level of protection and do not prohibit member states from adopting stricter laws, such as the anti-tampering provisions of the NIICPA. In a recent briefing, PTO Commissioner Bruce Lehman indicated that the Administration will attempt to seek passage of the NIICPA in the 105th Congress.[32] However, it is unclear whether the Administration will stand firm behind the precise language that failed to generate consensus last year in Congress and again in Geneva. One

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30. This appears to be the consensus view. *See* Samuelson, *supra* note 17, at 180; *Clinton Administration is Undecided on Implementing Steps for WIPO Treaties*, 53 PAT. TRADEMARK & COPYRIGHT J. 241, 242 (1997) [hereinafter *Implementing WIPO Treaties*].

31. According to Prof. Samuelson, implementing legislation would be necessary only for Article 12, regarding RMI. Samuelson, *supra* note 17, at 180. Article 12 defines RMI to include "information which identifies the work, the author of the work, the owner of any right in the work, or information about terms and conditions of use of the work . . . " *WIPO Provisional Treaty*, *supra* note 24, at 156. Removal or alteration of the first three items would be actionable under § 43(a) of the Lanham Act, which prohibits the use in commerce of "any false designation of origin, false or misleading description of fact, or false or misleading representation of fact" that is likely to confuse consumers as to the origin or sponsorship of a product or service. 15 U.S.C.A. § 1125(a)(1) (West, WESTLAW through P.L. 105-4, approved Mar. 3, 1997). However, § 43(a) does not appear to cover removal of information about terms and conditions of use.

As to Article 11, Prof. Samuelson believes that the doctrine of contributory copyright infringement already provides the required "adequate and effective" remedy against circumvention of CMS. Conversation with Pamela Samuelson, Law Professor, Univ. of Cal. at Berkeley (Mar. 14, 1997). The doctrine extends infringement liability to knowing purveyors of technologies that have no "substantial noninfringing use." Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, 441-42 (1984); Fonovisa, Inc. v. Cherry Auction, Inc., 76 F.3d 259, 264 (9th Cir. 1996); Casella v. Morris, 820 F.2d 362, 365 (11th Cir. 1987); Gershwin Pub. Corp. v. Columbia Artists Management, Inc., 443 F.2d 1159, 1162 (2d Cir. 1971). For the reasons discussed in part III.B, *infra*, I do not believe that the "substantial noninfringing use" doctrine alone can resolve the problem of tampering with CMS.

32. *Implementing WIPO Treaties*, *supra* note 30, at 242.

possible source for new language is a draft committee print of revisions to the NIICPA that was circulated before Congress adjourned last summer.[33]

1. *TECHNOLOGICAL PROTECTION*

Although arguably less draconian than the original proposal, the draft language would impose significantly higher levels of protection for CMS than the treaty language requires (changes to the original NIICPA language are underlined):

> Section 1201. Circumvention of copyright protection systems.
>
> (a) Prohibitions—No person shall import, manufacture, or distribute any device, product, or component incorporated into a device or product, or offer or perform any service, an effect of which is to avoid, bypass, remove, deactivate or otherwise circumvent [. . . .] any process, treatment, mechanism, or system which prevents or inhibits the infringement of any of the exclusive rights of the copyright owner under section 106, with reckless disregard for facts demonstrating that the device, product, component, or service primarily enables such infringement, or with the intent to primarily enable such infringement.
>
> (b) Limitation—Liability under this section shall not be based solely upon the failure of a device, product, or service to accommodate, facilitate, or enable the operation of any process, treatment, mechanism, or system described in subsection (a).[34]

2. *RIGHTS MANAGEMENT INFORMATION*

Section 1202 of the draft committee print is very similar to the final WIPO treaty provision on RMI (changes to the original NIICPA language are underlined):

> Section 1202. Integrity of copyright management information.
>
> (a) False Copyright Management Information—No person shall knowingly provide copyright management information that is false, or knowingly publicly distribute or import for public distribution copyright management information that is false, with intent to mislead or to induce or facilitate infringement.
>
> (b) Removal or Alteration of Copyright Management Information—No person shall, without authority of the copyright owner or other lawful authority, knowingly and with intent to mislead or to induce or facilitate infringement—
>
> (1) remove or alter any copyright management information,

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33. STAFF OF HOUSE SUBCOMM. ON COURTS AND INTELLECTUAL PROPERTY, 104th Cong., NII Copyright Protection Act of 1995, H.R. 2441 § 106 (Draft Comm. Print 1996) (on file with author) [hereinafter NIICPA Draft Committee Print].

34. *Id.* § 1201.

(2) distribute or import for distribution copyright management information that has been altered without authority of the copyright owner or other lawful authority, or

(3) distribute or import for distribution copies or phonorecords from which copyright management information has been removed without authority of the copyright owner or other lawful authority.

(c) Definition—As used in this chapter, the term 'copyright management information' means the following information that appears in connection with copies or phonorecords of a work or performances or displays of a work, including in digital form:

(1) The title and other information identifying the work, including the information set forth in a notice of copyright.

(2) The name and other identifying information of the author of the work.

(3) The name and other identifying information of the copyright owner of the work, including the information set forth in a notice of copyright.

(4) Terms and conditions for uses of the work.

(5) Identifying numbers or symbols referring to such information.

(4) [sic] Such other information as the Register of Copyrights may prescribe by regulation.[35]

3. *REMEDIES AND DEFENSES*

In the draft committee print of the NIICPA, the civil remedial provision is modified to afford a defense where the offending device, product, or component "was generally available in the relevant market prior to the introduction into that market of the process, treatment, mechanism, or system circumvented."[36]

The provision creating criminal liability, however, is enlarged to reach violations of section 1201 "with intent to infringe upon any of the exclusive rights of the copyright owner under section 106," as well as violations of section 1202 "with intent to defraud."[37] This language is substantially broader than required by the WIPO treaty. On its face, the treaty does not require criminal penalties at all, but only "adequate and effective legal remedies" for the copyright owner.[38]

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35. *Id.* § 1202.
36. *Id.* § 1203(d).
37. *Id.* § 1204(a)-(b).
38. *WIPO Provisional Treaty, supra* note 24, at 156.

III. OVERBREADTH CONCERNS

Legislating permissible developments in computer technology is a dangerous project. Invariably, technologies that might be used for indisputably unlawful purposes are the same technologies that are useful for achieving many lawful and socially valuable ones. Devices or services that might be used to defeat CMS are a case in point.

Article 11 of the WIPO copyright treaty is scrupulously attentive to this problem. It focuses on conduct in particular cases—circumvention of CMS designed to restrict unauthorized, infringing acts—and does not attempt to define a class of technologies that should be prohibited. In contrast, the NIICPA and its proponents have at best ignored, and at worst denied, the undeniable fact that "effects" legislation threatens lawful and socially valuable conduct.

A. Knowledge, Purpose, and Effect

Under the NIICPA, a finding of liability for tampering hinges on two factors. First, the accused technology is classified according to its effect in general, rather than its use to achieve infringement in a specific case. As originally worded, section 1201 of the NIICPA targets any technology or service with the "primary purpose or effect" of defeating CMS.[39] . The draft committee version goes even farther, extending liability to any technology or service "*an* effect of which" is to defeat CMS.[40] Second, the defendant's conduct must be knowing—but sections 1201 and 1202 of the NIICPA, as originally worded, require knowledge only as to the acts that constitute tampering, not as to any ultimate act of infringement.[41]

The primary-purpose-or-effect test is a radical departure from existing copyright law, in two distinct ways. First, copyright law treats with suspicion blanket prohibitions on technologies that are merely capable of facilitating infringement. Thus, a claim for contributory copyright infringement fails as a matter of law if the accused device is capable of substantial noninfringing use.[42] In *Sony Corp. of America v. Universal City Studios, Inc.*, the Supreme Court noted that in the context of patent law, "a finding of contributory infringement is normally the functional equivalent of holding that the disputed article is within the monopoly granted to the patentee."[43] The Court reasoned that in copyright law, a "substantial noninfringing use" standard would similarly

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39. NIICPA, *supra* note 6, § 1201.

40. NIICPA Draft Committee Print, *supra* note 33, § 1201(a) (emphasis added).

41. *See* NIICPA, *supra* note 6, §§ 1201-02. The draft committee version tightens this standard slightly, but not far enough. *See* text accompanying notes 54-55, *infra*.

42. *See* Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, 440-41 (1984).

43. *Id.* at 441.

"strike a balance between a copyright holder's legitimate demand for effective—not merely symbolic—protection . . . and the rights of others freely to engage in substantially unrelated areas of commerce."[44] This reasoning applies equally to technologies that might potentially play a role in defeating CMS. Such technologies include encryption and decryption tools, which are considered crucial to the development of Internet-based commerce;[45] tools for software reverse engineering, which have widespread lawful application and are protected by the fair use doctrine;[46] and possibly even that most ubiquitous hacking tool, the personal computer.[47] Giving copyright owners control over this broad spectrum of technological capability is bad policy, and likely to prove unworkable in practice.

Congress has historically dealt with perceived technological threats to copyright owners' rights by enacting narrow, targeted pieces of legislation. Thus, the Audio Home Recording Act requires digital recording devices to incorporate serial copy management technology,[48] and the Communications Act regulates devices for decrypting satellite broadcasts.[49] As Thomas Vinje has pointed out, both pieces of legislation address specific technologies that have few other markets and are unlikely to be deployed unintentionally.[50] Along similar lines, some commentators (including a number of delegates to the WIPO convention) have proposed that anti-tampering laws ban only devices designed with the "sole intended purpose" of defeating CMS.[51] Like the contributory infringement standard, a "sole intended purpose" test would help to

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44. *Id.* at 442.

45. *See, e.g.*, David Chaum, *Achieving Electronic Privacy*, SCI. AM., Aug. 1992, at 96, 96-97 (visited Apr. 26, 1997) <http://ganges.cs.tcd.ie/mepeirce/Project/Chaum/sciam.html>; A. Michael Froomkin, *Flood Control on the Information Ocean: Living with Anonymity, Digital Cash, and Distributed Databases*, 15 J.L. & COM. 395, 453-71 (1996).

46. *See* Sega Enterprises, Ltd. v. Accolade, Inc., 977 F.2d 1510, 1521-28 (9th Cir. 1992); DSC Communications Corp. v. DGI Technologies, Inc., 898 F. Supp. 1183, 1188-91 (N.D. Tex. 1995), *aff'd on other grounds*, 81 F.3d 597 (5th Cir. 1996); Julie E. Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of "Lock-Out" Programs*, 68 S. CAL. L. REV. 1091, 1104-34 (1995) [hereinafter Cohen, *Reverse Engineering*].

47. *See* Browning, *supra* note 23, at 186 (noting objections to proposed Article 13 of the WIPO treaty on this basis).

48. 17 U.S.C. § 1002(c) (1994).

49. 47 U.S.C.A. § 605(e)(4) (West, WESTLAW through Nov. 1996).

50. Thomas C. Vinje, *A Brave New World of Technical Protection Systems: Will There Still Be Room for Copyright?*, 8 EUR. INTELL. PROP. REV. 431, 433 (1996).

51. *See, e.g.*, Greenstein, *supra* note 22 (reporting on proposals made during the WIPO Diplomatic Conference by the African Group—Burkina Faso, Cameroon, Cote d'Ivoire, Egypt, Ghana, Kenya, Malawi, Namibia, Nigeria, Rwanda, Senegal, Sudan, Togo, Tunisia, and Zambia—and by Singapore); Vinje, *supra* note 50, at 435. The European Community's directive on the legal protection of computer software, which contains a provision regarding circumvention of devices used to protect computer programs, employs a "sole intended purpose" test. *See* Council Directive 91/250/EEC of 14 May 1991 on the Legal Protection of Computer Programs, art. 7(c), 1991 O.J. (L 122) 42.

minimize the NIICPA's effect on technologies capable of a diverse range of application. Neither standard, however, addresses the second major problem that the NIICPA would create for existing copyright law.

The second way in which the NIICPA departs from existing copyright law is in its failure to recognize that some instances of tampering with CMS may be necessary to preserve the public's current rights. For example, readers may wish to make fair use of copyrighted works, or to copy works that are in the public domain. As a practical matter, both the "no substantial noninfringing use" and "sole intended purpose" tests would hinder such efforts. If a device or service satisfied either standard, it could be banned outright—even though it might also be used to facilitate "lawful tampering." Alternatively, lawful tampering might be defined as a substantial noninfringing use—with the result that the sale or importation of a circumvention device would never, or hardly ever, trigger liability. This result is appealing, but unlikely to be what the drafters of the NIICPA had in mind.

The concept of "lawful tampering" is considered more fully below. I raise it here only to show that the delegates to the WIPO convention were correct in concluding that liability under an anti-tampering statute should hinge on something more than a technology's capabilities. For example, the statute might focus on the *tamperer's* (as opposed to the technology's) purposes. The knowledge requirements in proposed sections 1201 and 1202 of the NIICPA, however, merely contribute to the likelihood that the anti-tampering provisions might be used to suppress valuable technologies and lawful uses. As originally worded, both sections would require only knowing use of the challenged technology, not knowing infringement.

There is, of course, strict liability for copyright infringement.[52] As Chairman Liedes noted in his comments to the draft WIPO treaty, however, anti-tampering provisions do not establish intellectual property rights, but merely create a general class of obligations toward copyright owners who adopt technological measures to protect their works.[53] Given the need to preserve existing public rights of access, importing strict liability into these ancillary enforcement provisions would be unwise. Consider, for example, an individual who tampers with CMS to enable a use that she believes is fair. Her acts of tampering are knowing, but she lacks intent to infringe; indeed, she affirmatively intends *not* to infringe. If her beliefs regarding fair use prove mistaken, she will be held liable for infringement. Subjecting her to liability for tampering as well seems both unfair and unnecessary. The scope of the fair use doctrine is uncertain

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52. *See* 17 U.S.C. § 501(a) (1994).
53. *See* WIPO Basic Proposal, *supra* note 18, Art. 13, cmt. 13.03.

enough to force would-be fair users to think carefully. Strict liability seems advisable only if one believes that the law should provide additional *dis*incentives to those wishing to exercise fair use rights.

The draft revisions to section 1202 of the NIICPA are a step in the right direction. The new language would require both that the conduct be knowing and that the defendant possess "intent to mislead or to induce or facilitate infringement."[54] The revisions to section 1201 are less satisfactory; they require *either* "intent to primarily enable . . . infringement" *or* "reckless disregard" for facts showing that the *device* "primarily enables" infringement.[55] The latter requirement is simply a nonspecific "effects" test restated in terms of the evidence needed to meet it. Instead, section 1201 should be redrafted to eliminate the "effects" test and to include the same strict knowledge standard contained in the revised section 1202.

B. "Or Permitted By Law:" Fair Use and Other Authorized Uses

As noted above, the task of drafting effective, appropriately tailored anti-tampering legislation is complicated by the fact that unauthorized use of a copyrighted work is not always infringement. In consequence, CMS that prevent (for example) all copying, or all free copying, will almost certainly frustrate some actions that the Copyright Act would permit. Lawmakers should therefore consider whether and to what extent an anti-tampering law should protect CMS that have this effect.

The Copyright Act does not entitle copyright owners to control all uses of their copyrighted works. Instead, it gives them the exclusive right to perform or authorize the six acts listed in section 106: reproduction, preparation of derivative works, distribution, performance, display, and (for sound recordings) digital performance.[56] In addition, the Act provides a number of exceptions to these exclusive rights for particular uses and/or users. The most well known is section 107, which codifies the fair use doctrine.[57] Others include the provision allowing libraries to reproduce and distribute single copies of works for research and archival purposes,[58] and the provision allowing certain types of nonprofit performances and displays.[59]

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54. NIICPA Draft Committee Print, *supra* note 33, § 1202(a).
55. *Id.* § 1201(a).
56. 17 U.S.C. § 106 (1994).
57. *See Id.* § 107 (1994).
58. *See Id.* § 108 (1994).
59. *See Id.* § 110 (1994).

Moreover, many works that might be made available in digital form are wholly unprotected by copyright. In some cases, the term of copyright protection has expired and the work has entered the public domain. Other works are ineligible for copyright protection in the first place, because they fail to satisfy the originality requirement set forth in *Feist Publications, Inc. v. Rural Telephone Service Co.*[60]

Article 11 of the WIPO treaty requires member nations to protect against the circumvention of CMS "that restrict acts . . . which are not authorized by the authors concerned or permitted by law."[61] Section 1201 of the NIICPA similarly prohibits technologies that operate to circumvent CMS "without the authority of the copyright owner or the law."[62] According to the Clinton Administration's White Paper, this language is sufficient to preserve fair use and access to public domain materials.[63] However, the White Paper does not indicate how this preservation is to be accomplished. In fact, the problem is quite difficult, because works placed under technological protection are materially less accessible than before.

Taken literally, the language of Article 11 could be read to suggest no obligation to protect systems that restrict *lawful* acts. Thus, one solution might be to require that to be eligible for protection, CMS be designed to allow any uses of the underlying works that would be lawful. Realistically, however, this is unlikely to happen. First, copyright owners and other content providers welcome digital CMS precisely because of their capacity to define and enforce "usage rights" in digital works by electronic contract.[64] The White Paper expressly approves this possibility.[65] For noncopyrightable factual compilations, contract is currently the only way of ensuring that vendors can recoup their development costs.[66] Whether an anti-tampering law would or should

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60. 499 U.S. 340, 347-50 (1991) (requiring originality in "selection or arrangement" of data in order for a compilation to gain copyright protection).

61. *WIPO Provisional Treaty*, *supra* note 24, Art. 11, at 156.

62. NIICPA, *supra* note 6, § 1201.

63. *See* NII WHITE PAPER, *supra* note 2, at 231-32 (noting that proposed legislation targets circumvention "without authority" and that the applicable "authority" may be the author's permission or limitations upon the author's rights under the Copyright Act).

64. *See, e.g.*, BURNS, *supra* note 1, at 17-21, 29-36; Clark, *supra* note 2, at 99; Carol Risher, *Libraries, Copyright and the Electronic Environment*, Position Paper on Behalf of the International Publishers Copyright Council on the Occasion of the IPA 25th Congress, Barcelona, April 1996 (visited Apr. 5, 1997) <http://www.ipa-uie.org/ipcc_bcn.html>; *see also* Stefik, *Shifting the Possible*, *supra* note 2, at 147-49.

65. NII WHITE PAPER, *supra* note 2, at 58, 191-92.

66. *See* J.H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data?*, 50 VAND. L. REV. 51, 66-69, 137-63 (1997) (noting the vulnerability of noncopyrightable information products to appropriation by others, and arguing for the creation of a new intellectual property paradigm designed to balance the competing considerations of incentives to innovate and public access to information); J.H. Reichman, *Charting the*

shield the use of contract as a supplement to copyright is considered further in part IV.A, *infra*. Second, and more important, even if copyright owners were willing (or required) to design their systems to allow for fair use, library copying, and the like, designing around the fair use doctrine may be a near-impossible task. Automated CMS are inherently ill-equipped to handle the equitable, fact-specific inquiry required in fair use cases.[67]

Mark Stefik's work belies my skepticism—but only to a degree.[68] For example, Stefik has suggested that CMS could be designed to preserve the "transfer right" afforded members of the public by the first sale doctrine.[69] His counterparts in the publishing industry, however, appear concerned solely with maximizing their control over digital content. A report commissioned by the Association of American Publishers discusses Stefik's proposal without even considering the possibility that consumers might be given the *free* transfer rights they enjoy in print media—and then criticizes even a fee-based system of transfer rights on the ground that "[r]ights and prices cannot be reconsidered and the publisher loses the opportunity to review the context and usage of the material proposed."[70] Moreover, even Stefik appears to envision replacing the current system of fair use and library copying with a wholly fee-based regime.[71]

In short, even on the unlikely assumption that copyright owners will design their CMS with the public interest in mind, it is virtually certain that CMS adopted to protect digital works will prevent some actions that copyright law allows. Members of the public will be able to take these allowable actions only to the extent that they can defeat the system of technological protection surrounding the work. Thus, we come to the question of "lawful tampering."

Lawful tampering seems to be the solution contemplated by the drafters of the NII White Paper—yet here the White Paper is disingenuous. As discussed above, technologies for defeating CMS do

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Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System, 13 CARDOZO ARTS & ENT. L.J. 475, 517-20 (1995) (same).

67. Regarding the "equitable rule of reason" that governs in fair use cases, see H.R. REP. 94-1476, at 65-66, *reprinted in* 1976 U.S.C.C.A.N. 5659, 5678; Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 577-78 (1994).

68. *See* Stefik, *Shifting the Possible*, *supra* note 2, at 156 (observing that the "stakeholders in digital property" include consumers and librarians).

69. 17 U.S.C. § 109(a) (1994); Stefik, *Shifting the Possible*, *supra* note 2, at 145-46; *see also, id.* at 152-53 (noting that CMS could be designed to release digital works when the term of copyright expires).

70. *See* BURNS, *supra* note 1, at 34-35; *see also id.* at 16 (noting that CMS "might be resisted by users who . . . get no benefit from" them, without acknowledging that "users"—i.e., the public—may suffer any losses other than "functional disadvantages" and "complexity").

71. *See* Stefik, *Shifting the Possible*, *supra* note 2, at 149.

not differentiate among the various lawful and unlawful uses. Thus, banning technologies that have the "effect" of circumventing CMS would leave the public free to exercise its rights of access in principle only.[72] If the public is to have these rights in practice, circumvention technologies may not be banned based on their capabilities alone. The law must then decide how to treat individuals who break into CMS with innocent intent.

Can tampering with CMS be made unlawful even if the act the tampering enables is lawful? Certainly. (Arguably, existing general-purpose federal statutes that prohibit tampering with information stored on someone else's computer would apply in cases of "lawful tampering"—another result that a better-designed NIICPA would prevent.[73]) Should it? Of course not. Copyright owners cannot be prohibited from making access to their works more difficult, but they should not be allowed to prevent others from hacking around their technological barriers. Otherwise, the mere act of encoding a work within CMS would magically confer upon vendors greater rights against the general public than copyright allows.[74]

C. Remedial Overkill

The NIICPA's substantive provisions are equaled in overbreadth by its civil remedial provisions. Subsections 1203(b)(2) and (b)(6), which authorize the seizure and eventual destruction of devices used to defeat CMS, are broad enough to extend to the computers used to accomplish the violations, regardless of the fact that the computers might be used for many other lawful activities.[75]

Other remedial provisions are disturbingly vague. Subsection 1203(c)(2), which allows the copyright owner to recover damages and profits attributable to the violation, appears to operate as a penalty over and above damages and profits attributable to the act of copyright

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72. The White Paper observes that "the fair use doctrine does not require a copyright owner to allow or to facilitate unauthorized access or use of a work." NII WHITE PAPER, *supra* note 1, at 231. This formulation avoids (or perhaps evades) the real question: whether copyright owners may obstruct *lawful* access or use of a work. For more discussion of this point, see Niva Elkin-Koren, *Copyright Policy and the Limits of Freedom of Contract*, 12 BERKELEY TECH. L.J. 93, 111-12 (1997).

73. *See* 18 U.S.C.A. §§ 1030(a)(5), 2701 (West, WESTLAW current through P.L. 104-333, approved Nov. 12, 1996).

74. I am indebted to Professor Larry Lessig of The University of Chicago Law School for naming this proposition the "Cohen Theorem." Electronic mail from Larry Lessig to recipients of list CO-E-CONF (Nov. 11, 1996) (proceedings of 25-person online focus group convened by the United States Copyright Office, as part of its "Project Looking Forward," to discuss the future course of Internet technology and its implications for copyright) (on file with author).

75. NIICPA, *supra* note 6, §§ 1203(b)(2), (b)(6).

infringement.[76] The NIICPA does not specify how such damages might be measured, and it is difficult to think of any reliable measure. Similarly, section 1204(a) tells us that criminal penalties will attach to a violation of § 1202 "with intent to defraud."[77] Since the law already provides criminal penalties for willful copyright infringement, it is unclear what the tamperer must have intended to defraud the copyright owner of in order to trigger liability under the proposed statute.[78]

IV. BROADER IMPLICATIONS OF PRIVATE COPYRIGHT MANAGEMENT REGIMES

Although the potential reach of the proposed anti-tampering provisions is troubling, even more troubling is the fact that the capabilities of CMS themselves have received so little public scrutiny.[79] As the discussion above suggests, CMS could enable private content-control regimes in which contract entirely supplants copyright as the means of mediating public access to and use of creative and informational works. In addition, because the concept of "copyright management" is predicated on the ability to generate and maintain records of the "usage rights" granted to readers, viewers, and listeners of digital works, CMS pose an enormous threat to the privacy of individual reading, viewing, and listening habits.

A. Copyright, Contract, and "Private Legislation"

The discussion of "lawful tampering" raised, but did not pursue, the question whether anti-tampering laws may be deployed in the service of copyright owners who seek to supplement their rights under the Copyright Act by enforcing contractual restrictions on the use of copyrighted works. In fact, this is the direction in which CMS are most likely headed. Even the term "copyright management" is becoming obsolete. CMS developers prefer the term "rights management," which reflects a conception of allowable authors' rights that extends beyond copyright.[80]

If the "authority of . . . the law" mentioned in §§ 1201 and 1202 of the NIICPA includes contract law as well as copyright law, fewer

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76. *Id.* §§ 1203(c)(2); *see* Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 CONN. L. REV. 981, 991 (1996) [hereinafter Cohen, *Right to Read Anonymously*].

77. *NIICPA*, *supra note 6*, §§ 1204(a).

78. *See* 17 U.S.C. § 506(a) (1994); 18 U.S.C.A. § 2319 (West, WESTLAW through P.L. 104-333, approved Nov. 12, 1996).

79. One of the first discussions of CMS to appear in the popular media was Pamela Samuelson, *The Copyright Grab*, WIRED, Jan. 1996, at 134, 188-89.

80. *See, e.g.*, Stefik, *Shifting the Possible*, *supra* note 2; IFRRO Report, *supra* note 2.

instances of tampering may be excused as lawful.[81] (The NII White Paper's deliberate lack of concern for the practical difficulties that attend unauthorized but lawful uses of works under a CMS regime suggests that this may be precisely the result its drafters had in mind.) The significance of that interpretation for the reading, viewing, and listening public bears closer examination.

Thus far, much of the debate over the validity of contractual restrictions on the use of copyrighted works has focused on the voluntariness, or lack thereof, of so-called "shrinkwrap" licenses.[82] Until recently, that question, although important, had largely distracted courts and commentators from the more fundamental, and far more difficult, question of copyright preemption.[83] Two recent high-profile cases and a number of thoughtful articles suggest that the issue of copyright preemption may be moving to the forefront.[84] Representatives of various copyright-related industries are now working to reshape the law of contract voluntariness, via a new Article 2B for the Uniform Commercial Code, in a way that validates shrinkwrap or "click-through" licenses.[85] Section 2B-319 of the most recent draft effectively validates CMS; it expressly allows use of "a program, code or an electronic or other device

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81. NIICPA, *supra* note 6, §§1201-1202.

82. *See, e.g.*, David A. Einhorn, *Box-Top Licenses and the Battle-of-the-Forms*, 5 SOFTWARE L.J. 401 (1992); Robert W. Gomulkiewicz & Mary L. Williamson, *A Brief Defense of Mass Market Software License Agreements*, 22 RUTGERS COMPUTER & TECH. L.J. 335 (1996); Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239 (1995) [hereinafter Lemley, *Shrinkwrap Licenses*]; Mark A. Lemley, *Shrinkwraps in Cyberspace*, 35 JURIMETRICS J. 311 (1995); Gary H. Moore & J. David Hadden, *On Line Software Distribution: New Life for 'Shrinkwrap' Licenses?*, COMPUTER LAW., Apr. 1996, at 1; Michael Rustad & Lori E. Eisenschmidt, *The Commercial Law of Internet Security*, 10 HIGH TECH. L.J. 213, 290-93 (1995); Michael G. Ryan, *Offers Users Can't Refuse: Shrink-Wrap License Agreements as Enforceable Adhesion Contracts*, 10 CARDOZO L. REV. 2105 (1989); Richard H. Stern, *Shrink-Wrap Licenses of Mass Marketed Software: Enforceable Contracts or Whistling in the Dark?*, 11 RUTGERS COMPUTER & TECH. L.J. 51, 55 (1985).

83. *But see* David A. Rice, *Public Goods, Private Contract, and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543 (1992) (providing exhaustive analysis of the copyright preemption issue).

84. *See* National Basketball Association v. Motorola, Inc., 105 F.3d 841, 848-53 (2d Cir. 1997) (upholding defense of copyright preemption of state law misappropriation claim); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454-55 (7th Cir. 1996) (rejecting defense of copyright preemption of state law breach of contract claim); I. Trotter Hardy, *Contracts, Copyright and Preemption in a Digital World*, 1 RICH. J.L. & TECH. 2 (April 11, 1995) <http://www.urich.edu/~jolt/v1i1/hardy.html>; Lemley, *Shrinkwrap Licenses*, *supra* note 82, at 1255-59, 1266-74; Maureen A. O'Rourke, *Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms*, 45 DUKE L.J. 479 (1995); Elkin-Koren, *supra* note 72.

85. *See* U.C.C. Art. 2B: Licenses § 2B-308 (Proposed Draft March 21, 1997), *available from* the National Conference of Commissioners on Uniform State Laws (visited April 18, 1997) <http://www.law.upenn.edu/library/ulc/ucc2/ucc2b397.htm> [hereinafter Draft Article 2B]; Dan Goodin, *Seeking New Rules for a New Game: Commercial Code Meets the Digital Age*, LEGAL TIMES, Nov. 4, 1996, at 2; Raymond T. Nimmer, *UCC Revision: Information Age in Contracts*, *in* AMERICAN LAW INSTITUTE—AMERICAN BAR ASSOCIATION CONTINUING LEGAL EDUCATION, ALI-ABA COURSE OF STUDY: THE EMERGED AND EMERGING NEW UNIFORM COMMERCIAL CODE 17 (Dec. 12, 1996).

that restricts use" of digital information to "prevent[] use of the information in a manner inconsistent with the license."[86] Yet even assuming a click-through digital license that is (or has been defined to be) entirely voluntary, the question remains whether the restrictions that the license seeks to impose are legitimate.

If digital copyright management systems become widespread, the courts and Congress will need to confront the preemption issue. Here are some factors that should be considered.

First, although the Copyright Act does not preempt state contract law, it may preempt particular contract terms that have the effect of creating rights equivalent to those afforded under copyright law.[87] The rationale for finding that a contract does not have this effect—employed most recently by the Seventh Circuit in *ProCD, Inc. v. Zeidenberg*,[88]—is that any contract binds only its parties, and thus cannot establish rights against the world.[89] Assuming the truth of this reasoning, it is not at all clear that it applies to mass-market "licenses" establishing universal conditions of access. Excluding mass-marketed software, the typical copyright license agreement imposes restrictive terms on a small population of customers to prevent the loss of trade-secret information. The license establishes a confidential relationship between the copyright owner and its customers, who otherwise would be free to reverse engineer the product and/or to sell or give away their individual copies.[90] The argument that the copyright owner of a mass-marketed work can create a confidential relationship with the entire world is, quite simply, ridiculous. A restriction applied to the entire public amounts to private legislation.[91]

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86. Draft Article 2B, *supra* note 85, § 2B-314(a)(4); *see also id.* § 2B-314(a)(1)-(3) (allowing automatic termination of use of the licensed information upon expiration of the license term if the license so provides, if the electronic system provides "reasonable notice," or if the information is licensed for short-term use).

87. *See* 17 U.S.C. § 301(a) (1994); H.R. REP. 94-1476, at 132 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5748 (stating no intent to preempt state contract law generally); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1455 (7th Cir. 1996) (declining to find preemption of challenged contract term but declining to hold that *any* contract term escapes preemption as a matter of law); National Car Rental Sys., Inc. v. Computer Assocs. Int'l, 991 F.2d 426, 431-35 (8th Cir. 1993) (same); Lemley, *Shrinkwrap Licenses*, *supra* note 82, at 1257-58, 1259-72; O'Rourke, *supra* note 84, at 518-55; Rice, *supra* note 83, at 604-21.

88. 86 F.3d 1447 (7th Cir. 1996).

89. *Id.* at 1454.

90. *See* Rice, *supra* note 83, at 622-26 ("It is at least reasonable to argue that reverse engineering is, in most instances, necessarily precluded under a negotiated agreement not to disclose or use trade secret information except as required for computer program installation, adaptation, maintenance or use.").

91. *See* Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570, 1611-13 (1995) (citing Friedrich Kessler, *Contracts of Adhesion—Some Thoughts About Freedom of Contract*, 43 COLUM. L. REV. 629, 640 (1943)) (discussing power disparities surrounding use of standard-form contracts to augment intellectual property rights); Rice, *supra* note 83, at 595 (applying "private legislation" analysis to restrictive software license terms); Cohen, *Right to Read Anonymously*, *supra* note 76, at 1001-02 (applying "private legislation" analysis to CMS); *cf.* O'Rourke, *supra*

At the very least, such a "license" should be subjected to a preemption analysis entirely different from that applicable to negotiated, non-mass-market contracts.

Second, even if standard-form, "click-through" licenses for access to intellectual property are pronounced voluntary and enforceable, the voluntariness inquiry should not stop there. Conventional wisdom is that such licenses preserve consumers' ability to affect vendors' terms and conditions by "voting with their feet" and purchasing from competitors whose terms are more favorable.[92] CMS should cause us to rethink neoclassical assumptions about market responsiveness to consumer likes and dislikes. They are inexorable, technologically enforced gateways that can be imposed unilaterally, whether consumers like them or not.[93] In addition, the number of consumers with strong incentives to object to the new CMS regimes may be small. Most simply want to read, listen, and view, not to reverse engineer or parody, and most will be able to afford the fractional fees levied under a "usage rights" regime. And to the extent that copyrighted works are not fungible—i.e., to the extent that consumers want Nimmer on Copyright rather than the copyright summary prepared by a local law firm, or Toni Morrison rather than John Grisham, or Pearl Jam rather than the Cranberries—many consumers may be reluctant to take their business elsewhere.

Finally, if copyright owners prove determined to implement CMS that comprehensively augment the rights afforded them under the Copyright Act, perhaps Congress should consider whether these individuals and entities should be required to elect only contract remedies, and to abandon their claims to copyright protection.[94] After all, copyright was created to correct market failures arising from the

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note 84, at 541-55 (arguing that, generally speaking, even mass-market licenses restricting decompilation should survive preemption analysis, but recognizing exception when copyright owner "has obtained near monopoly power in the relevant market," as measured by antitrust analysis).

92. This reasoning is implicit in the Seventh Circuit's decision in *ProCD*. *See* 86 F.3d at 1455 (observing that ProCD's license terms would not bar other vendors from compiling and offering the same material); *see also, e.g.*, I. Trotter Hardy, *The Proper Legal Regime for "Cyberspace"*, 55 U. PITT. L. REV. 993, 1019-21, 1028-36 (1994).

93. *Cf.* Lawrence Lessig, *The Zones of Cyberspace*, 48 STAN. L. REV. 1403, 1408 (1996) ("Code is an efficient means of regulation. . . . One obeys these laws as code not because one should; one obeys these laws as code because one can do nothing else. . . . In the well implemented system, there is no civil disobedience."); Edward L. Rubin, *The Nonjudicial Life of Contract: Beyond the Shadow of the Law*, 90 NW. U.L. REV. 107, 125-31 (arguing that repeat players in the contracting process enjoy "simply overwhelming" advantages in implementing the self-help strategies of their choice).

94. *See* Tom W. Bell, *Fair Use vs. Fared Use: the Impact of Automated Rights Management on Copyright's Fair Use Doctrine* 75 N.C. L. REV. __ (forthcoming 1997) (visited May 7, 1997) <http://members.aol.com/tombell/FullFared.html>; Lemley, *Shrinkwrap Licenses*, *supra* note 82, at 1273-74; 1 MELVILLE NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 1.01[B], at 1-16.1 (discussing judicially imposed election of remedies as alternative to holding contract term preempted).

public good characteristic of original expression. If CMS provide a more reliable method of correcting market failure, who needs copyright? I hope that most readers will think this suggestion absurd—and will react that way because they recognize that the semi-permeable barrier of copyright promotes the public interest.[95] But if the copyright system is necessary, then allowing unlimited numbers of copyright owners to opt out of the system as it suits them is bad law and bad policy. At the very least, a CMS regime should be subject to an analogous set of restrictions designed to balance the affected interests.[96]

B. Reader Privacy and Anonymity

Leading recent surveys of developments in the field of "rights management" describe the capabilities of an ideal system as follows:

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95. Trotter Hardy argues that in light of the low costs of protecting and transacting in digital content, the current copyright paradigm is an inefficient method of protecting property entitlements and should be replaced with a pure private property rights regime. Trotter Hardy, *Property (and Copyright) in Cyberspace*, 1996 U. CHI. LEGAL FORUM 217, 236-52 (1996). He maintains that conceiving the public law of copyright to represent a variety of stakeholders (including the public) creates a form of group ownership, the inefficiency of which manifests itself in the lengthy, costly legislative process. *See id.* at 253-58. This analysis misses the point for two reasons. First, Congress "assumes" that copyright has multiple stakeholders because the Constitution requires it. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 349-50 (1991) ("[C]opyright assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed by a work."); Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 555-60 (1985) ("First Amendment protections . . . [are] embodied in the Copyright Act's distinctions between copyrightable expression and uncopyrightable facts and ideas, and in the latitude for scholarship and comment traditionally afforded by fair use.").

Second, and more fundamental, Hardy's analysis follows only if one assumes that the "point" of copyright is to provide maximum incentives to information creators and thus, necessarily, maximum protection for property entitlements. *See* Hardy, *supra*, at 220-23 (assuming just this, and discarding from his "taxonomy of incentives" those that do not fit within this model). Nowhere does Hardy acknowledge, much less justify, these assumptions. I (and many others) would argue for a more generous conception of copyright's purpose, and would contend that a maximum-incentives regime is not—and certainly has not been proven to be—the best-suited to advancing the ultimate goals that copyright seeks to further. *See, e.g.*, Feist, 499 U.S. at 349 ("The primary objective of copyright is not to reward the labor of authors, but '[t]o promote the Progress of Science and useful Arts.'"(quoting U.S. CONST. Art. I, § 8, cl. 8)); Cohen, *Reverse Engineering*, *supra* note 46, at 1104-24 (arguing that the purpose of copyright is not merely to disseminate works to the public *as consumers*, but to foster access to works by the public *as creators*, and that a maximum-protection regime does not serve this purpose); Robert A. Kreiss, *Accessibility and Commercialization in Copyright Theory*, 43 UCLA L. REV. 1 (1995) (same); Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965 (1990) (same); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283 (1996) (arguing that a purpose of copyright is to promote the deliberation and debate constitutive of a robust democratic public sphere, and that a maximum-protection regime does not serve this purpose); Niva Elkin-Koren, *Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace*, 14 CARDOZO ARTS & ENT. L.J. 215 (1996) (same).

96. Mark Stefik appears to agree. *See* Stefik, *Shifting the Possible*, *supra* note 2, at 156 (recognizing that CMS implicate social policy and advocating the creation of a Digital Property Trust, governed by representatives from all of the affected constituencies, to guide the development of CMS).

- "detecting, preventing, and counting a wide range of operations, including open, print, export, copying, modifying, excerpting, and so on;"[97]
- maintaining "records indicating which permissions ha[ve] actually been granted and to whom;"[98]
- "captur[ing] a record of what the user actually looked at, copied or printed;"[99] and
- sending "this usage record . . . to the clearinghouse when the user seeks additional access, at the end of a billing period or whenever the user runs out of credit."[100]

In addition, the system operator could manipulate this acquired data to generate predictive profiles of particular consumers for use in future marketing activities, or for sale to other vendors.[101] These capabilities, if realized, threaten individual privacy to an unprecedented degree. Although credit-reporting agencies and credit card providers capture various facets of one's commercial life, CMS raise the possibility that someone might capture a fairly complete picture of one's *intellectual* life.

Reading, listening, and viewing habits reveal an enormous amount about individual opinions, beliefs, and tastes, and may also reveal an individual's association with particular causes and organizations. Equally important, reading, listening, and viewing contribute to an ongoing process of intellectual evolution. Individuals do not arrive in the world with their beliefs and opinions fully-formed; rather, beliefs and opinions are formed and modified over time, through exposure to

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97. IFRRO Report, *supra* note 2, § 3.1.1; *see also* BURNS, *supra* note 1, at 17-21, 31-35 (1995); Stefik, *Letting Loose the Light*, *supra* note 1, at 228-38; Stefik, *Shifting the Possible*, *supra* note 2, at 140-41.

98. IFRRO Report, *supra* note 2, § 3.2.

99. BURNS, *supra* note 1, at 32; *see also* Mary G. Smith & Robert Weber, *A New Set of Rules for Information Commerce—Rights-Protection Technologies and Personalized-Information Commerce Will Affect All Knowledge Workers*, COMM. WEEK, Nov. 6, 1995, at 34, 36-37.

100. BURNS, *supra* note 1, at 32; *see also* Stefik, *Letting Loose the Light*, *supra* note 1, at 241 (describing the creation of transaction repositories and electronic clearinghouses to process CMS charges).

101. *See* Cohen, *Right to Read Anonymously*, *supra* note 76, at 985-86; Froomkin, *supra* note 45, at 484-88; Joel R. Reidenberg, *Privacy in the Information Economy: A Fortress or Frontier for Individual Rights*, 44 FED. COMM. L.J. 195, 200-06 (1992); Debra Aho Williamson, *Smart Agents Build Brains Into Net Ads: More Companies Tap Technology to Better Target Web Users Who Visit Their Sites*, ADVERTISING AGE, Apr. 8, 1996, at 26. For an example of an existing Internet-based content vendor that conducts "push" marketing based on customized consumer profiles unless the consumer expressly "opts out" of this activity, see the World Wide Web site of CDNow, <http://cdnow.com/>; *see also* Donna Hoffman, et al., Social Issues Raised by the Commercial Development of the Net, Panel Presentation at The Seventh Conference on Computers, Freedom and Privacy (March 12, 1997) (presentation by Jason Olim, President of CDNow).

information and other external stimuli.[102] Thus, technologies that monitor reading, listening, and viewing habits represent a giant leap—whether forward or backward the reader may decide—toward monitoring human thought. The closest analogue, the library check-out record, is primitive by comparison. (And library check-out records are subject to stringent privacy laws in most states.[103])

I have argued elsewhere that the freedom to read, listen, and view selected materials anonymously should be considered a right protected by the First Amendment, and that if it is so protected, the NIICPA's civil and criminal penalty provisions are vulnerable to constitutional challenge.[104] I will not revisit that argument here. Whether or not the NIICPA presents a First Amendment question, its privacy implications are clear and disturbing.

Designing CMS that are less invasive than the "ideal" technologies described above is of course possible. For example, a system might simply prohibit access or copying/printing without some initial payment, or incorporate serial-copy-management technology similar to that required under the Audio Home Recording Act.[105] It might preserve privacy by preventing the extraction of personal identifying data or accepting payments in anonymous "digital cash."[106] For the most part, however, at least in this country, those involved in the development of CMS appear enthusiastic about the prospect of generating individual usage records, and relatively unconcerned with reader privacy.[107]

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102. *See* Cohen, *Right to Read Anonymously*, *supra* note 76, at 1006-07; Niva Elkin-Koren, *Copyright Law and Social Dialogue on the Information Superhighway: The Case Against Copyright Liability of Bulletin Board Operators*, 13 CARDOZO ARTS & ENT. L.J. 346, 400 (1995); *cf.* Netanel, *supra* note 95, at 347-62 (arguing that the widespread dissemination of works of authorship facilitated by copyright creates and enhances deliberation and debate among citizens).

103. *See, e.g.*, ALASKA STAT. § 09.25.140 (1994); CAL. GOV'T CODE § 6254(j) (West 1995); DEL. CODE ANN. tit. 29, § 10002(12) (1991); ILL. ANN. STAT. ch. 81, para. 1201 (Smith-Hurd 1993); N.Y. CIV. PRAC. LAW § 4509 (McKinney 1992). *See also* Cohen, *Right to Read Anonymously*, *supra* note 76, at 1031-32 n.213 (listing state legislation passed to protect the identities of library patrons).

104. Cohen, *Right to Read Anonymously*, *supra* note 76, at 1003-30.

105. 17 U.S.C. § 1002(c) (1994).

106. *See* Froomkin, *supra* note 45, at 415-20, 459-70 (discussing anonymous-payer digital cash); Smith & Weber, *supra* note 99, at 36 ("To protect the privacy of individuals . . . the usage data can be aggregated or made anonymous before it reaches rights holders."); *cf.* Dorothy J. Glancy, *Privacy and Intelligent Transportation Technology*, 11 SANTA CLARA COMPUTER & HIGH TECH. L.J. 151, 181-83 (1995) (observing that the most effective way to protect individual privacy in the digital age is to design technological tools so that they prevent or limit the identification of individuals); Jeffrey H. Reiman, *Driving to the Panopticon: A Philosophical Exploration of the Risks to Privacy Posed by the Highway Technology of the Future*, 11 SANTA CLARA COMPUTER & HIGH TECH. L.J. 27, 43-44 (1995) (suggesting that "physical realities that hinder others in gathering information about or experiences of you" provide more effective protection than privacy laws that attempt to compensate for the ease of information gathering).

107. *See, e.g.*, BURNS, *supra* note 1, at 36 (characterizing privacy concerns as "market acceptance problems"). *But see* Proceedings of the First IMPRIMATUR Consensus Forum

After enough time and consumer outcry, the copyright management industry will likely decide to regulate its own privacy practices in some fashion.[108] The Information Infrastructure Task Force's Working Group on Privacy Rights recommended a series of principles to serve as the basis for voluntary, private-sector privacy policies, and the National Telecommunications and Information Administration has followed up with a more concrete proposal based on principles of informed consent.[109] This disclosure-based proposal, however, falls well short of vesting readers with an entitlement to prevent the collection of personal information and to control the uses to which it is put. And, as noted above, there is reason to doubt that information consumers will be able to effect substantial changes in the structure of private CMS regimes. Accordingly, legislation seems a more reliable way of guaranteeing a baseline level of reader privacy that is acceptable to consumers.

Although many other nations and the European Union have enacted general-purpose privacy laws, the United States has not done so.[110] Instead, it has relied on narrow context-specific legislation, such as the "Bork bill" concerning privacy of video rental records, to address perceived threats to privacy.[111] The most recent example of such legislation is the recently introduced Consumer Internet Privacy Protection Act of 1997, which is intended to impose restrictions on the use of personal identifying data collected by an "interactive computer

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86-90 (1996), (visited April 18, 1997) <http://www.imprimatur.alcs.co.uk/html/page15.htm> (concluding that the European IMPRIMATUR project to develop a standardized model for CMS should recognize reader privacy as a fundamental right and build "Privacy-Enhancing Technologies" into the CMS model).

108. Recent presentations at the 1997 Conference on Computers, Freedom, and Privacy indicate that self-policing initiatives are underway, motivated at least in part by a desire to avoid government regulation. The most promising of these initiatives appears to be ETrust, an effort to create a taxonomy of privacy policies and rating symbols that convey information on privacy practices to consumers. For information on ETrust, see the organization's World Wide Web site at <http://www.etrust.org/>.

109. *See* U.S. DEP'T OF COMMERCE, INFORMATION INFRASTRUCTURE TASK FORCE, PRIVACY WORKING GROUP, PRIVACY AND THE NATIONAL INFORMATION INFRASTRUCTURE: PRINCIPLES FOR PROVIDING AND USING PERSONAL INFORMATION (1995), (visited April 18, 1997) <http://www.iitf.nist.gov/ipc/ipc/ipc-pubs/niiprivprin_final.html>; U.S. DEP'T OF COMMERCE, NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, PRIVACY AND THE NII: SAFEGUARDING TELECOMMUNICATIONS-RELATED PERSONAL INFORMATION (1995) (visited Apr. 18, 1997) <http://www.ntia.doc.gov/ntiahome/privwhitepaper.html>.

110. *See* Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the Protection of Individuals with Regard to the Processing of Personal Data and on the Free Movement of Such Data, 1995 O.J. (L 281) 31; DENNIS CAMPBELL & JOY FISHER, EDS., DATA TRANSMISSION AND PRIVACY (1994) (surveying status of privacy protection in 19 European, Asian, and North American countries).

111. 18 U.S.C.A. § 2710 (West, WESTLAW through P.L. 104-333, approved Nov. 12, 1996); *see* Reidenberg, *supra* note 101 (outlining and critiquing the piecemeal privacy protection available against private-sector collection, use, and sale of personal information); Joel R. Reidenberg, *Setting Standards for Fair Information Practice in the U.S. Private Sector*, 80 IOWA L. REV. 497 (1996) (same).

service."[112] Although this language arguably is broad enough to cover operators of on-line CMS, the definition of "interactive computer service" suggests that the bill is intended to apply only to on-line service providers.[113] If that is the case, then there is no current or pending legislation that might serve to safeguard reader privacy in cyberspace.

Elsewhere, I have suggested the form that reader privacy legislation should take and some of the elements it should contain.[114] Here, I wish only to argue that *some* Congressional response to the privacy threat posed by CMS is necessary. This is so whether or not Congress adopts implementing legislation to protect CMS against unlawful tampering. If, as seems overwhelmingly likely, some anti-tampering legislation is enacted, Congress should consider the possibility that individuals might wish to tamper with CMS to preserve their privacy, and should make an express, considered decision whether and to what extent the provisions of an anti-tampering law should apply to such conduct.

V. CONCLUSION

I do not intend to suggest that CMS should receive no protection whatsoever. As this article makes evident, however, both CMS and laws designed to protect them warrant far closer public scrutiny than they have been given. Also evident from the vigorous opposition to the NIICPA, and to the United States' proposals for the WIPO copyright treaty, is that many disagree with the Clinton Administration regarding the scope of protection that is necessary and desirable. The upcoming treaty ratification and implementation process should include careful consideration of the implications of CMS, so that the public understands the exact bargain it is making in enacting laws for their protection.

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112. Consumer Internet Privacy Protection Act of 1997, H.R. 98, 105th Cong. § 2 (1997).
113. *Id.* § 4(1).
114. Cohen, *Right to Read Anonymously, supra* note 76, at 1031-38.

ARTICLE

CHAOS, CYBERSPACE AND TRADITION: LEGAL INFORMATION TRANSMOGRIFIED

ROBERT BERRING†

TABLE OF CONTENTS

I. INTRODUCTION

The practice of law in the United States has always been built around law books. Whether one looks to the early role of *Blackstone's Commentaries* and the enormous impact that this one set had on American jurisprudence, or to the primacy of the law library in Dean Langdell's reconceptualization of legal education, or to the structural and substantive importance of the West National Reporter and Digest System, everywhere one finds books at the center of the enterprise.[1] However, most lawyers take for granted the central role of legal information in its traditional paper form. The great sets of books around which so much is built are so completely a part of our legal tradition that they disappear before us. This makes them more, not less, important.

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† Walter Perry Johnson Professor of Law and Law Librarian, Boalt Hall School of Law, University of California, Berkeley. Professor Berring has worked as a consultant for each of the major legal publishers, and several that dissolved as a part of the recent mergers, but the opinions here are solely his own. Thanks to Debby Kearney and Alice Youmans of the Boalt Hall Law Library reference staff for finding some obscure citations.

1. FREDERICK C. HICKS, MEN AND BOOKS FAMOUS IN THE LAW (1921), describes the role of several particular law books in crystallizing American legal thought. His chapter on Blackstone's Commentaries is especially interesting. LAWRENCE FRIEDMAN, A HISTORY OF AMERICAN LAW 621-32 (1985), puts the role of books in wonderful perspective.

They are so omnipresent that they blend into the intellectual fabric. The legal publication universe is at the core of American law.

This central component of American law is now in a process of change. The change is one that affects all aspects of our culture, but its impact will be felt first in law. The dominant role played by the book in legal information is now ending. My contention is that its demise will not manifest itself in the form of a clean break with tradition. There will be at least a decade, perhaps a generation, involved in constructing the new information environment. Many lawyers, law professors and judges remain creatures of the old information, and will never change their views of how things ought to be. However, they are being superseded by newer researchers, who come to the profession as devotees of electronic information.

The transformation of legal information could have drifted into its change over the course of several decades, inching forward in fits and starts while the new models of legal information tracked the larger cultural shift from print to digital forms of information. The change could have taken place in each law firm and each court at a different rate. Indeed, it was taking place in this fashion. However, a series of events in the world of legal publishing has accelerated this trend. For old models of legal information, 1996 was the year the music died.

The change in legal information will spawn a series of problems, and pose a range of challenges. The goal of this essay is to outline recent changes in legal publishing, and to raise questions about the issues that will confront all who use legal sources in the future.

II. WHAT HAPPENED

A. The Power of Tradition

Setting the Stage. In 1996, the West Publishing Company was purchased by the Thomson Group.[2] For many who invest their time and energy working with legal materials, this was the commercial equivalent of the Pope announcing that the Vatican was to be taken over by Microsoft. A number of scholars have analyzed the implications of the age of electronic information on the law,[3] but the sale of the company that long

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2. John E. Morris, *How West Was Won*, AMERICAN LAWYER, Sept. 1996, at 73, outlines the final stages of the sale. As of February 28, 1997, the Justice Department continues its review of the details of the final deal, but the major points have been cleared and the publishers have consolidated offices. *See generally* Daniel Wise, *$3.4 Billion Merger of Legal Publishers Cleared by U.S. Judge*, N.Y. L.J., February 28, 1997, at 1.

3. For a fine summary of work up to this point, see M. ETHAN KATSH, LAW IN A DIGITAL WORLD (1995). Katsh's bibliography at pages 271-289 is especially helpful. Bernard J. Hibbitts, *Last Writes? Reassessing the Law Review in the Age of Cyberspace*, 71 N.Y.U. L. REV. 615 (1996), is filled with good sources and its footnotes are a veritable mother lode of

served as the bulwark of legal authority raised the stakes attached to the movement to new forms of information to a new level. It is one thing to speculate about possibilities for the future. It is quite another to have the future arrive at one's door in a taxi. The whirlwind consolidation of the legal publishing industry into two large conglomerates, each centered on a full-text database, has shifted the tectonic plates of legal information.

Part of the culture shock that will affect the legal profession will come from the changing role of the West Publishing Company. The West Publishing Company was a unique enterprise. It not only dominated American legal publishing, it established a special culture in doing so. Perhaps only now that it is gone can one appreciate just how unique it was.[4]

Founded in St. Paul, Minnesota by the West brothers in 1876, West brought entrepreneurial energy to legal publishing; rather than the scholarly inclinations or official sponsorship that had cloaked other legal publishers.[5] West responded to market needs for information. It did not anticipate those needs; West's lack of expertise in legal information guaranteed that fact. Instead, it set about providing information in the most comprehensive, uniform way possible. The company was ultimately to be influential for what they produced, and how they produced it.

West created the National Reporter System, a series of publications containing the jurisprudence of the federal system and every state.[6] West made two great decisions. First, West decided to report every case that the courts deemed worthy of publication. Therefore, West had to institute systems for getting the opinions from the courts. This was hard work, but West did it well. It removed the West enterprise from the world of picking opinions either on the basis of merit or interest. It allowed West to develop a system for editing each decision from each jurisdiction, preparing headnotes and digests for each opinion, all in a uniform, seemingly "objective" style. West became the dominant conduit for distributing judicial information.

The second decision was to create a geographically based system for publishing the reports. This allowed West to cover every jurisdiction

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work in this area.

4. As of March 1, 1997, all of West Publishing Company's senior management has been replaced. Brian Hall is the President of the newly titled West Group. *See West Group—Overview* (visited April 20, 1997) <http://www.westpub.com/Welcome/wgoverv.htm>. Mr. Hall had been with Thomson Legal Publishing before the merger. *Id.*

5. For a very good history of West's founding years, see Thomas A. Woxland, *"Forever Associated with the Practice of Law": The Early Years of the West Publishing Company*, 5(1) LEGAL REFERENCE SERVICES Q. 115 (1985); *See also*, W. W. MARVIN, WEST PUBLISHING COMPANY: ORIGIN, GROWTH, LEADERSHIP (1969) (an authorized history). For a charming perspective on how West conceptualized itself in its early years, see generally WHERE LAW BOOKS ARE MADE: LAW BOOKS BY THE MILLION (1901).

6. Detailed descriptions of the National Reporter System can be found in any textbook on legal research. *See, e.g.*, ROBERT C. BERRING, FINDING THE LAW (1995).

in a linked system. The creation of Regional Reporters and the federal components of the West system allowed standard coverage of seemingly "objective" legal information. In the early days commentators called it the "blanket" system and it played a role in standardizing American jurisprudence, one recognized at the time.[7]

West's form of standardized case reporting, with unified indexing, became the accepted standard for case information.[8] Owning the National Reporter System meant owning all of the relevant jurisprudence published in the country.[9] Owning the West Regional Reporter that covered your state meant owning all of the jurisprudence of that state.[10]

As time passed, the myth that West published all judicial opinions (in what came to be called "comprehensive" publishing) took hold.[11] In fact, many decisions written by judges do not enter the system. Every state and federal court had rules for what should and should not be published.[12] Only appearance in the printed reports conveyed "reality" to a decision. An opinion was considered "unpublished" even though it could be found in the Clerk of the Court's files, in a newsletter, or in a loose leaf service. Only if the decision could be found in a bound case reporter could it be deemed published. Only when a case was published

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7. "One effect of the blanket system of reporters, established by the West Publishing Company, has been to present the reports of several [states] in a single series.... This must necessarily have the effect of bringing about a more general comparison of the adjudications of the different American jurisdictions upon particular questions, which must in the end result in a unification of the law." *The Lawyer's Reports Annotated*, 22 AM. L. REV. 921, 922 (1888).

8. The role of the *American Digest System* as an organizational force in American legal thought is explored in Robert C. Berring, *Collapse of the Legal Research Universe: The Imperative of Digital Information*, 69 WASH. L. REV. 9 (1994) [hereinafter Berring, *Legal Research Universe*] and in Richard Delgado and Jean Stefancic, *Why Do We Tell the Same Stories?: Law Reform, Critical Librarianship, and the Triple Helix Dilemma*, 42 STAN. L. REV. 207 (1989).

9. This leaves statutory and administrative materials to the side. Given the stress placed on judicial decisions in the United States construct of the common law, this is not an unfair emphasis. Only in recent years have statutes and administrative codes grown in influence.

10. *See generally* THE AMERICAN BAR ASSOCIATION, STANDARDS FOR APPROVAL OF LAW SCHOOLS AND INTERPRETATIONS, POLICIES OF THE COUNCIL OF THE SECTION OF LEGAL EDUCATION AND ADMISSION TO THE BAR AND OF THE ACCREDITATION COMMITTEE, Annex II (Nov. 1988) (listing the required collections for law schools, which relies on the *National Reporter System* and the *American Digest System* as its core although noting that this standard is currently under reconsideration); Memorandum from James P. White, Consultant on Legal Education to the American Bar Association, to Library Directors of ABA Approved Law Schools, (Feb. 18, 1997) (discussing adjusting questions in the site evaluation process of re-accreditation) (on file with author).

11. *See A Symposium of Law Publishers*, 23 AM. L. REV. 396, 401 (1889) (containing the only personal statement of John B. West's beliefs on the issue). A representative sentence of West's is: "I believe it to be the principal business of American law publishers, to enable the legal profession to examine the American case law on any given subject, as easily, exhaustively, and economically as possible." *Id.*

12. *See generally* Kirt Shuldberg, *Digital Influence: Technology and Unpublished Opinions in the Federal Court of Appeals*, 85 CAL. L. REV. 541 (1997).

in a comprehensive system, which meant only when a case appeared in the West system, did it become real. The practice of many courts in requiring citation to the National Reporter System reified this belief.[13] The information could exist in other formats, but the "real" incarnation, the one that counted, was its appearance in the West bound volumes. Only if the decision could be found in a bound case reporter, which meant it could be found in the West system, could it be deemed real.

West was not the only locus for "real" judicial decisions. Official reporters, authorized by the jurisdiction, remained in about half the states,[14] and there was an official report of the decisions of the United States Supreme Court.[15] These official reports remained the preferred citation in the jurisdiction in which they appeared, but they did not destroy the utility or universality of the West system. While official publications waxed and waned in accuracy and timelines, West products were reliable, standard and (in a print world) quickly available.[16] From the beginning, West's *Federal Reporter* and *Federal Supplement* have been the main repository of the decisions of the lower federal courts, the largest producers of opinions in the system.

Perhaps the greatest of West's achievements was garnering credibility. There is no exact explanation of how this happens. At some point, however, the judgment of the market is that this information is what counts. I call this the "Tinkerbell" phenomenon.[17] If everyone believes that a set is credible, it is credible. The West Publishing Company worked closely with the Bench and Bar. Its motto, "Forever Associated with the Practice of Law," was more than a marketing slogan. West saw itself as a partner to the courts, and it played its cards very close to the vest.[18] West worked with the Courts to be dependable. The

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13. See THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION 14, 61-62 (16th ed. 1996) [hereinafter THE BLUEBOOK].

14. *Id.* at 165-228.

15. Some official reports were once idiosyncratic, even including commentary. *See* Craig Joyce, *The Rise of the Supreme Court Reporter: An Institutional Perspective on the Marshall Court Ascendancy*, 83 MICH. L REV. 1291 (1985) which provides rich and interesting background on this issue. In recent years even official reports have tended to follow sterile formats, with only a few exceptions. *See* KENT C. OLSON AND ROBERT C. BERRING, PRACTICAL APPROACHES TO LEGAL RESEARCH, 111-41, (1984).

16. One of the original justifications for the advance sheet was the desire to get opinions into the hands of attorneys every two weeks.

17. In the Walt Disney animated feature "Peter Pan," Tinkerbell was a fairy. She only existed if children believed in her existence. This character, viewed by the author at an impressionable age, stands for the classic bootstrapping of authoritativeness. For example, if everyone believes that the *New York Times* is the national newspaper of record, it is. Users seldom have time or ability to critically evaluate what they use. Instead, they rely on reputation. *See* PATRICK WILSON, SECOND-HAND KNOWLEDGE: AN INQUIRY INTO COGNITIVE AUTHORITY 131-134 (1983).

18. An example of this corporate self-image was the controversy over the publication of *U.S. v. Kilpatrick*, 575 F.Supp. 325 (D. Colo. 1983). Prosecutors and the I.R.S. attempted to suppress publication of the case, but the judge wanted it published. The case appeared in

closer that West stayed to simply serving as a conduit for judicial information, the better off it would be.

The second thing about West was its specific corporate culture. West had a very special "feel" to it. Anyone who visited West encountered a group of people who were not just producing information, they were on a mission.[19] Much of this was facilitated by West's ownership structure. The West Publishing Company was owned principally by senior management.[20] An employee who was not at the top of the executive structure might get shares.[21] There was an emphasis on rewarding long-term service and loyalty. Upon retirement, shares were returned to the company. There was never an accounting to shareholders, and the management could chart the course they saw as most prudent. Because West did not have to report to shareholders, they did not have to proceed in economical steps. They checked and rechecked text, verified and reverified sources. Perhaps the location of West in St. Paul, the epicenter of Garrison Keillor country, helped, but there was a real mission to the place. The company was quite self-conscious about its mission and its importance.

The same market dominance and management ownership that allowed for extraordinary measures of editing and quality control allowed the company to be very profitable.[22] West fought fiercely to protect its rights, and has for a century been a frequent advocate of its rights.[23] Its very size and omnipresence created antagonists. But even those who railed against much of West had to concede that it produced high quality information.[24]

The smaller, but nonetheless crucial, partner in this world of information was *Shepard's Citations*. *Shepard's* allowed the researcher to follow the citation trail of each case that came to be "published." The West National Reporter System and American Digest System published and classified each judicial decision; *Shepard's Citations* allowed one to

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advance sheets, was withdrawn, and was re-issued. The controversy was finally resolved in *Blondin v. Winner*, 822 F.2d 969 (10th Cir. 1987). West went through a strained minuet trying to figure out who to listen to. The power of whether or not to publish is seldom clearer. *See* John Riley, *Tenth Circuit Vacates No-Publication Order*, NAT'L L.J., Feb. 6, 1984, at 3 and W. John Moore, *Judges' Berating of Prosecutors Could Force Grand Jury Change*, LEGAL TIMES, Feb. 6, 1984, at 1.

19. When West figured out that this was a valuable asset, they began bringing groups of law librarians to St. Paul just to meet with West's people.

20. *See generally* Woxland, *supra* note 5.

21. The histories of West Publishing and of LEXIS have yet to be written. The author relies on his own recollection and his conversations with West and LEXIS employees.

22. *Cf.* John J. Oslund, *Debate Rages over Who Owns the Law: Tens of Millions of Dollars are Riding on the Outcome*, MINNEAPOLIS STAR TRIB., March 6, 1995, at 8A.

23. For detailed discussion of these issues, see *Oasis v. West*, 924 F. Supp. 918 (Minn. 1996), and *United States v. Thomson Corp.*, 949 F. Supp. 907 (D.C. 1996).

24. See Oslund, *supra* note 22.

keep track of it. *Shepard's* method of reporting on every subsequent citation of one's case, no matter how tangential or banal, provided a comprehensiveness of scope that tracked the West philosophy perfectly. *Shepard's* also gained credibility and came to be trusted by legal researchers as the standard against which information was to be tested.

Shepard's was so pervasive and so dominant in its own market, that it became the universal referent for any lawyer checking on a case's validity. To Shepardize™ was required procedure. Failure to do so could result in major problems.[25] Numerous courts have discussed Shepardizing as being central to research.[26]

So at its apex, the controlled paper universe of legal information consisted of a set of West reporters and a set of *Shepard's Citations*. As legal information exploded with more and more judicial opinions being produced, old research tools were strained to the breaking point. For example, one venerable tool, *West's Decennial Digest*, grew so cumbersome that it had to be issued every five years as *Decennial Part I* and *Decennial Part II*.

B. The Beginning of Change

The legal information system was centered on the book. The growth of computers and the use of data processing systems offered new possibilities. An increasing number of judicial decisions were appearing each year, and computers, with the capacity to store and sort large amounts of data, offered some promise of relief, for the bulging paper sets and those who used them. LEXIS was not the first attempt to bring computers and legal information together. In 1964, Professor John Horty of the University of Pittsburgh Health Science Center demonstrated a system at the American Bar Association meeting.[27] But the road to success was rocky. When LEXIS began to take hold in the mid-1970s, West was in a quandary. Should they defend the fortress of books, or should they take a plunge into the world of computers? Hindsight is always comforting, but recall that at the time, no one knew if online research would do anything other than make a large sucking sound near piles of cash.

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25. *See, e.g.*, Rosenstiel v. Rosenstiel, 251 N.Y.S.2d 565, 578-579 (1964) (noting that "[t]he court was astounded to find that case relied on by defendant's counsel" had been reversed, and the reversal had in turn been upheld).

26. *E.g.*, Cimino v. Yale University, 638 F. Supp. 952, 959 n.7 (D. Conn. 1986) ("diligent research, which includes Shepardizing cases, is a professional responsibility."); Fletcher v. Florida, 858 F. Supp. 169, 172 (M.D. Florida 1994) (noting plaintiffs' "neglect to Shepardize," and stating that they "should guard against future research failures").

27. *The LEXIS Service Started With A Handful of Clients, in* LEXIS TWENTIETH ANNIVERSARY 12 (1993) (history of the development of the system as seen by those who developed it) [hereinafter LEXIS TWENTIETH ANNIVERSARY].

LEXIS itself stumbled through a series of baby steps on its way to success, working with state bar associations and carefully building its database.[28] LEXIS faced the double challenge of making users who were unfamiliar with operating computers familiar with keyboards and protocols, and building trust in the LEXIS database.[29] The manner in which they triumphed is chronicled elsewhere,[30] but Mead Data Central, the owners of LEXIS at the time, attributed their triumph to the law school program.[31] As the success of online research became more and more undeniable, West was compelled to move.[32] West introduced the WESTLAW database, first limiting it to an online version of the headnotes that accompany cases. West abandoned this approach, and ultimately developed WESTLAW. A new battle was joined. WESTLAW competed head-on with LEXIS as a full-text, free-text online system of judicial decisions.

The history of competition between LEXIS and WESTLAW, and the evolution of these databases into full fledged libraries of information can be found elsewhere.[33] The salient point is that it was a competition. Unlike the National Reporter System, which had no real competitor, WESTLAW was locked in a very serious struggle with LEXIS. LEXIS had been developed under the aegis of the Mead Paper Company.[34] It had terrific financial resources, but it did not have roots in the book publishing business.[35] So while West was expanding WESTLAW, it could continue to sell books to the vast majority of American lawyers who viewed the new databases as gimmicks for students.

It is worth taking a moment to consider how the traditional lawyer thought of legal information. The law library was the center of the law firm. If a firm prospered enough to afford luxurious offices, the law library was often made a showplace. Clients looked to the library for an indication of the lawyers' prowess. Even Perry Mason sat in front of a set of book shelves. Lawyers commonly thought of these libraries as a part of overhead; paying for them was a cost of doing business. After opening a new practice, the first visit might be from the West salesman,

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28. *Id.* at 12-17.

29. *Id. See generally* William G. Harrington, *A Brief History of Computer-Assisted Research*, 77 L. LIBR. J. 543 (1985).

30. *See* Scott F. Burson, *Report from the Electronic Trenches: An Update on Computer-Assisted Legal Research*, 4 LEGAL REFERENCE SERVICES Q. 3 (1984) and Harrington, *supra* note 29.

31. *Id.* at 16. "Mead Data Central's first great marketing breakthrough came with the 1975 decision to offer LEXIS usage free to law schools, a move that insured future generations of attorneys would embrace the new service."

32. Burson, *supra* note 30, at 11-12.

33. *See* Berring, *Legal Research Universe*, *supra* note 8.

34. LEXIS TWENTIETH ANNIVERSARY, *supra* note 27, at 9.

35. *Id.* at 13.

selling the cases (and statutes and practice sets) for the firm's jurisdiction. Paying for information was part of the fabric of practicing law.

As LEXIS and WESTLAW grew in influence, many battles were fought in law firms over usage and placement of terminals.[36] To build a constituency of users, the databases initiated astoundingly generous giveaway programs for law schools, eventually providing each law student with his or her own personal password for free use of the system. At its peak, this included 24 hour access to the whole database, with toll free telephone support, free software for home computers, free assistance and training in the law schools and as much written aid as could be absorbed. Legions of law students, who were used to online searching and wanted access to its speed and power, graduated.

LEXIS and WESTLAW also marketed their services to law firms as dispersible (i.e., chargeable to the client). This was a brilliant stroke for encouraging lawyers to utilize the systems. If one used a database, one paid by the unit of time, or the library used. LEXIS and WESTLAW costs could be allocated and passed directly to the client. In certain situations the cost might even be surcharged.[37] Thus, use of the databases could actually generate profit. The subject of dispersing costs using this method was never universal, and eventually became quite controversial.[38] The practice is much more bounded today, but these initial impressions created the context for the new, electronic legal information: legal information was now a commodity. No longer was legal information a simple overhead cost; now it was a cost item. It had to justify its existence by paying its way. To put it baldly, a firm would never charge a client for a portion of its annual subscription to the National Reporter System, but the firm might very well bill a client for its share of the cost of online information.

LEXIS and WESTLAW began as repositories of decisions, but soon grew more complex.[39] Statutory and legislative material quickly appeared in both databases.[40] Then came administrative materials, some of which had been very difficult to find in paper form. The online services, in a race to provide the most useful material, were building enormous libraries of information. When LEXIS introduced its NEXIS

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36. See comments, *supra* note 21.

37. *Skaddenomics*, AM. LAW., Sept. 1991, at 3 (describing large law firm billing practices at its apogee, or the "ludicrous world of law firm billing;" Skadden, Arps, Slate Meagher & Flom added 25% to the cost of all online research charges in clients' bills); *Skadden May Forfeit $1.5 Million in Fees*, MANHATTAN LAW., Feb. 23-28, 1988 at 6, (includes a detailing of a charge of $27,000 for LEXIS research as a part of a bill).

38. *Skaddenomics*, *supra* note 37.

39. *See* MARK CYGNET, DISCOVERING WESTLAW: THE ESSENTIAL GUIDE, (6th ed. 1996); STEVEN L. EMANUEL, LEXIS-NEXIS FOR LAW STUDENTS (2nd ed. 1995).

40. Burson, *supra* note 30, at 5.

service, with Boolean searching of everything from professional journals to restaurant reviews, a new form of information was born. But it took a while for everyone to figure that out. And while the experimentation went on, the National Reporter System and *Shepard's* were still on the shelves, anchoring a credible system.

C. The Shoot Out of 1996

As the representative of a dying information paradigm in the most computerized discipline in the world, the West print system was eroding. This process was accelerated by the vendor neutral citation controversy, which threatened the bound case reporters status as the sole repositories of the real law.[41] But the biggest impetus to the changes of 1996 was the purchase of LEXIS by Reed Elsevier PLC.[42] LEXIS had long been an anomaly, a huge database vendor owned by a paper company.[43] The early years of LEXIS were almost buccaneer days, selling a crazy concept to a world of conservative lawyers. Although LEXIS grew, so did the level of competition; LEXIS needed infusions of capital for continued research and development.[44] Reed Elsevier spent over one billion dollars to buy the system in 1994.[45]

Suddenly a very large player was behind the controls of LEXIS, one who could draw on world wide assets and invest considerable resources into honing new products. While West continued to fight on all fronts, another decision was made. In the autumn of 1995, West announced that it was looking for a new partner.[46] After protracted negotiations and a series of delightful rumors, West announced that it was being sold to Thomson Publishing Group, a Canadian information conglomerate.[47] The price was more than three billion dollars.

Hard on the heels of the West announcement came word that the publisher of *Shepard's* had been sold to a combination of Times Mirror Co., parent company of Matthew Bender , an established legal publisher,

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41. Robert C. Berring, *On Not Throwing Out the Baby: Planning the Future of Legal Information*, 83 CAL. L. REV. 615, 617-18 (1995) [hereinafter Berring, *Planning the Future*]; *but see* James H. Wyman, *Freeing the Law: Case Reporter Copyright and the Universal Citation System*, 24 FLA. ST. U. L. REV. 217 (1996).

42. Raju Narisetti & Greg Steinmetz, *Reed Elsevier Wins Bidding for Lexis/Nexis*, WALL ST. J., Oct. 5, 1994, at A3; Richard L. Hudson, *Reed Elsevier Enters Big League of On-Line Services*, WALL ST. J., Oct. 6, 1994, at B4.

43. *See generally* LEXIS TWENTIETH ANNIVERSARY, *supra* note 27.

44. Marcia Berss, *Logging Off Lexis*, FORBES, Jan. 4, 1993, at 46.

45. Anthony Aarons, *Lexis-Nexis Price: $1.5B: Few Immediate Changes Expected from Reed*, L.A. DAILY J., Oct. 6, 1994, at 8.

46. See John Oslund, *Which Direction for West?*, MINN. STAR TRIB. Nov. 13, 1995, at 1D; *West Publishing Co.: Outside Advisors Are Hired to Consider Alternatives*, WALL ST. J., AUG. 30, 1995, 1995 WL-WSJ 9897894.

47. Steven Lipin et al., *Thomson to Purchase West Publishing for $3.43 Billion*, WALL ST. J., Feb. 27, 1996, at A3; and Morris, *supra* note 2, at 74.

and Reed Elsevier PLC, parent company of LEXIS.[48] This meant that the National Reporter System was out of the hands of the cult of quality at West, and that *Shepard's* would shift from being Switzerland in the publishing wars, always independent, always on its own, to being a member of one team.

This realignment will have profound effects. No one outside the inner circles of the two companies knows what will happen, (perhaps even they are unsure) but it seems certain that a larger mix of electronic products is at its core. Thomson had been aggressively marketing compact disk systems (CDs) in various states. These states include New York and California, where Thomson also owns the companies that print and distribute the official reporters. Now Thomson can combine that CD effort with the WESTLAW database. Reed Elsevier has used its acquisition of traditional sets like *Shepard's* to expand its database offerings. The tectonic plates of legal information are shifting.

III. ISSUES FOR THE FUTURE

A wide array of issues faces legal information users and providers in the near future. Three main questions head the list. The first concerns issues of authority and credibility. The second centers on issues of access to legal sources. The third surrounds issues of search strategy and education.

A. Authority and Creditability

In the old legal information universe, the touchstones were clear. For judicial information, the official reports of one's jurisdiction might be the ultimate repository of authoritative decisions. Whether that jurisdiction had an official reporter or not, the National Reporter System was there as a "comprehensive" back-up. A lawyer might cite a more ephemeral source until the "real" citation became available, but once the case was published in either the official version or in the National Reporter System, those sources had to be used.[49] The standard citation guide, the *Uniform System of Citation*, spent considerable time setting out the parameters of case citation, with all of it cycling into the system of printed judicial reports.[50]

West won its reputation for credibility early on. Once it was established, it became accepted as the standard, it was the "Tinkerbell."

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48. Frederick Rose, *Times Mirror to Swap College Business for McGraw-Hill's Legal-Citation Unit*, WALL ST. J., July 5, 1996, at A3.

49. *See* THE BLUEBOOK, *supra* note 13, at 68; *see also id.* at 165 (defining the order of preference in citing to Supreme Court opinions).

50. *See id.* at 55-71.

A lawyer reading a case in the National Reporter System or in an official state report did not stop to consider whether it was an accurate portrayal of the information. She accepted it as real. It was the definitive form of the information.[51] She might question its price, or how much of it she might need, but the issue for the new lawyer was whether she needed to *buy* the cases, or could she get away with using a set located somewhere else. Since West offered the only nationally based system, and since citations to out of jurisdiction material would inevitably lead to a West citation, West became the major paradigm. West filled its quasi-official role well; for example, it worked closely with the judiciary. It has long been known among law librarians that West overdid its production standards. West hired only lawyers as its book salespeople. New hires at West started as proofreaders, going through each case word by word in teams. No stone was left unturned in an effort to get it right. West had a reputation for humorless intensity. Of course, this was all possible because West was making a lot of money.[52] How much we cannot tell, and the final payoff price of over three billion dollars cannot be gainsaid.

All of the stability introduced by West is now at risk. As more and more publishers enter the fray, producing a dizzying array of electronic products, things will grow more confusing. Where once a lawyer did not have to think about the information that she was going to use, now choices will be popping up like zits on a teenaged face. Compact disk products may have all the cases of a jurisdiction at a fraction of the cost of LEXIS, WESTLAW or the books.[53] But what is the coverage that they offer? How credible are they? Internet-based providers can provide access to cases at very low rates to the user.[54] But the same questions must be asked. Various law schools are posting cases, and some public-spirited individuals and groups are posting at online sites.[55] These volunteers range from very sophisticated operations, like the Legal Information Institute at Cornell, to the work of individual librarians. In other words, cases are everywhere. Price options will be everywhere. The primacy of the old paper sets is fading, and a vortex of conflicting claims and products is spinning into place.

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51. On a dare, Kent Olson actually reviewed a volume of the *Federal Reporter* as if it were a book. Kent C. Olson, *Book Review of 750 F.2d*, 6(3/4) LEGAL REFERENCE SERVICES Q. 199 (1987)

52. Steven Lipin et al., *Thomson to Purchase West Publishing for $3.43 Billion*, WALL ST. J., Feb. 27, 1996; and Morris, *supra* note 2.

53. *See, e.g.*, CAL. ST. B.J., Mar. 1997, at 14 (advertisement for AccessLaw's CalDisc).

54. *See, e.g.*, LOIS Homepage (visited May 5, 1997) <http://www.pita.com>.

55. For example, the Boalt Hall Law Library's website provides links to various legal information websites, *Internet Resources* (visited April 16, 1997) <http://law164.law.berkeley.edu/library/internet.html>.

The momentum towards a world of unlimited cases in all manner of formats has been accelerated by the movement toward vendor-neutral citation.[56] A coalition of small publishers, public interest advocates and library groups has continued to lobby for the establishment of a new form of citation that will embed paragraph numbers in the text of each judicial opinion at the time of its issuance, and identify each case by an alphanumeric address.[57] The hope is that as court decisions are made available electronically via bulletin boards or Internet web pages, anyone can download and re-use them. The smaller publishers are seeking inexpensive access to the raw opinions; the public interest advocates think this will mean low cost information for everyone.[58]

My reasons for doubting the efficacy of the movement to achieve these intentions are set out elsewhere.[59] Whether it reaches its goals or not, however, this movement has momentum, and is something of a historical inevitability. The practical implication of vendor neutral citation is that rather than referring one back to an authoritative printed text, all versions of the case will carry the same internal citation. Rather than relying on a link back to a paper set, upon which all citations can grounded, each version will carry the same identifiers that were embedded in the raw text of the decision.

This will quickly destroy the role of the printed sets, especially the National Reporter System, as centerpieces of the system. The printed sets have only held sway because they were the central repositories of the information upon which everything else was built. If one were to embark today on the design of methods of distributing case information effectively and profitably, one would never come up with Regional Reporters or the *Federal Supplement*. They are inefficient and top-heavy. If they cannot serve as foundations for the system, it becomes difficult to see what function they can usefully fill. In a world of customized products that are competing to offer the leanest, lowest cost information, who will want to be saddled with a subscription to a paper set that contains far more than one needs? Who will want access to an enormous online database filled with exotica and obscure content? Great research libraries may answer that question in the affirmative, but there are only a handful of those. Legal publishers make money by selling to lawyers.

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56. *See* Berring, *Planning the Future*, *supra* note 41, at 630; Wyman, *supra* note 41, at 258-64.

57. Wyman, *supra* note 41, at 262-63.

58. The Judicial Conference of the United States issued a call for comments on the adoption of the vendor neutral citation by the Administrative Office of Federal Courts; 62 Fed. Reg. 8037. This call has generated a number of submissions that set out the advocates arguments strongly which Hyperlaw has posted on their Web site; *see Citation Reform* (visited April 14, 1997) <http://www.hyperlaw.com/hlreport.htm>.

59. Berring, *Planning the Future*, *supra* note 41, at 622-23.

When the world of legal information users turns away from the old models, inevitable questions about the accuracy, authenticity and reliability of sources will arise. The logical inheritors of the mantle of the old printed reporters should be WESTLAW and LEXIS. Each is full-text. Each has an editing process that can be supported by the large publishing organizations from which they spring. Each has proven itself reasonably reliable, accurate and authentic. The problem is that access to LEXIS and WESTLAW is limited. Though large firms inevitably have one system or the other, many small offices still do not. Many smaller firms and non-profit organizations appear to be opting for the cheaper compact disk products.

LEXIS and WESTLAW are at a distinct disadvantage in this game. For generations, books were the only way to get information. By a slow process book publishers established themselves. LEXIS and WESTLAW came on the scene when the books were still there. As discussed above, the new databases had to fight an entrenched system. And they have yet to win a total victory. They could not become authoritative because they were not omnipresent.

The real key to being the authoritative source is to be trusted by *everyone*.[60] Neither LEXIS nor WESTLAW is pervasive enough to pull that off. When it was a matter of which set of books would be trusted, a transition from one source to another was much easier; witness the demise of the great treatise and the rise of legal newspapers.[61] Print sources have risen and fallen. But this is a transition from print sets to a new medium. It will be very difficult.

The same is also true of *Shepard's*. Now that *Shepard's* is in the LEXIS family, it is most likely that it will appear only on LEXIS. The competing systems of *Auto-Cite* and *Insta-Cite*, long more speedy and informative on issues of direct history and validation, will increasingly become direct rivals. *Shepard's* currently retains an advantage because it retrieves every relevant citation and allows for citation chasing in a more sophisticated form. However, it was not these features that made it a standard. It was an absolute necessity to use *Shepard's* to verify citations. Everyone used it. Everyone believed in it. For some years I have dubbed *Shepard's* the bellwether, or the canary in the print coal mine.

When it began to lose its primacy because functional equivalents had arisen that could outperform it by objective standards, one would know that the old system was dissolving. Once one begins to analyze *Shepard's* for just how good it is, for exactly how well it performs, it has lost its Tinkerbell status. I believe that this process had begun, and its

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60. *See* WILSON, *supra* note 17, at 131-134 (discussing authoritativeness in the professions).

61. KIM ISAAC EISLER, SHARK TANK 116, 206-07 (1990).

sale to one of the two competing giants will increase its speed. This is not to say that *Shepard's* is lost. It can fight back and stay important, but to do so it will have to change. It is changing. Once it is in that fight, it loses its special position, and becomes just another research tool. Law libraries all over the country are canceling the paper versions of everything but local *Shepard's*.[62] The canary looks peaked.

One reason that I hope that the National Reporter System and *Shepard's* live for another generation is so that they can ease the pain of identifying the new centers of authority. There will be new authoritative sources, but they will have to build reputations. They will either establish themselves through their quality and staying power, or they will follow the Microsoft model and establish themselves through sheer pervasiveness. Either process will take time, and it would be nice not to be working without a net.

B. Access to Legal Information

1. *THE WORLD OF BOOKS*

The National Reporter System sits in every major law library in the country, and parts of it can be found almost everywhere. When combined with the surviving official jurisdictional reports, it provides cost-free access to those who use them. Of course such use is only cost-free in the sense set out above, i.e., that the books are part of the general overhead of the library that holds them. Most libraries do not charge for usage of their sets. The withering of the paper sets will change this ease of access. As subscriptions to the National Reporter System and *Shepard's* drop, the price for them will have to rise. This will mean that more and more libraries will cut back or jettison their collections. This process of rising prices leading to cancellations, which force a further rise in prices, is a vicious circle that can only diminish the influence of a set. As a faithful follower of LAW-LIB, a listserv for law librarians with over 2,500 registered members, I often see law firms offering sets of books for the cost of shipping.[63] Folks are bailing out from paper.[64]

For those who never trusted the West Publishing Company because of its size, its cultish attitude or its air of superiority, this is good news. "Death to the old monopolists!" reads the banners of these folks. What worries me is that no one is there to take up the standard. The stability

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62. For example, the UC Berkeley Boalt Hall Law Library has followed this path.

63. One can subscribe to this listserv by sending the following email message to listproc@ucdavis.edu: subscribe law-lib firstname lastname.

64. For instance, LAW-LIB regularly receives postings from law firms and corporate legal departments offering full sets of digests and other printed materials for the cost of shipping. Examples are on file with the author.

and predictability that were provided by the West Publishing System were central but unseen. Legal researchers could rail against them, sue them and festoon them with epithets, but in the end, they could rely on West to keep the home fires burning.

Not that the West system of books will dry up overnight. The National Reporter System and the American Digest System will struggle on. But these sets can no longer be taken for granted as the repositories of information that backstop the system. Both vendor neutral citation and the forces of the market are changing that model. At the very best, these traditional sets, representing printed information in a tangible form, were wonderful repositories of information. The new information sources can enable cheaper and quicker research, but still are not as comprehensive or accessible as the old sources. Such a model will certainly grow, but there will be growing pains.

Who might be hurt by the upheaval generated by the transition from the old model of legal information to the new? There is no need to fret over the technocowboys. Folks who enjoy the Internet, have their own web page, and telecommute, have almost no meaningful relation with the old sets anyway. This is one part of the constituency for vendor neutral citation. These are researchers who never need to look in a book, who can print out just what they need. The current system, tied as it is to the book, slows them down and annoys them. They will be well served by the change. They will lead it and serve as its heralds.

Nor need we worry about large legal entities. The two hundred largest law firms, the largest corporate departments, federal agencies, even large state agencies are served by librarians.[65] These law librarians can guide the organizations that they serve through the storms of transitions. Though the law librarians at these organizations will come equipped with varying skills, they at least come equipped with a map and compass in hand. Indeed, some of the large private law firms may purposefully put themselves at the cutting edge of technology in information. These firms are a desirable market, and the lawyers who work in them have been trained in the use of full-text databases. The substantial training investments of the legal database vendors have created a legal profession in which the younger generation is adept at using full-text computer systems. Law is ahead of other fields, and the high end users who can pay the way will keep it there.

But a surprisingly small percentage of lawyers works in such organizations.[66] The majority of lawyers are not part of one of the large

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65. *See* AMERICAN ASSOCIATION OF LAW LIBRARIES, AALL DIRECTORY & HANDBOOK: 1995-1996.

66. BARBARA A. CURRAN & CLARA N. CARSON, THE LAWYER STATISTICAL REPORT: THE U.S. LEGAL PROFESSION IN THE 1990S (1994).

firms, and many state and federal agencies lack the budgetary wherewithal to keep up. And what of all of the folks who use legal information and who are not even lawyers? We need to worry about these information users.

A major complicating factor in this witches' brew is the changing nature of libraries. The changing paradigm of information is fundamentally altering our culture's vision of the library.[67] When information was encoded on paper in a three dimensional representation, it existed as an object. Libraries could collect these objects and hold them out for anyone who wished to use them. Copyright law recognized the right of anyone to go into a library and use a book.[68] Once again, no usage charge attached to the book. Usually, even libraries that charged user fees permitted unlimited use of available material. The fee might be tied to the book access, but such fees were not commonly recovered by the author. In that important sense, libraries always have competed with book stores. They have cut into the money that publishers and authors could recover from their product. This was traditionally justified through the "fair use" exception to the law of copyright. Prof. Gordon feels that this "fair use" exception was carved out by market failures.[69] Libraries were serving customers who could never be part of the income stream for a creator or publisher. Whatever explains it, the exception was allowed. The harm that it may have caused was ameliorated by two factors.

One factor was that for certain publications—publications that were most likely only to wind up in libraries—the publisher would tend to charge a much higher price. The publisher was recognizing that its market was not individuals, but institutions. Pricing, design, and marketing could reflect this reality. The library, with its institutional budget and its user-driven incentives, could budget for larger purchases. Important reference tools were published as sets priced so high that no normal patron would personally purchase them.[70] All of the players understood

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67. *See* FUTURE LIBRARIES (R. Howard Bloch & Carla Hesse eds., 1995). For the changing role of books in our culture *see* DÆDALUS, Fall 1996 (Books, Bricks & Bytes). Especially interesting in this issue is Peter Lyman, *What is a Digital Library? Technology, Intellectual Property and the Public Interest, id.* at 1. For a view of one specialty's view, *see* TOWARD A RENAISSANCE IN LAW LIBRARIANSHIP: THE REPORT, RECOMMENDATIONS AND MATERIALS OF THE AMERICAN ASSOCIATION OF LAW LIBRARIES SPECIAL COMMITTEE ON THE RENAISSANCE OF LAW LIBRARIANSHIP IN THE INFORMATION AGE (Richard A. Danner ed. 1997).

68. Jane C. Ginsburg, *Copyright Without Walls?: Speculations on Literary Property in the Library of the Future*, in FUTURE LIBRARIES (R. Howard Bloch & Carla Hesse eds., 1995).

69. *See* Wendy Gordon, *Fair Use as Market Failure: a Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600 (1982); Robert P. Merges, *The End of Friction? Property Rights and Contract in the 'Newtonian' World of On-line Commerce*, 12 BERKELEY TECH. L.J. 115 (1997).

70. For example, the payment records for UC Berkeley's Boalt Hall Law Library show that Congressional Information Service's index and abstracts costs $43,000 initially, and updates cost an additional $2,925 per year. An annual subscription for LegalTrac costs $6,356 in 1996/97.

that such sets would be bought by libraries and housed for general use. The system worked for everyone. It was based in the available technology, but well adapted to the research habits of its users. There is some circularity here. Publishers designed books to fit the system, and the system fit the books that they designed.[71] Thus, rather than serving as competitors or threats to the publishers and authors, libraries became an important distribution channel. Even publishers of normally priced literature might consider the library market in calculating strategy.

The second major factor ameliorating the way in which libraries handled intellectual property was the cultural support for the mission of libraries. The autodidact, working in a publicly accessible library, is a central myth in our culture. The idea that anyone with the gumption to pursue knowledge can run it down sounds strongly for us.[72] The intellectual equivalent of sweat equity is an appealing concept.

The myth penetrates only so far into reality. There have always been information elites. Those with resources could always get better data, better service, indeed, better librarians. There has never been real parity of access to information. But the thought that the hard-working anyman, through his own effort, can also have access to largely the same material is comforting.

Some of this rhetoric can be found in discussions of fair use.[73] It underlies the role of libraries as holders of intellectual property. If the patron took the trouble to come into the library, navigate the card catalog, penetrate the wilds of the Reference Room, and emerge triumphant, he deserved to use the book. Indeed, he ought to be able to sit down and read the whole thing. Even in areas where the copyright laws did impinge, as in the dark corridors of photocopying, library users were largely left alone. Most librarians do not make a serious attempt to enforce copyright law in their collections, because the ethos of librarianship is to distribute information, not surcharge it. I always check the copy rooms in libraries to locate the little sign that is posted telling users not to violate copyright laws. That's the extent of it. Librarians are not guardians of intellectual property, they are dispensers of it. Socialists were put in charge of the granary, and it was impossible to keep them from trying to pass out free food.

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71. The real irony is that the most valuable sets of books, the ones that were most popular, had to be given special "protection" lest they disappear. This was an element of their physicality.

72. *See, e.g.*, James C. Billington, *Libraries, the Library of Congress, and the Information Age*, DÆDALUS, Fall 1996 (Books, Bricks & Bytes), 35, 36-37.

73. I believe that this idea of parity of access to information should bridge to the discussion of fair use. *See also* Niva Elkin-Koren, *Copyright Policy and the Limits of Freedom of Contract*, 12 BERKELEY TECH. L.J. 93, 100-101 (1997) (discussing accessibility of works).

Why did no publisher ever attack this system? Why did no best-selling author step forward and point to all of the sales lost through library copies? Perhaps the patrons of publicly accessible libraries were not a viable market, or perhaps the free use of libraries is just too central a part of our cultural gestalt to be restricted. Whatever the reason, the system has long since become ingrained. Our view of information, at least the sort of information presented in books, is that free copies should be available for public use.

This vein runs long and deep in the law. Our system upholds the right of anyone to access legal information. If one can argue that everyone deserves some form of access to information, how much stronger is the argument when we begin to talk about legal information? Another of our myths is that of the pro se patron, the individual who goes out on his own to parse out his rights and enforce his claims.[74] Nor is this just a myth. The Supreme Court has explicitly validated the right of prisoners to have access to legal information.[75] County law libraries, state law libraries, public libraries, many academic libraries, indeed any law library that uses the Federal Depository Program to acquire materials, allows the general public into its walls and offers them access to the paper system.[76] The intensive use of public access sets has been at the center of our legal information system.

2. *ACCESS TO LEGAL INFORMATION*

Electronic information, priced by the unit or by time of usage, is based on a totally different set of assumptions. First, the distribution system for electronic information is still developing, but it is highly unlikely that it will follow the paper model. The whole welter of issues brought on by the physical aspect of paper-bound information disappear in the wave of a hand. Of special importance here is that no special pricing model assumes that large or expensive sets can only be sold to libraries for redistribution. Presently no effective means exists for using libraries for such distribution. The producer of electronic information does not need libraries. The heart and soul of electronic information has

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74. *Kolender v. Lawson*, 461 U.S. 352 (1983), was popularly known as the "Walking Man" case. It was filed and briefed in pro per by Mr. Lawson, using the Boalt Hall Law Library as his source. He won. Note that the Supreme Court would not allow Mr. Lawson to argue his case. Kolender v. Lawson, 459 U.S. 964 (1982).

75. Bounds v. Smith, 430 U.S. 817, 828 (1977).

76. The Depository Library Act is codified at 44 U.S.C. §§ 1901-1916 (West 1991 & Supp. 1997). For a discussion of the Federal Depository Library Program and other factors affecting public access to government information, see JOE MOREHEAD, INTRODUCTION TO UNITED STATES GOVERNMENT INFORMATION (5th ed. 1996). Changes in the depository system were proposed in late 1996; for current information on the status of these proposals, see *Resources of Use to Government Documents Librarians* (visited April 24, 1997) <http://library.berkeley.edu/GODORT>.

been direct marketing to the end user. Electronic information does not need a functional equivalent of the bookstore or the library. The incredible efficiencies of CD reproduction make direct sales of very large chunks of information possible. There is no space problem or price problem for an individual consumer. If a database is too large to sell, then access to it can be sold. Usage can be billed on an "as used" basis.

For example, consider the case of a law library that buys a set of the National Reporter System. The library pays its subscription costs and provides shelving and access. It is expected that a series of people will use the set. The users will read it, copy it, and take notes from it. The publisher is not concerned whether those users number ten or a thousand; the cost to the library is the same.

Now consider the library that instead purchases a subscription to LEXIS. Assume that the library pays a flat fee to LEXIS. If the library tried to set up a terminal in a well-lit place and invited a series of users to access the database in order to use it, copy it and take notes from it, LEXIS would care a great deal. LEXIS might allow the library to provide its service, with each individual user billed by LEXIS. Or, the library can offer to pay the cost of each search thereby subsidizing the usage of all of its patrons. In effect, this is what law firm libraries do, with the important caveat of dispersible costs discussed *infra* part II.B.

In the early years, both LEXIS and WESTLAW tied their billing to individual terminals, and those terminals were invariably in libraries.[77] The user came to the terminal. But this model is long gone. The end user now has her own number, and can gain access to the databases over any modem. The library can house fifty students, but each is using her own number, working on her own connection. The information is passing directly to the researcher.

This process has accelerated in recent years. The merger of Thomson and West, and the partnering of LEXIS and *Shepard's*, make it appear that the lines are being drawn around the dreadnoughts of legal information. With LEXIS at the center of one information Goliath, and WESTLAW at the center of the other, exciting days are ahead. Head-to-head rousing competition can produce large benefits for customers, and there may well be good deals and enhanced service ahead. But these price breaks most likely will be designed for end users, for the attorneys who can afford to pay, not for libraries. And if they are not for libraries, they are not for anyone else who cannot afford them. The bottom end of the system might just fall out.

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77. See comments, *supra* note 21.

3. *SEARCH PROBLEMS AND EDUCATION*

Another major problem inherent in the new form of legal information is the transparency of search protocols. Are electronic database users aware of the preemptive decisions being made for them by the system that they are using? The bulk of research and development in this field centers on developing easier and quicker means of using the systems.[78] Making it intuitively simple to log in and move about in the system is more important than enhancing the database or investing time in new research protocols. In a system skewed to the end user, this makes sense. Lawyers are no more likely to read directions than anyone else, and the industry standard for how much training and special skill acquisition one is willing to undergo seems to be dropping.[79] In a conference I attended at the University of Pennsylvania in the spring of 1996, information retrieval specialists, information vendors and librarians were brought together to search for commonalties.[80]

In the informal discussions I had while at the conference, it became clear that researchers in the information retrieval community felt that the big database vendors were not interested in implementing better search systems. In a fit of candor one of the vendor representatives agreed. He pointed out that lawyers are not complaining about what the system produces; instead they are complaining about how difficult it is to use and how much it costs. To invest $5,000,000 in implementing a new search system could demonstrably improve research effectiveness, but that might raise costs and might introduce a new layer of difficulty for the user and thus would be counterproductive. The money would be better spent in marketing.

This candid assessment emphasizes a crucial point. The future seems clear. One set of future information products will be low-end. Raw information will be taken from the Internet, reformatted, and resold. The quality and credibility of these products will be open to question. The other set of information products will be high-end. These high-end products will be easy to use, full of prompts and links to other systems. Researchers will be able to sit down and use them with no training. Most likely they will be voice-activated, so users will no longer need to type.

The danger of the high-end products is that each step in the research process that is carried out automatically by the front end system, is a

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78. The University of Pennsylvania convened a conference on May 16, 1996, to commemorate the 50th Anniversary of the ENIAC "thinking" machine [hereinafter 50th Anniversary of ENIAC Conference]. The Conference was entitled "Workshop on Problems in Information Retrieval." No transcript of the Conference was produced. All references to it are from the memory of the author. *See generally* PENN PRINTOUT, March, 1997 (multiple articles devoted to the anniversary).

79. 50th Anniversary of ENIAC Conference , *supra* note 78.

80. *Id.*

step taken away from the purview of the researcher. Each decision that is built into the system makes the human who is doing the search one level further removed from the process. If each user of information was aware of these steps, if each user understood what was being done for her and could monitor results with a skeptical eye, the danger would not be so great. But the whole point of these systems is to work automatically. The whole point is to create an environment where the searcher does not have to know about those steps. In this environment one accepts the search results as being the best available information. The problems brought out in the string of articles on Boolean searching begun by Professors Blair and Maron's study continues on.[81] Most researchers do not understand how to critically evaluate search results. The emphasis from the vendors of high-end information will be to lessen that critical evaluation, not enhance it.

It could plausibly be pointed out that most researchers never understood the steps taken by the print publishers, and that West and its editorial staff did an enormous amount of sorting of information, and classification of legal concepts. The process followed at West was designed to be unobtrusive. West was most successful when it served its conduit function, and the user thought of the product as no more than the primary law itself. The researcher could go to the sources, could see the headnoting, and could grasp what was being done to the information, but few took it to that level of analysis. For most, the process was lost in the product. West only dealt with cases in the National Reporter System, and that made it easier too. The West system would spin products into tools like annotated codes, but the Digest system was safely casebound. So long as law remained mired in the world of cases, this was the best place to be.

Shepard's likewise used an editorial staff and exercised far more judgment than most lawyers realized, but it was once again constrained by its medium and by the cases that were its core. It did not want the lawyer to think of the team of editorial workers who were massaging the data. *Shepard's* was most successful when it was thought of as automatic and abstract. Thus the two anchors of the old system shared a strange trait. They invested a great deal in editorial work on the product, but succeeded because no one noticed all the effort that was going into it.[82]

The new tools that have emerged so far appear to have none of these checks. Editorial staffs cost money. Small publishers can download the judicial information that they need from a bulletin board and transfer it to a disk. This produces information cheaply and quickly.

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81. *See, e.g.*, Daniel P. Dabney, *The Curse of Thamus: An Analysis of Full Text Legal Document Retrieval*, 78 L. LIBR. J. 5 (1986).

82. FRANK SHEPARD CO., LEGAL BIBLIOGRAPHY: SHEPARD'S CITATIONS 9-10, 40-41 (1923).

My view is that since so few lawyers realized the size and cost of the editorial efforts of the old West Publishing Company, they will not understand what they are missing. They will be missing a lot.

There is a deeper conceptual change involved in this transformation. One of the most salient features of the compact disk products already penetrating the market is that hypertext links make differences between types of information disappear. This was also true of the online systems, but the CD, inserted in one's own computer, and contained in a single package, heightens the effect. One moves from a case to a statute to a practice book seamlessly. The oldest injunctions about primary and secondary sources will be hard to enforce in a world where all information tools slide easily into one another. The impact of this may be useful or destructive, but it will change the universe of legal information, and how it is used.[83]

Only a focused educational program can prepare legal information users to adapt to this change. Law schools have never done a good job of research training.[84] The only major efforts at real training recently have come from WESTLAW and LEXIS, which have spent great sums in providing system training to law students.[85] However, that is not training in critical evaluation. And who will take on the burden of educating the members of the Bar who are already in practice? Who will hold their hand through these changes?

IV. CONCLUSION

With the purchase of the West Publishing Company by Thomson and its evolution into the West Group, as well as the purchase of *Shepard's* by LEXIS, the world has changed. The emergence of a plethora of new companies like LOIS, an aggressive company that started out in the CD market but which is now offering subscriptions to an Internet site that contains the primary authority for a number of smaller states and is moving national, adds to the mix.[86] Most likely the future of legal information will be determined by corporate strategies and marketing success, but the Bar and the legal education establishment should attempt to play a role. I fear that the American Bar Association, hamstrung as it

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83. *See* Berring, *Legal Research Universe*, *supra* note 8.

84. There is rich literature on this topic. Donald J. Dunn, *Why Legal Research Skills Declined, or When Two Rights Make a Wrong*, 85 L. LIBR. J. 49 (1993) is a good summary. The fiery exchange found in Christopher G. Wren & Jill Robinson Wren, *The Teaching of Legal Research*, 80 L. LIBR. J. 7 (1988) and Robert C. Berring & Kathleen Vanden Heuvel, *Legal Research: Should Students Learn It or Wing It?* 81 L. LIBR. J. 431 (1989) contains an extended discussion of the failures of research training from two very different perspectives.

85. Berring, *Legal Research Universe*, *supra* note 8.

86. *See, e.g.*, LOIS Homepage, *supra* note 54.

is by its Byzantine committee structure,[87] and the American Association of Law Schools, (AALS) typically disorganized and unfocused,[88] can do little. But the effort must be made. Legal information has been very accessible and of high quality in the United States; it would be a shame to let all that slip away.

87. Morris, *supra* note 2, at 73-74.

88. Twice in the past three years the AALS has conducted workshops on these questions as a part of its annual meeting. But the decentralized nature of its operations means that fast action of any sort is impossible.

ARTICLE

SURFING THE SENTO

DAN ROSEN†

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I. INTRODUCTION

During the 1996 election campaign, candidates and their parties were working overtime on on-line Internet information systems. The Republicans and Democrats added position papers, policies, and promises almost by the hour, the better to reach voters directly. The Internet was their way to circumvent the filtering of the national news media. But the cyberspace campaign in America was only half the story.

Across the ocean in Japan, another Fall referendum was taking place—the first one under the nation's new election and campaign law. At stake was control of the House of Representatives, the more powerful of the two chambers of the Diet,[1] and with it control of the government and the Prime Ministership. Most of the political parties had started Internet home pages several months before.[2] This was to be the first general election in which computerized communication could be a factor.

And so, the parties were understandably busy, but in a different way from their American counterparts. Japanese party workers were put to work purging their home pages of anything remotely related to the ballot.

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1. The House of Representatives has the right to receive the budget from the Cabinet prior to the House of Councilors, to overrule the House of Councilors on budget and other matters, to have the final say on appointment of a Prime Minister, and to dissolve the Cabinet. *See* HITUSHI ABE ET AL., THE GOVERNMENT AND POLITICS OF JAPAN 16 (James W. White trans. 1994).

2. *Politics Logs on to Internet*, ASAHI EVENING NEWS, Jan. 3, 1996, at 4.

Japan's election laws control everything from the size and placement of campaign posters to the number of postcards a candidate can dispense to supporters.[3] The Internet, however, was not on the minds of regulators when they drafted the new legislation.[4] Articles 142 and 143, which specify the appropriate use of words and pictures in a campaign, define the kind of media in which they might be displayed. About computer-linked communication, there is not one word.

Unsure what the government might say about a law that had not been written, the Japanese political parties opted to exit the Information Superhighway. The dominant Liberal Democratic Party (*Jiminto*), the New Frontier Party (*Shinshinto*), and the Pioneers (New Party *Sakigake*) all scrubbed their home pages of any reference to candidates by name. "It was a tedious work," said Okamoto Kenji[5] of the Pioneers. "I went through each and every page going as far back as entries made half a year ago."[6]

This little story speaks volumes about the legal culture of Japan and its difference from that of the United States. The American attitude is: that which is not specifically prohibited is allowed. The Japanese approach is: that which is not specifically allowed is prohibited. There are at least as many other examples of legal cultural differences as there are nations of the world. Thus, the question becomes, in an Internet-linked world, where messages are simultaneously created, sent, and stored wherever phone lines can carry them, whose law and whose society will rule?

To date, most debate over regulation of the Internet has centered around the United States—its place of birth. Even the slightest suggestion of government oversight brings out flame-throwers from seemingly every modem-equipped log cabin in the country. The past year's adoption of the Telecommunications Act[7] constituted an Armageddon to some[8] because of its criminalization of sending sexual

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3. *See generally* Dan Rosen, *Speaking for Democracy: Japan's New Campaign-and-Election Law System*, THE JAPAN FOUND. NEWSL., Mar. 1996, at 10; Masahiro Usaki, *Restrictions on Political Campaigns in Japan*, 53 LAW & CONTEMP. PROB. 133 (1990).

4. Public Officials Election Law, Law No. 105 of November 25, 1994.

5. In this essay, I have followed the Japanese practice of placing the family name first, followed by the given name, unless an author's name has been listed otherwise in an article or book.

6. Atsushi Kodera, *Candidates Miss Cyber-Campaign Opportunities Due to Obscure Law*, DAILY YOMIURI, Oct. 15, 1996, at 10. One party, the Democratic Party of Japan (*Minshuto*), was somewhat less timid. It opted to maintain the names and photos of its candidates on its home page but removed any information about the districts from which they were running. *Id.*

7. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) [hereinafter Telecommunications Act]. The act amends the Communications Act of 1934, 47 U.S.C. §§ 151 *et seq.*

8. *See, e.g.*, Barbara Dority & John Perry Barlow, *A Declaration of the Independence of Cyberspace*, THE HUMANIST, May, 1996, at 16:

materials to minors via computer, or displaying such materials in a manner available to minors.[9]

At the Digital Content conference at UC-Berkeley, discussion focused primarily on how to enforce existing rights such as trademark and copyright in the digital environment and how to make better business use of cyberspace.[10] The unspoken assumption was that the Net is there to be used, even exploited, but not restricted.

The most pure, if not the most popular, expression of this idea came from John Perry Barlow of the Electronic Frontier Foundation. Barlow's position is something akin to the absolutism of Justice Hugo Black toward the First Amendment to the Constitution:[11] "no law" means *no* law.[12]

> In the United States, you have today created a law, the Telecommunications Reform Act, which repudiates your own Constitution and insults the dreams of Jefferson, Washington, Mill, Madison, de Tocqueville, and Brandeis. These dreams must now be born anew in us.
>
> You are terrified of your own children, since they are natives in a world where you will always be immigrants. Because you fear them, you entrust your bureaucracies with the parental responsibilities you are too cowardly to confront yourselves. In our world, all the sentiments and expressions of humanity—from the debasing to the angelic—are parts of a seamless whole, the global conversation of bits. We cannot separate the air that chokes from the air upon which wings beat.

9. (d) Whoever—

> (1) in interstate or foreign communications knowingly—
>
> (A) uses an interactive computer service to send to a specific person or persons under 18 years of age, or
>
> (B) uses any interactive computer service to display in a manner available to a person under 18 years of age, any comment, request, suggestion, proposal, image, or other communication that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards, sexual or excretory activities or organs, regardless of whether the user of such service placed the call or initiated the communication; or
>
> (2) knowingly permits any telecommunications facility under such person's control to be used for an activity prohibited by paragraph (1) with the intent that it be used for such activity, shall be fined under title 18, United States Code, or imprisoned not more than two years, or both.

Telecommunications Act, *supra* note 7, § 502.

10. For example, panelists in the first session on The Advertising Model talked about how to get the attention of users of the Net. Nat Goldhaber of CyberGold, Inc., called the current era The Attention Society, and said that in such a society attention is the principal measure of power. His company pays consumers to look at ads it creates for various advertisers. Curt Blake of Starwave discussed the importance of brand names, such as ESPN, in attracting the attention of users.

Remarks at the Digital Content conference, University of California at Berkeley, Nov. 8, 1996.

11. "Congress shall make no law . . . abridging the freedom of speech, or of the press . . . ." U.S. CONST. amend. I.

12. *See, e.g.*, New York Times Co. v. Sullivan, 376 U.S. 254, 293 (1964) (Black, J., concurring); Barenblatt v. United States, 360 U.S. 109, 141 (1959) (Black, J., dissenting). *See generally* Edmond Cahn, *Justice Black and First Amendment "Absolutes": A Public Interview*, 37 N.Y.U. L. REV. 549 (1962). Except for periodic sympathetic utterances by

Barlow would practically exempt the Internet from the application of copyright law, the better to empower ordinary citizens to acquire and exchange information without restraint.[13]

The purpose of this essay is not to contest the views of Mr. Barlow or any other of the speakers at the conference. Rather, my primary intent is to show that much of the debate surrounding cyberspace and the Internet is an outgrowth of American society, and, moreover, a particular strand of American society. The values that underlie this ideology are by no means universal. If the battles to be fought in the U.S. are difficult, they are well-nigh impossible overseas. My example is Japan because, like the U.S., it is an information-rich society, but unlike the U.S., it has never accepted the notion that the marketplace of ideas should be wholly unchanneled.

II. CYBER LIBERTARIANS AND THE AMERICAN FRONTIER

David Hudson, writing in the San Francisco Bay Guardian, calls the advocates of laissez-faire Internetism "right-wing libertarian[s]," and a kind of "techno-elite."[14] If they are the founding fathers of a new cyber-nation (and, according to Hudson, they are mostly fathers—"well-educated white men with an interest in high technology"[15]), then *Wired* magazine is their Federalist Papers. Their philosophy, argues Hudson, transcends computer issues.

Justices Douglas and Brennan, however, Justice Black was alone on the Court in this belief. *See generally* WILLIAM W. VAN ALSTYNE, FIRST AMENDMENT 8-25 (2d ed. 1995).

13. John Perry Barlow, remarks at the Digital Content conference, University of California at Berkeley, Nov. 8, 1996. Barlow would not, however, allow fans of the Grateful Dead—for which he wrote songs—to enter their concerts and hear his music for free. Neither would he object, seemingly, to being paid royalties based on purchases of recordings of his songs or their performance on the radio and in other domains. Barlow's theory is that because copies do not deprive authors of their originals, they should be as free as the air. (He and the Grateful Dead did not prevent fans from taping their concerts.)

However, relationships—by his view—can properly involve an exchange of money. A consumer may download copyrighted software for free in his world, but then be called upon to pay for the advice of the company on how to use it. This is either a "paradigm shift" or it is wrong. Ordinarily, people operate in the opposite way. I expect to pay for my computer software, but if it does not work, I do not expect to have to pay to consult the company and find out why. Indeed, I am currently vexed by the worst of both the ordinary and Barlowian worlds. I write with WordPerfect software purchased at the discounted academic price. For the discounted price, I am not entitled to call the company's helpline; thus, I have paid for the product but apparently not a direct relationship. "Technical support is limited on online support such as the Corel Bulletin Board Service (BBS), the World Wide Web and FTP Internet Sites, CompuServe® and the Corel Fax on Demand service. No telephone or other support will be included for the Corel® WordPerfect® Suite—Academic Edition." Corel® WordPerfect® 3.5 For Macintosh® box (1996).

14. David Hudson, *Digital Dark Ages*, S.F. BAY GUARDIAN, Nov. 6, 1996, at 26, 27.

15. *Id.* at 26.

Libertarianism is grounded in a basic distrust of government, a mindset shared by many heavy users of the Net and solitary arms collectors living alone in the woods. The government is out to take my guns, my tax money, my modem—these are essentially the same arguments. One could call this school of libertarianism "the conspiratorial strain."

There is another school of libertarianism, however: one that sees the free market as liberator. This view holds that to the degree that government is involved, the perfect state of nature is diminished. Such a view was very popular in the United States until the Great Depression.[16] Several generations have passed since that time, when scores of Americans leaped to their deaths over their debts. Cyber-libertarians paint a much more attractive face on the philosophy. To them, it is all about choice and empowerment, until the Savings & Loans in which they have deposited their retirement accounts fail, at which time most adherents fall in line with everyone else to get their money back from the Federal Deposit Insurance Corporation.

Whether it springs from the fear of government or hope for the wisdom of humankind, the cyberlibertarian ideology seeks a revolution. For example, the founder of *Wired*, Louis Rossetto, is quoted as saying:

> There are really only two alternatives: trust the universe, or trust the politicians and bureaucrats. Right now, most people have been educated to believe that governments are necessary, and that electoral politics is the highest form of democracy.... People believe electoral politics is democracy because they have been brainwashed, period. Children are collected in public schools and taught history, which means basically they are taught the history of the state, or rather the history of a particular way of looking at their state, and that idea is continually reinforced by mass media and the structure of the game. Democracy in America? It's quadrennial Kabuki paid for with tax dollars administered by politicians and bureaucrats ultimately for their benefit, and for the benefit of the economic interests that influence them.[17]

Leaving aside the likelihood that the economic interests will not go away even if the politicians and bureaucrats do (economic interests are likely to trust in the universe even more if there is no government to stand in their way), Rosetto's views spring, perhaps unconsciously, from three very American traditions: (1) if you don't like the government, move away; (2) if you just don't like government at all, move farther away; (3)

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16. *See, e.g.*, Lochner v. New York, 198 U.S. 45 (1905) (government limitation of working hours of bakers is unconstitutional interference with liberty and freedom of contract). *But see* Nebbia v. New York, 291 U.S. 502 (1934) (government can regulate economic policy).

17. David Hudson, *There's No Government Like No Government*, S.F. BAY GUARDIAN, Nov. 6, 1996, at 30, 33 (interview with Louis Rosetto).

if you want to make a buck, make the move and wait for everyone else to follow.

This is based on simple American history. The colonists were the malcontents of their time. Some wanted to change British society but could not, so they opted out. Others wanted just to be left alone. The problem was not so much with the king; it was with any government that restrained their freedom of choice. So they headed for the Colonies. And finally there were those who raced across the ocean and, later, out West to snatch up free resources (land, minerals, animals) so they could sell them back to those who were not as quick. Along the way, all three groups happened to interfere with a goodly number of Native Americans, who trusted completely in the universe. Luckily for the settlers, there were few politicians or bureaucrats to get in their way.

When the colonists finished up their manifest destiny, they needed a new project. So, they set about building a railroad to make it easier for others to see the Pacific Ocean. Once people got rich from that project (it was fine for the government to help obtain the right-of-way for the tracks, but presumably unconscionable to set a minimum wage for the laborers who laid them), they decided to build highways from Disneyland to Disneyworld to make it even easier to span the nation (oops, again with some of that tainted government money). After that, they constructed airports. And finally, when all it took to get to the Golden Gate Bridge from the Brooklyn Bridge was a *See America* ticket on Greyhound, they had nowhere else to escape.[18]

As luck and the universe would have it, it was around that time that a bunch of scientists put together a rag-tag linkage of computers so they could talk to one another. They did it with money from the Pentagon, the National Science Foundation, and other government entities. It became the Information Superhighway, the "promised land," the new manifest destiny with no bounds, and it was there that the Cyberlibertarians embarked on the new Gold Rush. It is surely not coincidental that one of the leading companies making money from the Net is called CyberGold.

The story is indisputably American, combining the realizable dream of a new frontier [19] with a self-help mentality that conveniently filters out any recollection of the government aid that made it all possible. It has been a fascinating adventure, but now that the Net has gone global, can it

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18. The analogy could be extended by adding the development of telegraph, radio, television, and telephone systems, but enough has been said—I trust—to make the point.

19. *See generally* HOWARD RHEINGOLD, THE VIRTUAL COMMUNITY: HOMESTEADING ON THE ELECTRONIC FRONTIER (1993) (describing the growth of Computer Mediated Communications).

be exported? Or is it a uniquely American adventure, against which people in other places will rebel? This brings us to Japan.

III. THE WEB OF JAPANESE SOCIETY

The idea that Japan tends to be a group-oriented society, and America an individualist one, is the most timeworn of all clichés about Asia. That does not make it any less true. From the moment of birth, children in Japan are taught that safety is found within the circle; first the circle of family, then school, and later employer. Unlike the Dick and Jane readers of the American baby boomers' past, Japanese elementary school textbooks inevitably show pictures of children working together with their classmates to accomplish goals, even when the book (ostensibly) is not about civics at all.[20]

Japan is not at all unique in identifying the locus of identity in the society rather than in the individual. The tendency is common throughout Asia, dating back at least as far as Confucius. Confucian philosophy is all about relationships: subject and ruler, parent and child, older and younger sibling, and the like. In the course of a day, each person passes through numerous relationships; sometimes he is the superior, sometimes the inferior. The inferior has a duty to follow the direction of the superior, while the superior has a duty to act benevolently toward the inferior. In this way, all are thought to work for the common good: a harmonious society.[21] Thus, not only is the individual's identity tied up with that of the group, his role within the group depends on his position in the vertical hierarchy.

To date, the American attitude toward the Internet has been to break down hierarchical barriers, to separate oneself from the control of institutions (be they the news media, corporations, or the government), and to enter and exit relationships whenever the whim strikes. This

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20. Dick and Jane are enjoying a revival, fueled by a PBS documentary, a museum exhibit, and a book—all exploring the America depicted in the series, which taught 85 million Americans to read between the 1930s and the 1960s. CAROLE KISMARIC & MARVIN HEIFERMAN, GROWING UP WITH DICK AND JANE: LEARNING AND LIVING THE AMERICAN DREAM (1996). In general, Dick and Jane and the other characters were depicted as autonomous nouns individually acting upon their world through verbs. "Look Dick, look. See Spot run." In Japanese children's texts, however, characters are frequently seen as acting together. For example, a first grade arts and crafts book features photos of children in groups making mudpies, constructing a huge paper sculpture of Gulliver, building a sandcastle, parading in a festival, and drawing a gigantic chalk fish on the schoolgrounds. In all these pictures, each child is doing his own small part to contribute to the creation of a whole. Many of the projects are far too large for any one child to execute alone. Some, like the festival parade, by necessity involve the group. The unstated but (at least to outside eyes) clear message is that for society—the whole—to prosper, everyone must work together. NIHON JIDOU BIJUTUSU KENKYUUKAI [JAPAN CHILDREN'S ART RESEARCH CENTER], ZUGA KOUSAKU 1 [DRAWING, PAINTING, AND HANDICRAFTS, FIRST GRADE] (1991).

21. *See generally* THE ANALECTS OF CONFUCIUS (Mei Renyi trans. 1992).

ideology is as foreign to Japan and other Confucian-based nations as sashimi might be to the Nebraska Association of Cattle Ranchers.

Murai Jun is a Japanese advocate of the Internet. He is an important member of the WIDE Project, which stands for Widely Integrated Distributed Environment Project, a group that aims to extend the reach of the Net within Japan.[22] Yet even a true believer such as Murai has concerns. In his book *Intanetto (The Internet)*,[23] he foresees conflict because American ideas toward the Net are based on individualism, but European and Asian users are accustomed to knowledge and information systems centered around authority and control.[24] Though this may cause significant upheaval outside of the U.S., Murai is ultimately optimistic about the outcome, hopeful that the American model will influence Japanese citizens to rethink their notions of the proper life.

The story recounted at the beginning of this essay suggests otherwise. Even with the technology available to reach thousands of voters and no law explicitly standing in the way, Japanese political parties were afraid to make use of the technology without direct approval from an authority figure—in this case the Home Affairs Ministry.

Another writer, Nishigaki Toru, puts the question a different way.[25] Multimedia culture is indisputably based on an American worldview, he says. Realistically, the amount of information from America is bound to outstrip that based in Japan. However, the question should not be how this will change Japanese society, but rather how it *should* change Japanese society.[26]

Nishigaki's concern is that, confronted with such a technological assault on tradition, Japanese society may embark on a futile mission to avoid lagging behind America.[27] This would not be the first time such a thing has happened. In the mid-nineteenth century, Japan was faced with another invasion of technology from the outside: the black ships of Commodore Perry. Perry, on behalf of the United States, demanded that

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22. *See* Kiyohara Keiko, *Books in Japanese*, JAPAN FOUND. NEWSL., Mar. 1996, at 15, 17.

23. MURAI JUN, INTANETTO [THE INTERNET] (1995).

24. Kiyohara, *supra* note 22, at 17.

25. NISHIGAKI TORU, MARUCHIMEDIA [MULTIMEDIA] (1994); *see also* NISHIGAKI TORU, SEINARU VACHARU RIARITI JOHO SISUTEMU SHAKAIRON [SACRED VIRTUAL REALITY: THEORIES OF THE INFORMATION SOCIETY] (1995).

26. Kiyohara, *supra* note 22, at 16.

27. Maeno Kazuhisa, late professor of Information Studies at Gunma University, worried about the consequences of Japan *not* trying to follow America's lead. He wrote, "Will multimedia bring us closer to the information society, shattering Japan's old ways of thinking in the process? Or conversely, will traditional ways of thinking obstruct multimedia's progress and cause Japan to fall behind the current of world history?" Maeno Kazuhisa, *Multimedia Society and Japan*, JAPAN FOUND. NEWSL., Mar. 1996, at 1, 9 [hereinafter Kazuhisa, *Multimedia Society and Japan*]; *see also* MAENO KAZUHISA, JOHO SHAKAI, KORE KARA DO HARU [THE FUTURE OF THE INFORMATION SOCIETY] (1991).

Japan open its ports to foreign trade. He backed up his demand with superior armaments and an impressive armada. Confronted with strength it could not resist, Japan succumbed.[28] Then, paradoxically, it began a frantic quest to catch up. Suddenly, anything foreign was the rage.[29] Gentlemen appeared in photos with Western-style frock coats. Companies scrambled to import Western industrialization. The military adopted the command structure of the German army.[30] Even Western law experts were imported to create a modern (read: Western) legal system.[31]

Along the way, Japan also noticed that the great powers exerted their power around the world through military adventures, territorial "acquisitions," and imperialistic aggression. Consumed with the fever to become accepted as a full partner in the community of influential nations, and fresh from its victory in the Russo-Japanese War, Japan set out to establish its credentials. This led to the cataclysmic *denouement* of World War II.[32] Cyberlibertarians who desire to remake the world should be careful what they wish for; they may get it.

No wonder Mr. Nishigaki is concerned. John Perry Barlow should be too.

I am not in any way predicting Digital War I (although it certainly would make an exciting plot for a novel.) My point is only that any society that finds fundamental change forced upon it is likely to react in unpredictable ways. Rapid Western-style industrialization of Iran begat a return to a fundamentalist theocracy. Demographic shifts in contemporary America have ushered in an era of restricted immigration and English-only advocacy. The reactions are sometimes good, sometimes bad, and sometimes different in the short and long run.

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28. *See generally* EDWIN O. REISCHAUER & ALBERT M. CRAIG, JAPAN: TRADITION AND TRANSFORMATION 118-22 (2d ed. 1989).

29. Even the idea of a consciousness of culture was in some ways a Western import. *See* Tessa Morris Suzuki, *The Invention and Reinvention of "Japanese Culture,"* 54 J. ASIAN STUD. 759, 761-763 (1995); *see also* W.G. BEASLEY, JAPAN ENCOUNTERS THE BARBARIAN (1995) (describing Japanese sent abroad in the mid-nineteenth century to acquire foreign knowledge).

30. REISCHAUER & CRAIG, *supra* note 28, at 145-89.

31. *See generally* Y. NODA, INTRODUCTION TO JAPANESE LAW 41-62 (Anthony H. Angelo trans. 1976). Still older examples include the reception of Ch'an Buddhism from China in the twelfth and thirteenth centuries, which became Japanese Zen; tea drinking from China, which was stripped to bare essentials by the Japanese priest Sen Rikyu and transformed into the Japanese tea ceremony; and certain pottery-making techniques from Korea. *See, e.g.*, SOSHITSU SEN XV, TEA LIFE, TEA MIND 12-14 (1979); DAISETSU SUZUKI, ZEN AND JAPANESE CULTURE 50 (1970). *See generally* Dan Rosen, *The Koan of Law in Japan*, 18 N. KY. L. REV. 367, 370-75 (1991). *Cf.* J. MARK RAMSEYER & FRANCES M. ROSENBLUTH, THE POLITICS OF OLIGARCHY: INSTITUTIONAL CHOICE IN IMPERIAL JAPAN (1995) (ultimate failure of Meiji era leaders to construct government structures that would preserve their power).

32. *See generally* EDWARD BEHR, HIROHITO: BEHIND THE MYTH (1989); JOHN TOLAND, THE RISING SUN: THE DECLINE AND FALL OF THE JAPANESE EMPIRE (1970).

Information flow could be just as challenging as political restructuring; perhaps it is even more so. If this is true in Japan, it is certainly true of other Asian countries, most notably China, where users of the Internet must have a registration form on file with the police department.[33] Of course, in China there is no tradition of private broadcasting. To the contrary, the tradition involves control of mass communication by the government, both pre-and post-1949. Unfettered and uncontrolled use of the Internet is simply not going to happen in the foreseeable future. Pushing too hard for too much too soon may have the opposite effect, as recent history has demonstrated. On the other hand, as today's American software and record companies can attest, China has a long history of not letting private "ownership" rights interfere with citizens' ability to copy whatever they want.[34] Perhaps it is a few hundred years ahead of the wave.

Monroe Price has observed "[a]s new forms of communication ... transcend existing political boundaries, they call into question historic political ties and threaten to destabilize existing national and multinational regimes."[35] Change will undoubtedly occur, but it may not be the change that advocates of Internet libertarianism expect.[36]

Unlike the hierarchical structure of Confucianism, which continues to influence Asia, decentralization is basic to the American ideal of the Internet. Federalism has been a way of life since the Articles of Confederation. Dispersion of authority remains one of the major political values in the United States of today. There is great enthusiasm for getting the government out of the capital, getting the companies out of the cities, and getting the workers out of the workplace. Silicon Valley is a village of men and women who founded their companies at the workbench in their garage, or who now work for the industrial giants that have been formed

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33. No one really knows the number of Internet users in China, but most 1996 estimates place it at fewer than 100,000. *See, e.g., China, Wired*, TIME, Apr. 22, 1996, at 73 (40,000); *Estimated 60,000 mainland Chinese in cyberspace*, REUTERS, Mar. 28, 1996; Renee Schoof, *China Says Censorship Laws Apply to the Internet*, AUSTIN AMERICAN-STATESMAN, Apr. 15, 1996, at D1 (100,000); *But see* Steve Higgins, *Why Internet Curbs in China May Not Hurt U.S. Business*, INVESTOR'S BUS. DAILY, Apr. 16, 1996, at A10 (200,000).

34. *See generally* WILLIAM ALFORD, TO STEAL A BOOK IS AN ELEGANT OFFENSE (1995).

35. Monroe Price, *Electronic Media and the Global Competition for Allegiances*, 104 YALE L.J. 667, 668 (1994).

36. Price notes that governments have various ways to regulate media: they can subsidize, censor, or speak themselves. *Id.* at 677-81. America is unusual in the world in its almost complete reliance on commercial broadcasting. *See, e.g.*, Dan Rosen, *Broadcasting in the Public Interest: Lessons from Japan*, 7 CONST. COMM. 35 (1990). Only recently, for example, did Austria gain its first private radio station. Most countries have at least one publicly-supported television and radio service, and often only that (with perhaps several different channels). Other countries, such as Japan, Britain, and Canada, have created broadcasting corporations free of direct government control but funded through listeners' fees imposed by law.

out of those workbenches (and who not-so-secretly aspire to go off on their own and find their own way to success).

Even before the Internet, America encouraged a multiplicity of voices. Mass media regulation worked toward the proliferation of as many television and radio stations as possible, with as many different owners. In major markets such as New York or Los Angeles, 50 different radio signals may be available to listeners. Even in medium-size cities like New Orleans, they number around 30. Cable television, after some early growing pains, now reaches a majority of Americans with a multiplicity of channels.[37] For those who cannot be satisfied with fewer than 100 video options, satellite dishes now exist, allowing users to receive an even greater number of specialized services. Not so far in the future: video on demand, the home electronics equivalent of the Blockbuster Video shop in your neighborhood.

Japan is a very different story. The biggest cities, Tokyo (population approximately 7.9 million) and Osaka (population approximately 2.5 million), have fewer than a dozen radio stations, and far fewer television stations.[38] Only 6.3% of Japanese households have cable television.[39] There is essentially one local phone company for the entire nation: Nippon Telephone and Telegraph. Under just a few years ago, there also was only one long-distance company: NTT. Now there are additional competitors, still, however, dwarfed in size by NTT.[40] International telephone service has been a bit more deregulated. KDD—the NTT of the international calling sector—retains the lion's share of the business, but at least two other companies are making significant inroads with discount pricing.[41]

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37. The Neilson rating service estimates cable penetration at 69.1% in the U.S. *See* Joanne Ostrow, *Cable's Future Depends on Whose Crystal Ball You See,* DENV. POST, Oct. 31, 1996, at F1.

38. For a comparative analysis of regulation of broadcasting in Japan and the United States, see generally Jonathan Weinberg, *Broadcasting and the Administrative Process in Japan and the United States,* 39 BUFF. L. REV. 615 (1991). For an overview of the origins of broadcasting and its regulation in Japan, see NIPPON HOSO KYOKAI (NHK), FIFTY YEARS OF JAPANESE BROADCASTING (1977).

39. *See* Eri Kim, *Digital Sats Target Japan,* VARIETY, Sept. 16, 1996, at 58. The figures, as of March 1995, mean that the number of subscribers is about 2.2 million.

40. NTT has more than 93% of the local telephone business and 70% of the long-distance market. ASAHI SHIMBUN, JAPAN ALMANAC 180 (1996); *see* Jonathan Watts, *Japan: Where the Phones are Highly Regulated—and Highly Priced,* THE OBSERVER, Nov. 10, 1996, at 6.

41. KDD retains almost 70% of the international calling market from Japan. *See* ASAHI SHIMBUN, *supra* note 40. Callback services, by which the customer calls a computer in the U.S. for one ring, hangs up, and waits for the computer to call him back with a dial tone (and a cheaper international rate based on the cost of an American phone line) have gained some popularity among expatriates and their businesses, including your author. Japanese consumers, on the other hand, remain wary.

An advisory committee to the Posts and Telecommunications Ministry[42] has supported the breakup of NTT into three separate companies to encourage competition.[43] However, so far that proposal has remained stalled.[44] The success of the conservative party, the Liberal Democratic Party, in the 1996 elections is thought to make any radical restructuring of the telephone industry unlikely.

The differences in telecommunication regulation between Japan and the U.S. are not accidental.[45] As a matter of policy, the Japanese government believes that the public is better served by a few strong competitors, confident of their position, than a free-for-all.[46] This attitude is not restricted to the media business. Automobiles, banking, insurance, and even lawyering reflect it. The passage rate on the Japanese Bar Exam, for example, is three percent. As in other industries, this ensures high quality, and it also serves to guarantee most of the country's 15,000 attorneys a livable income.[47]

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42. The Ministry's web site includes information on Japanese telecommunications regulation and policy. *See* Advisory Committee to the Posts and Telecommunications Industry (visited Apr. 18, 1997) <http://www.mpt.go.jp/> .

43. *Id.* The United States, of course, is itself going through this painful process. *See generally* Lawrence A. Sullivan, *Elusive Goals Under the Telecommunications Act: Preserving Long Distance Competition Upon Baby Bell Entry and Attaining Local Exchange Competition: We'll Not Preserve the One Unless We Attain the Other,* 25 SW. U. L. REV. 487 (1996).

44. *Compare DDI Calls for Splitting Up NTT's Operations,* JAPAN ECON. NEWSWIRE, Nov. 13, 1996, *with NTT Head Opposes Split Due to Global Competition,* JAPAN ECON. NEWSWIRE, Nov. 13, 1996. DDI is one of the companies competing with NTT. Ironically, both sides are looking to government regulators to make regulations favorable to their interest. Neither is interested in complete deregulation. NTT wants the government to preserve its dominance of the local phone network and discourage access to its networks by competitors. On the other hand, it wants the freedom to participate in the market for international transmissions. The President of NTT, Miyazu Junichiro, has said rather than competing for international voice telephone business, "[w]hat we are interested in is offering data communications and other multimedia-related services through our networks. And it is inevitable that we offer international services if our multimedia services require a network with international communications capability." Joshua Ogawa, *Company's Leader Takes a Global Line,* NIKKEI WKLY. (Japan), Oct. 28, 1996, at 9. Thus, NTT is presumably enthusiastic about one recommendation of another government advisory group, The Economic Council, that it be allowed to compete in the international market, but less so about the Council's other suggestion to allow greater competition in city calls and increased access to NTT's grid. *See Panel Urges Reform of Financial, Labor, Telecom Marts,* MAINICHI DAILY NEWS (Japan), Oct. 18, 1996, at 7.

45. A recent Japanese government report, for example, spoke proudly of the creation of a total of *five* new community broadcasting stations in the entire country. MINISTRY OF POSTS AND TELECOMMUNICATIONS, WHITE PAPER: COMMUNICATIONS IN JAPAN 17 (1994).

46. Stories of how Japanese companies' market shares remain relatively stable (where winners tend to continue winning) are recounted in JAMES C. ABEGGLEN & GEORGE STALK, JR., KAISHA: THE JAPANESE CORPORATION 42-66 (1985).

47. Hideo Fuji, *The Role of Lawyers in Japanese Society, in* UNITED STATES/JAPAN COMMERCIAL LAW AND TRADE (Valerie Kusuda-Smick ed. 1990). Access to the Bar is even more tightly controlled in Korea, where the passage rate is "less than a few percent" and the total number of active lawyers less than 3,000. Kyong Whan Ahn, *The Growth of the Bar and the Changes in the Lawyer's Role: Korea's Dilemma, in* LAW AND TECHNOLOGY IN THE PACIFIC COMMUNITY 119, 120 (Philip S.C. Lewis ed. 1994).

In stark contrast is the United States. The Telecommunications Act of 1996—despite all the attention its indecency sections[48] received—is in fact a radical deregulatory statute. Telephone companies are free to compete with cable companies and offer video;[49] cable companies can provide telephone service;[50] local phone companies can offer long-distance;[51] long-distance companies can compete in the local market.[52] Everyone is in everyone else's business, and the assumption is, that's good.

From Japan, however, the Act looks like unbridled chaos.

Professor Matsui Shigenori has written that "*[l]aissez-faire* capitalism has never been a part of Japanese ideology."[53] Government, far from being the enemy of business, has been viewed since the Meiji era (1868-1912) as being committed to promoting industry and protecting it against foreign competitors. Matsui goes on to say that regulation in the U.S. tends to be deemed justified only when there is market failure, but in Japan it is thought to be justified even in the absence of failure or malfunction of the market.[54]

> As a result, free competition is often regarded as threatening to the harmony of society. It is true that many Japanese companies are engaged in fierce competition and that this is apparently one of the major reasons for rapid economic growth. It cannot be denied, however, that such competition is allowed only with the boundaries set by bureaucrats. Indeed competition is always controlled and coordinated by bureaucrats in Japan. Such control and coordination become especially prominent when the industry faces economic trouble. But there are also many anti-competitive protectionist entry restrictions to prevent a fragile industry from falling into economic trouble. Moreover, even in healthy industries, small and medium size companies and stores are often protected against competition by various regulations. All such regulations are justified in the name of the necessity of maintaining the orderly development of the economy.[55]

Matsui is critical of this Japanese legal tradition, and his description makes the difference between Internet cultures clear. America in general, and the Internet community in particular, believe in discontinuous, market-driven, spontaneous, unpredictable progress. The corpses of

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48. Communications Decency Act, Telecommunications Act, *supra* note 7, Title V (codified as amended at 47 U.S.C. § 223 (1996)).

49. *See* Telecommunications Act , *supra* note 7, Title III (codified as amended at scattered sections of 47 U.S.C. §§ 522-613 (1996)).

50. *Id.* at Title II (codified as amended at 47 U.S.C. §§ 251-261 (1996)).

51. *Id.* at Title III (codified as amended at 47 U.S.C. § 271 (1996)).

52. *Id.* at Title II (codified as amended at 47 U.S.C. §§ 251-261 (1996)).

53. Shigenori Matsui, Lochner v. New York *in Japan, in* LAW AND TECHNOLOGY IN THE PACIFIC COMMUNITY, *supra* note 47, at 199, 237.

54. *Id.* at 229.

55. *Id.*

failed companies and disappointed consumers is just the cost that must be paid for moving forward. Japan, on the other hand, seeks to avoid the bloodshed if at all possible. Decisionmaking must be coordinated so that all, or most, march in the same direction.[56] The market wars of the 1970s and early 80s between VHS and Beta video formats were the nightmare of industrial regulators. The agreed-upon standard for the new generation digital video disk of the late 1990s is their dream. Hitachi, Sony, and Toshiba, along with seven other companies from Japan, the U.S., and Europe, have settled upon a single format for the disks, resolving a contest between incompatible designs.[57] A subsequent agreement on encryption, in order to preserve copyright, made it possible for some manufacturers to plan market launches by the end of 1996.[58]

The Supreme Court of Japan routinely upholds government legislation designed to limit competition, under the theory that "excessive competition" is unhealthy.[59] In *Marushin Industries, Inc. v. Japan*,[60] the court upheld zoning restrictions on commercial projects designed to avoid excessive competition. The restrictions required a distance of 700 meters between retail store buildings. Similarly, in three cases involving public baths (*sento*),[61] the court ruled against entrepreneurs who wanted to open baths within close proximity to existing establishments. The court said, in the Second Public Bath Act case, "To prevent public baths from closure or change of business because of the economic trouble and to take various legislative measures to secure its healthy and stable management do contribute to the maintenance of health and welfare of the citizen and thus conform with the public welfare."[62] Although the subject was hot water, not websites, these cases illustrate the ability of the government to limit competition. In that sense, they are decisions that affect broadcast

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56. It should not be thought that such decisions all come from the top down. As a matter of fact, the consensus-based *ringi* system of decisionmaking favored in Japan often requires broad-based support from the principal participants. Decisions tend to be slower in coming, but once achieved can be implemented with lightning speed. Professor John Haley, in his close analysis of administrative behavior in Japan, has concluded that the authority of Japanese bureaucrats is extensive, but their power to implement their decisions in isolation is quite limited. JOHN O. HALEY, AUTHORITY WITHOUT POWER: LAW AND THE JAPANESE PARADOX 200 (1991).

57. *See More Electronics Firms Join DVD Standardization Efforts*, DAILY YOMIURI (Japan), July 26, 1996, at 14.

58. *See Industry Hopes for Swift Growth After DVD's Troubled Birth*, FIN. TIMES, Oct. 31, 1996, at 23.

59. *See* Shigenori Matsui, *supra* note 53, at 229.

60. Judgment of November 22, 1972, Supreme Court, Grand Bench, 26 KEISHU 586, *translated in* THE CONSTITUTIONAL CASE LAW OF JAPAN, 1970 THROUGH 1990, at 183 (Lawrence W. Beer & Hiroshi Itoh eds. 1996).

61. Judgment of January 26, 1955, Supreme Court, Grand Bench, 9 KEISHU 89; Judgment of January 20, 1989, Supreme Court, 2d Petty Bench, 43 KEISHU 1; Judgment of March 7, 1989, Supreme Court, 3d Petty Bench, 1308 HANREIJIHOU 111.

62. Judgment of January 20, 1989, Supreme Court, 2d Petty Bench, 43 KEISHU 1, 3, *translated in* Shigenori Matsui, *supra* note 53, at 220.

stations, telephone companies, and home pages no less than the *sento* (which, by the way, served as the Internet of its time—the place where people gathered to exchange information.)

Those who advance the free market argument that existing forms of media are dinosaurs that will be buried by the eruption of the Internet may be sobered by the court's concern over the public bath industry. By the 1980s, it was in a serious decline, which continues to this day. In the 90s, most people now have baths in their own homes and need not go down the street to get in the steamy water. Yet the court said:

> It was true at the time of enactment of this Act and is still true today that the public bath is an essential institution in the daily life of residents. It is necessary to maintain and preserve the public bath in order to serve the needs of residents dependent upon it. It is even more so today because the public bath business is facing economic trouble.[63]

Substitute the words "radio and television stations" or "telephone company" or "newspapers" for "public bath" and you have a tailor-made argument for regulation and limitation of the growth of the Internet in Japan.

Therefore, what is likely to happen in Japan is not a wholesale rejection of the Net, but rather a slower, more sustained development. The culture of the Net may be set in America, but like American baseball[64] and other cultural exports, it will surely be changed by its interaction with Japanese society and people. That, in my opinion, is a good thing; the Net does not belong to a few people in Berkeley and Boston, but rather to everyone who uses it, in his or her own way.

Providing a contrarian view, the late Professor Maeno Kazuhisa, predicts that rather than being shaped by Japan's bureaucracy, the Internet will cause a fundamental revolution in bureaucracy:

> The present regulatory regime was built around the needs of the agricultural/industrial model. As such, its proper fate is not modification, through deregulation and similar means, but abolition. Today's bureaucrats carry out their duties by working to determine whether a precedent exists. Such a standard, however, has been rendered utterly irrelevant by a neo-Copernican shift from an agricultural/industrial society to an information society. Going forward, the bureaucracy will face a range of phenomena entirely without precedent. A new decision-making standard will be required, one that simply asks whether a given phenomenon actually benefits the Japanese people.[65]

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63. *Id.*

64. For the story of the transformation of American baseball into Japanese baseball, see ROBERT WHITING, THE CHRYSANTHEMUM AND THE BAT (1977); ROBERT WHITING, YOU GOTTA HAVE WA (1989).

65. Kazuhisa, *Multimedia Society and Japan*, *supra* note 27, at 5.

This prediction might be correct, but Japan has seen some revolutionary changes since the opening of the country in 1868. The change from agricultural to industrial was itself Copernican at the time. And yet, the nation has held fast to the notion that some direction, some leadership, some coordination (usually by the bureaucracy) is in the best interest of the people. In the end, it seems that even Professor Maeno does not doubt the continued role of government decisionmaking—even in the information industry. The issue he raises is not whether bureaucrats will continue to decide, but rather what criteria will they use to decide.

So far, the revolution has been slow in coming. Early in 1996, Japan accounted for only two percent of the world's users of the Internet. The number of host computers connected to the Net in Japan was 160,000, far fewer than in the U.S., of course, but also less than countries with populations smaller than Japan's 125 million: Germany, the U.K., Canada, and Australia.[66] This is in marked contrast to the use of other forms of media in Japan. Japanese newspaper circulation is almost 72 million, greater than that of the United States and even China—both of whose populations far exceed that of Japan.[67] Weekly magazine circulation is 1.9 billion per year; for monthlies it is 2.8 billion.[68]

One impediment to the growth of the Internet in Japan is the small installed base of personal computers, which is still far less than in the United States. College students in Japan, a prime market in America, remain heavily dependent on dedicated word processors with built in thermal printers rather than PCs. It is the exception, rather than the rule, for a company employee to have a PC in front of him at his desk. All the workers in a particular department may share access to one machine. Thus, the structure of the workplace also does not yet encourage the kind of individual relationship with a computer that Americans take for granted. "One person, one computer" may be the credo in the United States, but not in the offices of Japanese corporations (even those that manufacture the hardware.)

Then there is the matter of language. English is the de facto *linqua franca* of the Net. The number of Japanese who can read and write fluently in English is not large, and those who will be motivated enough to make the effort to use a foreign language on a computer even smaller. Smaller still is the number of people outside of Japan who can read and write Japanese. Computer software that can flawlessly translate the two

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66. *Japan's Internet Connection—Who's Who, What's What,* FOCUS JAPAN, Jan./Feb. 1996, at 1. Asia in general is far behind the United States and Europe in the number of Internet host computers. *See* William McGurn, *Net Assets,* FAR EASTERN ECON. REV., July 27, 1995, at 68, 69.

67. FOREIGN PRESS CENTER/JAPAN, JAPAN'S MASS MEDIA 15 (1994).

68. *Id.* at 73.

languages is still far away. Thus, to the extent that much of what appears on the Net is in English, the momentum for logging on in Japan will be diminished.[69]

And finally, we return to what is probably the most important point of all. Even without any government interference, Japanese are just less likely than Americans to become enthusiastic about isolating themselves from face-to-face contact in the name of "progress." In Japan, "skinship" matters almost as much as "kinship." The number of public baths (*sento*) may be declining, but no Japanese resort would dare be without a big bath to offer its customers. It is a place where everyone is equal, the water is hot, and the conversation is loose.

Japan will surely adapt to the Internet, but in its own way and in its own time. One scenario is for groups of people to gather around single computers, turning Net surfing into a communal activity. Another possibility is that existing media companies will gradually shift their output online, leading customers to the Net rather than following behind them, just as the three major newspapers did in creating television networks.[70] Japanese television viewers have yet to march on the Posts and Telecommunications Ministry, demanding the mega-channel options available in the U.S. They apparently remain content with the offerings of the principal commercial networks.[71] Thus, rather than shaking off the shackles of major media conglomerates, consumers seem more likely to follow these companies to the digital domain.[72]

As Japan adapts to the Internet, it will adapt the Internet to itself. This will be yet another story of the reception of outside culture and technology, modified to fit local preferences. It is likely to be a future different from the one envisioned by the American theoreticians of the Internet, but not so different as to be unrecognizable. If the mandarins of cyberspace can accept the possibility of different digital cultures in

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69. Domestic use of the Net within Japan, of course, is another matter. The craze for cellular telephones, handy phones, and *pokeberu* (pagers) may indicate substantial growth potential for the Internet. However, the use of these other electronic technologies is a matter of convenience or amusement, as with the games that young people play making homonym number messages on their friends' pagers (Example: 3 is pronounced *san* or *sa* ; another pronunciation of 3 is *mitsu* or *mi;* 4 is *shi;* 1 is *ichi* or *i.* So, 3-3-4-1 is *samishii,* which means "I'm lonely.") *See* William Marsh, *A phone in the hand,* MANGAJIN, Nov. 1996, at 92. When extolling the liberatory virtues of the Internet, its advocates presumably have something more in mind.

70. Each of Japan's largest newspapers, the *Asahi, Mainichi,* and *Yomiuri,* has its own television network. The Fuji Sankei group, the owner of another network, also operates newspapers, but their circulation is much smaller than the big three.

71. The first digital satellite television service in Japan was scheduled to being in late 1996, offering 70 channels to subscribers. Eri Kim, *supra* note 39.

72. On the other hand, the number of specialized magazines published in Japan is astronomical. Were I a salesman for a service depending on extensive consumer choice on the Internet, I would point to the magazine industry as evidence that Japan is not immune to this sort of individualization.

different places, rather than insisting on one world order, the Net may turn out to be the biggest *sento* of them all.

BOOK REVIEW

EXAMINING TRADITIONAL LEGAL PARADIGMS IN A NON-PHYSICAL ENVIRONMENT: NEED WE INVENT NEW RULES OF THE ROAD FOR THE INFORMATION SUPERHIGHWAY?

SCOTT E. BAIN†

LAW AND THE INFORMATION SUPERHIGHWAY. By *Henry H. Perritt, Jr.* New York: Wiley Law Publications. 1996. Pp. xxiii, 730. $135.

1997 Supplement. Pp. viii, 102. $57.

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I. INTRODUCTION

Scarcely a decade has passed since author William Gibson described in his acclaimed science fiction novels *Neuromancer* and *Count Zero* a fantasy world of computer-generated data matrices which had no correlation to any physical reality, but to which people could "plug in" via a "brain-computer link" and have the illusion of physically moving about to obtain information.[1] Gibson dubbed this virtual world

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1. *See* WILLIAM GIBSON, NEUROMANCER (1984); WILLIAM GIBSON, COUNT ZERO (1986). *See also* EDWARD A. CAVAZOS & GAVINO MORIN, CYBERSPACE AND THE LAW 1 (1994); William Byassee, *Jurisdiction of Cyberspace: Applying Real World Precedent to the Virtual*

cyberspace—"the space that wasn't space."[2] In Gibson's portrayal of cyberspace, inhabitants could meet, converse, carry on business and recreation, and do everything else that was possible in a physical world, including break the law.[3]

Today it is apparent that Gibson's vision was more than a science fiction dream. It is strikingly similar to existing information and communications networks, and the term *cyberspace* has even caught on as a name for the virtual space in which users interact via these networks. Politicians, the media, business leaders, and technologists have sensationalized this burgeoning information infrastructure,[4] especially the "network of networks" known as the Internet, and its potential to change the way we communicate, learn, work, and play.[5] Already, this "Information Superhighway" is having a phenomenal effect on the way we live. Cellular phones and fax machines, email and the World Wide Web, satellite broadcasting and cable television, video conferencing and personal communications systems are just a few of the building blocks of this Superhighway that are helping to create a society and economy in which time and geography are no longer formidable obstacles to human interaction, and information is the most valuable commodity.[6]

History suggests that when new technology is a catalyst for sweeping social and economic change, the law struggles to keep up.[7]

Community, 30 WAKE FOREST L. REV. 197, 198 n.5 (1995); ETHAN KATSH, LAW IN A DIGITAL WORLD 14 (1995).

2. GIBSON, COUNT ZERO, *supra* note 1, at 38.

3. *See* GIBSON, NEUROMANCER, *supra* note 1.

4. Many terms are used to describe this infrastructure. Perritt refers to it informally as the "Information Superhighway" and he broadly defines it to include information conduits such as the Internet, the public switched telephone network, proprietary systems such as Westlaw and LEXIS, broadcast radio and television networks, movie theaters, and video rental stores; content producers such as book and newspaper publishers, television and film studios, and radio talk show hosts; and information finders and brokers such as critics, reviewers, libraries, and newsstands. *See* Henry H. PERRITT, LAW & THE INFORMATION SUPERHIGHWAY iii, 11 (1996) [hereinafter PERRITT, INFORMATION SUPERHIGHWAY]. When discussing the infrastructure in the context of government initiatives, the more formal terms "National Information Infrastructure" (NII) or "Global Information Infrastructure" (GII) are usually used; Perritt uses these terms interchangeably with "Information Superhighway." "Cyberspace" is a term used to describe information networks in general, but sometimes is used when specifically referring to the Internet.

5. *Compare* NICHOLAS NEGROPONTE, BEING DIGITAL (Vintage Books 1996) (1995) (a self-proclaimed optimist's view of the fascinating technological, commercial, social, and political effects of the Internet and the "digital revolution," as well as though-provoking predictions of what is yet to come) *with* CLIFFORD STOLL, SILICON SNAKE OIL (1995) (taking a skeptical view of the Internet, arguing that the truly fulfilling things in life are *real* experiences and relationships, while Internet experiences are superficial).

6. *See, e.g.*, JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY (1996).

7. For example, the invention of the printing press in the late 15th Century left English authors without effective copyright protection for their works until the *Statute of Anne* was passed nearly 200 years later, in 1710. *See* ROBERT A. GORMAN & JANE C. GINSBURG, COPYRIGHT FOR THE NINETIES 1-2 (1993). During the Industrial Revolution thousands of injured workers were left without sufficient recourse before negligence principles were

Thus, not surprisingly, the perceived changes produced by the proliferation of networks and digital technology have led several notable commentators to suggest that traditional legal paradigms are an uncomfortable fit in this new environment. For example, in *Being Digital*, Nicholas Negroponte describes the law, in its struggle to adapt to digital technologies, as "behaving like an almost dead fish flopping on the dock. It is gasping for air because the digital world is a different place."[8] Similarly, John Perry Barlow, noting the "problem of digitized property" and lack of physical boundaries in cyberspace, has compared our continued reliance on traditional legal models to "sailing into the future on a sinking ship . . . developed to convey forms and methods of expression entirely different from the vaporous cargo it is now being asked to carry."[9] Barlow argues that instead of trying to make the old legal models work through a "grotesque expansion" of existing laws or through the "brute force" application of these laws to the digital world, we "need to develop an entirely new set of methods as befits this entirely new set of circumstances."[10]

Are existing legal principles and paradigms truly insufficient to address the problems presented by the new information and communications technologies? Does a special body of law need to be carved out for online issues? In *Law and the Information Superhighway*, Henry Perritt attempts to answer these questions.[11] And from the outset his answer is clearly a resounding *"No!"*

Professor Perritt is eminently qualified to address the legal issues presented by new information technologies. Perritt has provided information law and policy guidance to the Clinton administration, the

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incorporated into tort law in the late 19th Century. *See* LAWRENCE M. FRIEDMAN, A HISTORY OF AMERICAN LAW (2d Ed. 1985). Over the course of the 19th Century, the proliferation of newspapers, and the invention of new technology such as the telegraph, telephone, and camera, enabled unprecedented "snooping" into people's lives, eventually leading to state-recognized rights of privacy by the end of that century. *See* Lawrence M. Friedman, *Looking Backward, Looking Forward: A Century of Legal Change*, 28 Ind. L. Rev. 259, 261-2 (1995); William H. Minor, *Identity Cards and Databases in Health Care: The Need for Federal Privacy Protections*, 28 COLUM. J.L. & SOC. PROBS. 253 (1995). Our first forays into sea and space challenged, and continue to challenge, our notion of law based on borders. *See generally* GLENN H. REYNOLDS & ROBERT P. MERGES, OUTER SPACE: PROBLEMS OF LAW AND POLICY 248-58 (1989); Robert P. Merges & Glenn H. Reynolds, *Toward a Computerized System for Negotiating Ocean Bills of Lading*, 6 J. L. & COMM. 23 (1986).

8. NEGROPONTE, *supra* note 5, at 237 (reacting to the case of Jake Baker, whom the government attempted to prosecute for posting a violent, fictitious story to a newsgroup on the Internet; *see* United States v. Baker, 890 F. Supp. 1375 (E.D. Mich. 1995)).

9. John Perry Barlow, *The Economy of Ideas*, WIRED, March 1994, at 85, 85. Barlow is Executive Chair of the Electronic Frontier Foundation, and presented the keynote luncheon address at the 1996 Berkeley Technology Law Journal symposium, *Digital Content: New Products and New Business Models*, Nov. 8-9, 1996.

10. *Id.*

11. PERRITT, INFORMATION SUPERHIGHWAY; HENRY H. PERRITT, LAW AND THE INFORMATION SUPERHIGHWAY (Supp. 1997) [hereinafter PERRITT, 1997 SUPPLEMENT].

European Commission and other international bodies, and the Board of Governors of the American Bar Association. He has been a professor of computer and information law at Villanova University School of Law for fifteen years, and is an instrumental figure in the Villanova Center for Information Law and Policy. The author of 11 books and more than 35 journal and law review articles, Perritt's works have been cited in more than 400 journal and law review articles and 30 cases.[12]

Perritt squarely acknowledges in the first chapter of *Law and the Information Superhighway* that the Information Superhighway presents several novel phenomena that call for thoughtful examination of existing legal paradigms.[13] However, he asserts that these phenomena are merely "interesting," not "revolutionary," and that we do not need to scrap the traditional legal doctrines developed in other contexts. What we need, according to Perritt, is "a clear understanding of the core legal principles . . . and a clear understanding of how the various NII [National Information Infrastructure] technologies actually work," so that we can properly adapt the existing doctrines to the NII.[14]

Perritt provides ample support for this position throughout his text, exhibiting a keen understanding of the underlying network technology as well as a thorough knowledge of traditional American and international legal principles. He addresses an extremely broad range of issues, many of which books of this sort often omit for the sake of manageability,[15] including criminal, regulatory, and international issues, as well as problems related to NII technologies other than the Internet, such as

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12. The majority of Perritt's articles have addressed federal information policy, electronic commerce, electronic property rights and liabilities, or problems of regulation and jurisdiction on the NII. *See, e.g.*, Henry H. Perritt, *Unbundling Value in Electronic Information Products: Intellectual Property Protection For Machine Readable Interfaces*, 20 RUTGERS COMPUTER & TECH. L.J. 415 (1994). He is also a notable scholar in the areas of employment and labor law. *See, e.g.*, Henry H. Perritt, *The Future of Wrongful Dismissal Claims: Where Does Employer Self Interest Lie?*, 58 U. CIN. L. REV. 431 (1989).

13. These new phenomena include: (1) the convergence of technologies which historically defined distinct legal categories (e.g. radio and wire), thereby collapsing the old categorical boundaries; (2) the convergence of communications and computing, which previously mapped a distinction between regulated and essentially unregulated activity; (3) the fading distinction between basic and enhanced communication services (significant in terms of regulation), and between "raw" content and "value-added" content (significant in the context of intellectual property); and (4) low barriers to entry in electronic markets and low transaction costs (collectively called "atomization"). *See* PERRITT, INFORMATION SUPERHIGHWAY at 27-30.

14. *Id.* at 30.

15. A significant number of excellent books on the subject of online legal issues have been written in the last three years, mirroring the growth and interest in the Internet itself. *See, e.g.*, JONATHAN ROSENOER, CYBERLAW: THE LAW OF THE INTERNET (1997); KENT D. STUCKEY ET AL., INTERNET AND ONLINE LAW (1996); ONLINE LAW: THE SPA'S LEGAL GUIDE TO DOING BUSINESS ON THE INTERNET (Thomas J. Smedinghoff ed., 1996); BOYLE, *supra* note 6; KATSH, *supra* note 1; TOWARD AN INFORMATION BILL OF RIGHTS AND RESPONSIBILITIES (Charles M. Firestone & Jorge Reina Schement eds., 1995); LANCE ROSE, NETLAW: YOUR RIGHTS IN THE ONLINE WORLD (1994); CAVAZOS & MORIN, *supra* note 1.

telephone and cable. Although the ambitious undertaking of analyzing the law over this wide range of topics limits his opportunity to provide detailed policy arguments in all of the areas, he effectively picks his spots, dropping suggestions where the law appears to him to be unclear or headed in the wrong direction.[16] His analysis of existing case law and the extension of the principles established therein to the online context are consistently sound, which creates a convincing case for the continued use of traditional paradigms and framework to address the legal problems on the Information Superhighway.

II. A TELLING METAPHOR

Perritt enlists the commonly used term "Information Superhighway" as a metaphor for the information infrastructure in order to emphasize his point that a new legal structure is unnecessary. He compares the Information Superhighway to the interstate highway system which, like its electronic counterpart, requires various rules to ensure continued order, safety, and utility for those who use it. He notes that on a physical highway, one must have rules establishing tolls for use of the highway (analogous to NII regulation policy); payment systems for bus rides and automobile rentals and purchases (E-commerce); and rules for determining who gets to use which lanes and when (NII access policy).[17] Likewise, the highway must have rules for allocating risk of loss for accidents (liability for harmful electronic communications); rules for assigning responsibility for fixing potholes (liability for information service failures); standards to ensure passable interconnections between roads (interoperability and standard setting); and safeguards to constrain police and others from unreasonable searches of vehicles (E-privacy).[18]

Perritt is not the first author to utilize linguistic devices such as metaphors and analogies to facilitate understanding of the online world. A description of an abstract, non-physical entity such as cyberspace (much like the description of abstract, non-physical emotions or experiences such as anger, love, or even the creative process of writing) often requires the use of familiar language based on known, tangible

16. For example, for the assignment of top-level domain names (TLDs) he proposes a private, international, self-regulatory scheme with specialized tribunals and the built-in sanction of refusing to recognize an email address or domain name, as an alternative to the present system in which Network Solutions, Inc. (NSI) administers TLDs in North America (including the popular ".com" domain) under contract with the National Science Foundation (Europe and Asia also have registries for other TLDs). *See* PERRITT, 1997 SUPPLEMENT at 50-53. *See generally* Daniel W. McDonald et al., *Intellectual Property and the Internet*, COMPUTER LAW., Dec. 1996, at 8, 13-14 (describing the domain name registration battle).

17. PERRITT, INFORMATION SUPERHIGHWAY at iii.

18. *Id.*

things discernible by the traditional five senses.[19] Thus, the cyberspace literature is rich with symbolism and comparisons to things common in real-world existence. For example, copyright law professor Paul Goldstein coined the term "Celestial Jukebox" to describe the satellite and fiber optic network that will deliver a nearly limitless selection of videos, movies, and texts to our desktop or living room.[20] In *Netlaw*, Lance Rose examined the effectiveness of various metaphors for the Internet, including "local bar," "wild west frontier," "supermarket," and "adult bookstore."[21] Some metaphors have even become an explicit part of the Internet language: for example, we can "surf" the World Wide "Web" (WWW), guided by Netscape "Navigator"™ software.[22]

While Perritt's use of the Information Superhighway metaphor is effective in calling immediate attention to his point that the development of the NII does necessitate drastic changes to the structure of the law, he wisely refrains from carrying the Superhighway metaphor too far. The mere fact that we can recognize similarities between the virtual world and something (like a highway) in the physical world does not mean prima facie that the same legal paradigms apply to both. Consequently, Perritt devotes adequate individual attention to each of the separate legal

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19. *See, e.g.*, Elizabeth Bishop, *At the Fishhouses*, *in* THE COMPLETE POEMS 64-66 (1983) (using a description of fishhouses at the water's edge as a multi-layered metaphor).

20. *See* PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: THE LAW AND LORE OF COPYRIGHT FROM GUTENBERG TO THE CELESTIAL JUKEBOX (1994). *See also* Robert Chow, Book Note, 10 HIGH TECH. L.J. 193 (1995) (reviewing GOLDSTEIN, *supra*).

21. ROSE, *supra* note 15. Rose contrasts the metaphors used in various contexts, including: "print publisher," "telephone service," "magazine distributor," "bookstore," and "local bar" (ch. 1); "shopping mall" and "toll road" (ch. 2); "wild west frontier" and "supermarket" (ch. 4); "postal service" and "private home" (ch. 5); "casino" (ch. 6); "dangerous gadget" (ch. 7); and "adult bookstore" and "singles bar" (ch. 8)). *Id.*

22. At least two recent works have specifically focused on the use of metaphors to describe the new information infrastructure. In his book *Internet Dreams*, Xerox PARC scientist Mark Stefik, recognizing that metaphors can have an impact on the legal and policy treatment of a technology, explored various metaphors for describing what the Internet is and will be. MARK STEFIK, INTERNET DREAMS: ARCHETYPES, MYTHS, AND METAPHORS (1996). Stefik suggests, as an alternative to the common "Information Superhighway" metaphor, four metaphors consistent with thousands of years of human history: digital library ("keeper of knowledge"), electronic mail ("communicator"), electronic marketplace ("trader"), and digital world ("adventurer"). *See id.* And in an essay reviewing recent books by Ethan Katsh and James Boyle, Pamela Samuelson discusses the efforts of the authors to discard metaphors of a declining era—print in Katsh's case and the romantic author in Boyle's case—and search for the emergence of new metaphors to better suit the information age. Pamela Samuelson, *The Quest for Enabling Metaphors for Law and Lawyering in the Information Age*, 94 MICH. L. REV. 2029 (1996) (reviewing KATSH, *supra* note 1; BOYLE, *supra* note 6). For other uses of symbolic language to describe cyberspace, see Barlow, *supra* note 9 (describing the law's attempt to carry on existing principles in the NII environment as a "sinking ship" on a rough sea, carrying "vaporous cargo"); Paul Gilster, THE INTERNET NAVIGATOR, xix (1993) (describing the Internet as a "frontier that has barely begun to be explored"). A more common example is the metaphor of "community," often used in the context of supporting an argument for self-regulation schemes online. *See, e.g.*, Henry H. Perritt, *Cyberspace Self Government: Town Hall Democracy or Rediscovered Royalism?* 12 BERKELEY TECH. L.J. (forthcoming Dec. 1997).

subjects,[23] to determine which legal paradigms are most appropriate for that subject in the online context, and which principles are best applied to resolve the problems presented.

III. NEW RULES OF THE ROAD?

Some online legal issues lend themselves fairly easily to traditional paradigms. For example, someone who uses a computer to gain unauthorized access to a bank's computer system, cracks the security codes with the help of software tools, and transfers funds to an account of his own is as easily characterized as a criminal as someone who breaks into the same bank at night, cracks open the safe with a crowbar, and steals printed money.[24] In other contexts, though, how existing legal principles provide tenable solutions to online problems is less clear.

In addition to resolving the more straightforward problems, Perritt offers some creative applications of existing principles in analyzing the more complex problems. Without attempting to force traditional legal paradigms where they do not fit in the online context, Perritt illustrates that even the seemingly troublesome online problems can be addressed effectively within the existing legal framework, staying faithful to his premise that creating new categories for NII issues is unnecessary. While it would be impractical to summarize his treatment of each of the many issues presented in the book, an examination of the following two particular areas provides a representative example of Perritt's legal and policy analysis: (1) access rights to public information and to online networks and facilities; and (2) private intellectual property rights.

A. Access to Public Information and Networks

Perritt considers the availability of access to public information to be a key to the development of the NII: "In order for the full potential of the NII as a conduit for public information to be realized . . . private sector electronic publishers and individual citizens must have access to basic governmental data collected by public entities, particularly including primary legal information."[25] He supports the extension of traditional Freedom of Information (FOI) doctrine into the online

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23. The book is divided into fourteen chapters, organized in survey format, addressing: how the NII technology works, access to networks, privacy, liability for communications, liability for service failure, Constitutional issues, regulation, interoperability, electronic commerce, intellectual property, public information, civil procedure, criminal law, and international law.

24. *Compare* Computer Fraud and Abuse Act, codified at 18 U.S.C. § 1030 (1991) (defining various computer crimes) *with* Cal. Penal Code § 484 (1995) (defining common theft).

25. PERRITT, INFORMATION SUPERHIGHWAY at 469-70.

environment, stressing two principles that he believes are essential to developing fair, effective information policy for the NII: first, if information is requested in electronic format rather than paper, it should be supplied electronically if available;[26] and second, the government should promote a diversity of channels and sources of public information (which necessarily coincides with principles of access to networks and facilities).[27] Although the copyright law,[28] the First Amendment,[29] and state freedom of information laws all provide some degree of protection for information access rights, Perritt believes that the most important source of that right is incorporated in Freedom of Information Acts (FOIAs),[30] thus he focuses his analysis on the application of FOI doctrine to the online environment.

Perritt's first principle of effective information policy is sound. Anyone who has used electronic information tools realizes the electronic format has significant search and retrieval advantages, saving the user time and money.[31] Thus, as a purely practical matter, supplying documents in paper form rather than electronically impairs public access to information. Perritt alertly recognizes that the inability to obtain electronic formats of information would present a problem for electronic publishers who wished to attach value-added features to the information and resell it, because electronic format greatly facilitates the addition of features like links and tags, and significantly lowers barriers to entry in the market.[32] He criticizes the position taken by those who claim that mandating electronic disclosure of public records to private publishers planning to resell the records for profit constitutes the use of public funds for private purposes. Perritt argues that:

> the mere fact that an individual or entity may obtain income from an activity that serves a public purpose does not negate the public

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26. This principle was recently incorporated into the Freedom of Information Act by amendment, after *Law and the Information Superhighway* was first published. *See* Electronic Freedom of Information Act Amendments of 1996, Pub. L. 104-231, 110 Stat. 3048 (amending Freedom of Information Act, 5 U.S.C. § 552 (1994)). The amendments are discussed in Perritt's 1997 Supplement. *See* PERRITT, 1997 SUPPLEMENT, *supra* note 11, at 75.

27. PERRITT, INFORMATION SUPERHIGHWAY at 473.

28. Factual information is not copyrightable because it does not meet the originality requirement of section 102 of the 1976 Copyright Act. *See* 17 U.S.C. § 102 (1996); Feist Publications v. Rural Tel. Serv. Co., 499 U.S. 340 (1991).

29. The First Amendment has been held to limit direct restrictions on access to electronic forms of information. *See* Legi-Tech, Inc. v. Keiper, 766 F.2d 728 (2d Cir. 1985) (restrictions on plaintiff's access to electronic legislative database amounted to censorship, since the same restrictions did not apply to individual citizens and the state's preferred publisher); U.S. CONST. amend. I.

30. *See, e.g.*, Freedom of Information Act, *supra* note 26.

31. An instructive example is using the search tools to find legislative history for a statute on the THOMAS database online, compared with searching the various print versions of legislative history sources. *See* Library of Congress, *THOMAS* <http://thomas.loc.gov>.

32. PERRITT, INFORMATION SUPERHIGWAY at 495-496.

> nature of the activity. When a commercial publisher disseminates public information, it is serving a public purpose, the same purpose that is the central justification for enactment of the Freedom of Information statutes: increasing access to government information.[33]

Providing public electronic records to private publishers for resale does, however, present some interesting problems of ownership and property protection. Raw public information such as judicial opinions, the text of statutes, basic land records, and agency rules are not copyrightable.[34] Thus, pirates could extract the publicly supplied information (omitting the value-added features such as tags, links, and headers) from the private publisher's product and reuse it in competition with the publisher, incurring neither the publisher's cost of assembling the product nor liability for copyright infringement. Of course, this problem is nothing new, as it appeared in the context of paper records more than a century ago. In the 1834 case of *Wheaton v. Peters*, the Supreme Court confirmed the right of competing reporters to publish the text of its opinions.[35] The problem is even more significant in the electronic medium, which greatly facilitates the "lifting" or extracting of such unprotected content from a publisher's product.[36]

Perritt suggests several strategies that private publishers can use to protect their investments, without necessitating the reach of copyright into material belonging in the public domain. Publishers could design the product to make effective pirating difficult by using fine "granularity of information" (dividing content into many small parts to make it difficult for each individual element to be extracted and reassembled by a pirate) or utilizing a "planned obsolescence" strategy (providing frequent updates to the product and thus rendering older material worthless).[37] Creative legal solutions are also possible. Perritt suggests that publishers brand electronic information products with trademarks, which prevent competitors from appropriating the name and goodwill built up by the

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33. *Id.* at 481.

34. *See* Feist Publications v. Rural Tel. Serv. Co., 499 U.S. 340 (1991) (holding that originality in selection and arrangement is necessary in order for a factual compilation to be copyrightable).

35. 33 U.S. (8 Pet.) 591 (1834).

36. For example, on the World Wide Web, an "IMG" link on a web page instructs the browser to supplement the text on that page with an image contained in a separate file (on another web page). The result can be the presentation of content from one page within the "frame" of a completely different page, with the user never seeing the original source of the content. At least two plaintiffs have claimed to be the victim of some type of misappropration or infringement using IMG links. *See* The Shetland Times, Ltd. v. Dr. Jonathan Wills and ZetNews, Ltd., Sess. Cas. (Oct. 24, 1996) (visited May 2, 1997) <http://www.shetland-news.co.uk/opinion.html>; The Washington Post Co. v. Total News, Inc., No. 97-1190 (S.D.N.Y., filed Feb. 20, 1997) (visited May 2, 1997) <http://www.ljx.com/Internet/complain.html>.

37. *See* PERRITT, INFORMATION SUPERHIGHWAY at 497.

trademark owner.[38] This is an excellent suggestion, because it is difficult to effectively protect digital works, particularly works encompassing some degree of public, non-copyrightable information, solely by copyright law.[39] Also, trademark infringement is sometimes easier to prove than other theories of misappropriation or infringement, as illustrated by several recent cases.[40]

In addition to providing some degree of protection for the information products of private publishers, Perritt indicates that trademarks can be used by public entities which directly supply information:

> [C]onceivably, a local government could obtain a trademark for the 'official version' of a land records database and deny use of the trademark to unofficial sources. This form of intellectual property permits public agencies to reduce risks of poor quality information that might endanger the public, while also permitting a diversity of channels and sources to exist.[41]

Perritt's second principle of effective information policy—promoting diversity of channels and sources—is also sound. He observes that

> The need for a diversity of sources and channels of information . . . is based on the reality that no one supplier can design modern information products to suit the needs of all users. The diversity principle is inimical to any state-maintained or state-granted monopoly over public information.[42]

Perritt notes that the present architecture of the infrastructure provides for a wide variety of channels and conduits for information, in the form of various choices of service providers to access the network[43] and a huge

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38. *See* Trademark Act of 1946 ("Lanham Act"), codified as amended at 15 U.S.C. §§ 1051-1128 (1994).

39. *See, e.g.*, Feist Publications v. Rural Tel. Serv. Co., 499 U.S. 340 (1991); *but see* West Publishing Co. v. Mead Data Central, Inc., 799 F.2d 1219 (8th Cir. 1986) (star pagination used in Westlaw to correspond with pagination in West's official reporters cannot be used in Mead's LEXIS database).

40. *See* Playboy Enters., Inc. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993) *and* Sega Enters., Ltd. v. MAPHIA, 948 F. Supp. 923 (N.D. Cal. 1996) (both finding trademark infringement based on Plaintiff's trademark/logo being displayed on the user's screen when the computer file is downloaded and run).

41. PERRITT, INFORMATION SUPERHIGHWAY at 488. Perritt cites the examples of "Smokey Bear" and the figure of an eagle above the letters "U.S." as government-owned trademarks. *See id.*

42. *Id.* at 474.

43. Searches using Lycos and Yahoo yield hundreds of ISPs in the United States. *See, e.g., Yahoo!* (visited May 2, 1997) <http://www.yahoo.com>. Access to the telephone system is available from a variety of phone companies, especially under access provisions of the Telecommunications Act of 1996, Pub. L. 104-104, 110 Stat. 56 (amending 47 U.S.C. § 153, 251-252 (1996)). Cable providers tend to have a monopoly in their area of operation, but they are closely regulated in order to preserve access rights. *See, e.g.*, Cable Communications Policy Act, 47 U.S.C.A. §§ 521-559 (West Supp. 1995); Turner Broadcasting Sys., Inc. v. FCC, 117 S. Ct. 1174 (1997) (upholding "must-carry" provisions of the Cable Television Consumer Protection and Competition Act, 47 U.S.C.A. §§ 534-535 (1992)). *See generally* Brent K. Yamashita, Building the National Information

network of cables and wires providing a wide range of paths between any two points.[44] However, in concluding that this architecture likely precludes the development of diversity of access problems, Perritt overlooks one significant bottleneck to network access and use of online services, the potential problems this bottleneck presents, and the possible role of antitrust law in addressing this problem.[45]

Perritt devotes substantial analysis to the relationships and markets of World Wide Web content providers and Internet Service Providers (ISPs),[46] and concludes that the wide variety of access points and paths of information flow likely precludes any online market from being characterized under antitrust law as an essential facility and, furthermore, appears to prevent the need for antitrust intervention to ensure competition in online markets.[47] However, he appears to have missed the importance of the final physical "link" in the "chain" of information flow across the network from content provider to consumer: the user's desktop personal computer (PC) and modem.

Web browser software such as Microsoft™ Internet Explorer™ and Netscape Navigator™, running on top of the OS, currently provides the interface between the user and network. However, many industry observers agree that browser software and OS software are on an inevitable crash course—they will soon become one and the same.[48] Netscape Navigator, for example, already has the capability of running "add-on" applications,[49] much like an OS runs application programs. The potential problem, then, is that one company (Microsoft Corp.) already has a virtual monopoly on the OS market,[50] leading one to believe

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Infrastructure: An Agenda for Action (1994) (unpublished A.B. thesis, Princeton University) (on file with author).

44. *See* PERRITT, INFORMATION SUPERHIGHWAY at 465-71.

45. Perritt does suggest the possibilities of taking property by eminent domain or instituting partial condemnation of intellectual property rights in order to force access if necessary, citing the examples of patents for encryption algorithms, or a sudden assertion of copyright in a fundamental protocal such as TCP/IP. *See* PERRITT, INFORMATION SUPERHIGHWAY at 293. Arguably, the same principle could be applied to proprietary operating system software.

46. *See id.* at 64-74 (comparing, for example, the cable network/cable channel relationship as discussed in Futurevision Cable Systems, Inc. v. MultiVision Cable TV Corp., 789 F. Supp. 760 (S.D. Miss. 1992) with the Internet content provider/network service provider relationship).

47. *See id.* at 70-71. Under antitrust law, an essential facility is something that (1) is essential to the antitrust plaintiff's competitive survival; (2) cannot practically be duplicated; and (3) can be used by the plaintiff without interference with the defendant's use. *See* Hecht v. Pro-Football, Inc., 570 F.2d 982 (D.C. Cir. 1977); United States v. AT&T, 552 F.Supp. 131 (D.D.C. 1982) (holding that AT&T is required to share access to the local telephone networks with other long distance providers).

48. *See, e.g.*, STUCKEY, *supra* note 15, at xx-xxi.

49. For example, application programs called "applets" can be written for Netscape Navigator, adding special capabilities to the browser.

50. 80% of the world's PCs presently use a Microsoft operating system. *See* STUCKEY, *supra* note 15, at xxi.

that it is quite possible they could soon control the user's complete software interface with the web.[51]

A monopoly in the area of desktop web interface software (which, for the sake of simplicity will be referred to as OS software) could have several detrimental effects on access to public information, as well as chilling effects on the free speech rights of content providers and consumers. First, it could limit the variety of forms in which a user may receive information. The variety of available value-added features which Perritt considers so important could significantly decline in the event of a monopoly OS, because any feature not supported by that OS would not likely be developed by content providers. Second, the bottleneck at the desktop could be used by the producer of the monopoly OS to regulate the actual substance of information users are able to receive, the ease or difficulty with which it can be retrieved, and the speed with which it is accessible. In other words, the OS can be designed so that the content produced by sources favored by the OS producer—probably as part of a financial arrangement between the parties—appears more attractive, or has additional features, or is accessed faster than the content of another source.[52] Not only is this harmful for public information policy in that it limits diversity of sources and channels, it also allows the OS producer to filter out specific kinds of information, giving it the power of "virtual censorship." Likewise, the OS producer could design the system to favor certain ISPs over others, thereby limiting the users' practical access to the physical network.[53]

There are several theories under which antitrust law could help address the problem. First, section 2 of the Sherman Act could be applied to prevent a dominant OS producer from tying other information products or services to the sale of the OS, or engaging in other anticompetitive practices.[54] Presently, this theory would help to preserve competition in the market for web browsers, thereby allowing competing browsers to develop into viable competing OSs for the future. Second, vertical relationships between OSs and content providers or ISPs should be scrutinized carefully under section 1 of the Sherman Act, in order to prevent certain content providers or ISPs from gaining a favored status

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51. *See id.*; Gary L. Reback et al., *Why Microsoft Must Be Stopped*, UPSIDE, Feb. 1995, at 52.

52. *See* Reback, *supra* note 51.

53. *See* STUCKEY, *supra* note 15, at xxiii ("Microsoft's virtual operating system monopoly, control of this interface, and interest in competing in the online services market threaten to interfere with the continued unfettered formation of robust competitive markets offering a diverse array of access and service providers.").

54. *See* 15 U.S.C. § 2 (1996); United States v. Microsoft Corp., 56 F.3d 1448 (D.C. Cir. 1995) (consent decree prohibiting Microsoft from engaging in certain restrictive actions, such as pricing with minimum commitments).

with the OS producer.[55] Potential mergers and acquisitions of firms in other network or computing markets by the OS producer should likewise be closely scrutinized under the Sherman and Clayton Acts.[56] Finally, some lawyers and economists view online markets as natural monopolies, which means that the existence of one dominant OS is actually the most market-efficient scenario.[57] In that case, viewing the operating system as a bottleneck to the network, the essential facilities doctrine could be applied to ensure that all content providers have the ability to send information to users without any filtering mechanisms, or discrimination at the OS level as to how fast the file is received or the way it is displayed.[58] This would alleviate potential access policy problems as well as Constitutional problems.

Thus, in light of the foregoing, it seems as if antitrust law may have a more important role in access problems than Perritt realizes, and the application of the existing antitrust doctrine to a non-physical "bottleneck" like a software interface is not really analogous to the physical examples he cites. Nevertheless, his premise that existing legal principles are sufficient to address NII problems still holds true in the area of public information and network access.

B. Protection of Intellectual Property Online

Digital technology and networks create a myriad of problems for the protection of intellectual property. The many levels of expression in computer programs, which can possess literary qualities,[59] artistic

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55. *See* 15 U.S.C. § 1 (1996). Traditionally, though, under both the Sherman Act and the Clayton Act, "rule of reason" rather than "per se" analysis is applied to vertical relationships. *See, e.g.*, Continental T.V., Inc. v. GTE Sylvania, Inc., 433 U.S. 36 (1977); *see also* Clayton Act, 15 U.S.C. § 12-26 (1996).

56. *See* Clayton Act, *supra* note 55. When a monopolist in one market enters a related market, it often has the ability to leverage its monopoly so as to drive out competing firms in the newly entered market, and if one firm were to gain a dominant position at more than one level of the network environment, access and censorship problems would be a legitimate concern. *See, e.g.*, In the Matter of Policy and Rule Concerning Rates for Dominant Carriers, 4 FCC Rcd 2873 (1989) (acknowledging the economic power of dominant carriers to extend their control to other markets). For example, there is evidence that Microsoft has attempted to leverage its near-monopoly in the OS market to improve the position of its Internet Explorer in the browser market. *See* Reback et. al, *supra* note 51 (claiming that Microsoft is attempting to use leveraging power in the OS market in order to control the bottleneck at *both* ends of the network—desktop and server—and antitrust action is merited). For the view that antitrust law should be applied more cautiously to standard-driven markets like Internet software markets, see Mark A. Lemley, *Antitrust and the Internet Standardization Problem*, 28 Conn. Law Rev. 1041 (1996).

57. *See* Lemley, *supra* note 56.

58. *See, e.g.*, United States v. American Tel. & Tel. Co., 524 F. Supp. 1336 (D.D.C. 1981) (essential facilities doctrine could be a basis for initial restructuring of the voice telephone system).

59. Both the source code (human readable programming language such as FORTRAN or C) and the object code (the machine-readable binary code) are eligible for copyright protection as literary works, but this scope of protection (limited to literal copying) is quite

qualities,[60] and functional qualities,[61] make it difficult to ascertain the appropriate scope of protection for programs, particularly copyright protection. Unique problems for intellectual property are also presented by characteristics of digital networks, such as the ability to make perfect copies and to do so in potentially unlimited numbers, the ability to instantaneously transmit copies of digital works to any number of users (and the uncertainty as to whether such a transmission satisfies the "fixation in a tangible medium" requirement for establishing copyright),[62] and the caching of files downloaded from remote sites.

Perritt recognizes the importance of protecting intellectual property, and the gravity of the piracy problem on the Internet: "The NII can realize its potential only if it protects private property and makes it possible to offer something for sale or license in open networks like the Internet without it being misappropriated by a competitor."[63] Consistent with his oft-stated premise, though, he believes that the combination of existing legal, technological, and business schemes can adequately protect property interests online, while properly balancing such private interests with the public domain.

Much literature is addressed to the problem of intellectual property protection in cyberspace. The approaches taken can be put into three general categories: (1) arguments for the creation of entirely new regime(s) to protect software or digitized property (sui generis approach); (2) arguments for rewriting the copyright laws to make them fit the digital environment; and (3) arguments for a more conservative approach, based on existing legal principles and on the promise of technology to help address the problems it created. Several notable authors have favored the first category. In *A Manifesto Concerning the Legal Protection of Computer Programs*, Pamela Samuelson, Randall Davis, Mitchell Kapor, and J.H. Reichman argue that the unique properties of computer software—including the observation that they "behave"—make software expensive to develop and easy to imitate, an ill-suited combination for protection under traditional intellectual property regimes such as patent

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narrow given that it is usually possible to vary the programming of a computer in order to obtain the same end result. *See* 17 U.S.C. § 101 (1996).

60. Artistic elements that a program displays or plays, such as graphics or music, are eligible for copyright protection or trademark protection. *See* 17 U.S.C. § 102 (1996).

61. Functional qualities of software can be protected by patent law. *See* 35 U.S.C. § 101 (1996); Examination Guidelines for Computer Related Inventions, 51 PATENT, TRADEMARK, & COPYRIGHT J. 422 (1995).

62. *See* U.S. DEP'T OF COMMERCE, INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995) [hereinafter NII WHITE PAPER].

63. PERRITT, INFORMATION SUPERHIGHWAY at 416.

and copyright.[64] They argue that the use of traditional regimes will lead to cycles of overprotection or underprotection of software, and outline the general principles of a sui generis, market-based approach that features a three-year "blockage period" for software clones, during which development but not distribution would be allowed.[65] In a separate article, Reichman proposes another hybrid regime loosely based on antitrust and trade secret (but not property) principles that is designed to give innovators adequate lead time to recover their investment, while allowing others to build socially desirable derivatives of the innovation.[66]

The Clinton Administration's Information Infrastructure Task Force, led by the Patent and Trademark Office (PTO) Commissioner Bruce Lehman, favors the second category. In *The Report of the Working Group on Intellectual Property Rights* (commonly referred to as the "NII White Paper"), the Working Group outlines several proposals for revising copyright law for the digital age, including provisions clarifying that transmission of a copyrighted work is the exclusive right of a copyright holder, imposing liability on service providers for copyright infringement perpetrated via their system, and prohibiting the unauthorized removal or alteration of copyright management information.[67] Some of the proposals have already been enacted into law, such as the right of performance in digital works.[68]

Professor Perritt, on the other hand, favors the conservative approach of the third category. He exclaims:

> [M]uch of the concern about protecting intellectual property through new statutes and elaborate encryption structures is overblown. As with other threats to property and personal interests through the NII, a combination of existing law and effective entrepreneurial mobilization of the particular attributes of new technologies should suffice to strike a reasonable balance between competing interests.[69]

For example, Perritt states that the problem of determining the copyrightable elements of a computer program is adequately addressed by the "filtration method" used by the court in *Computer Associates Int'l,*

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64. Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Compuer Programs*, 94 COLUM. L. REV. 2308 (1994) [hereinafter Samuelson et al., *Manifesto*].

65. *Id.*

66. J.H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 COLUM. LAW REV. 2432 (1994) [hereinafter Reichman, *Legal Hybrids*]. *See also*, J.H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data?*, 50 VANDERBILT L. REV. 51 (1997) (proposing a hybrid protection scheme for databases, but a more narrow scheme than the sui generis proposals in the United States and Europe).

67. NII WHITE PAPER, *supra* note 62, at 114-23, 213-24, 230-35.

68. *See id.* at 221-25; Digital Performance Right in Sound Recordings Act, Pub. L. 104-39, 109 Stat. 336 (1995).

69. PERRITT, INFORMATION SUPERHIGHWAY at 464.

Inc. v. Altai, Inc.[70] The filtration approach becomes difficult to apply, however, when a product becomes so successful in the marketplace that competitors can succeed only by copying certain of its features.[71] Perritt therefore suggests that when standard intellectual property doctrines seem to fail or create confusion in the digital environment, innovators can use "alternative protection methods" based on *existing legal, entrepreneurial, and technological principles* to protect their intellectual property.[72]

For example, the non-copyrightable elements of a compilation such as a database can be protected by contract law, in the form of shrinkwrap licenses. The Seventh Circuit recently upheld the enforceability of such licenses in *ProCD v. Zeidenberg*.[73] On the web, shrinkwrap licenses (called "point-and-click," "click-on," or "click-through" licenses in that medium) arguably would have even greater enforceability, since the web site can force the user's browser to display a license before entering the site, requiring the user to take the affirmative action of clicking on a link indicating consent to the license terms.[74] Perritt also suggests a "reverse passing off" theory for protection of non-copyrightable, sweat-of-the brow digital works that could otherwise be misappropriated by pirates,[75] and he notes that content providers can use business strategies such as planned obsolescence, fine granularity of information, and marking and tagging to increase practical protection for digital works.[76] In addition, technology such as encryption and

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70. 982 F.2d 693 (2d Cir. 1992). This test is based on the abstraction-filtration-comparison test set forth by Judge Learned Hand over 60 years ago. *See* Nicholas v. Universal Pictures Corp., 45 F.2d 119 (2d Cir. 1930).

71. *See, e.g.*, Lotus Dev. Corp. v. Borland Int'l Corp., 49 F.3d 807 (1st Cir. 1995) *aff'd per curiam* 116 S. Ct. 804 (1996).

72. *See* PERRITT, INFORMATION SUPERHIGHWAY at 458-59 (Table 10-1: Protecting Intellectual Property Without Copyright).

73. 86 F.3d 1447 (7th Cir. 1996). *Compare* Maureen O'Rourke, *Copyright Preemption After the ProCD Case: A Market-Based Approach*, 12 BERKELEY TECH. L.J. 53 (1997) (favoring the supplementation of copyright law by contract law in digital content licensing arrangements) *with* Niva Elkin-Koren, *Copyright Policy and the Limits of Freedom of Contract*, 12 BERKELEY TECH. L.J. 93 (1997) (arguing that copyright law still has an important role in the licensing of digital content).

74. The terms of the shrinkwrap license in *ProCD* were not visible until after the purchaser broke the seal of the package. However the court reasoned that the license should still be upheld because the user could return the product for a refund if he did not consent to the terms. The court also noted that the license agreement was displayed every time the user ran the software, preventing the user from proceeding without accepting the terms of the license. *Id. See also* UCC Proposed Article 2B-308 Mass Market Licenses (May 3, 1996 Draft).

75. *See* PERRITT, INFORMATION SUPERHIGHWAY at 442-445. *See also* Waldman Publishing Corp. v. Landoll, Inc., 43 F.3d 775 (2d Cir. 1994) (finding that the "substantial similarity" standard used to show copyright infringement can also be used for non-copyrightable works to show reverse passing off).

76. These principles are discussed more fully in Part III.A, *supra*. *See also* PERRITT, INFORMATION SUPERHIGHWAY at 458-464.

password protection will become more effective as appropriate mechanisms are developed for their use, and trademark law will play a much greater role in the protection of works displayed by a computer, since product branding can effectively show the source of a product.[77] Thus, Perritt argues, digital property rights can be protected in many ways without creating new legal doctrines.

Of the three approaches discussed, Perritt's approach is the wisest course of action, at least for the present time. The sui generis approach is attractive on some fundamental level because it attacks the problem head-on, taking a fresh look at the problems presented by digital technology and the market structures affecting incentives to produce intellectual property in the digital era. Arguably, such a fresh look will result in the most fair and efficient rules for protection. However, resorting to a sui generis approach creates the danger of an intellectual property regime consisting more of special rules for various technologies than general rules. Various pockets of specialized law have already been carved out for plants,[78] semiconductor chips,[79] and pharmaceuticals.[80] As more and more technologies are added to the fray, such a regime may rapidly become cumbersome and impractical to work with. There likely will be technologies which straddle the line between special categories, and lawyers and courts will struggle to characterize whether a technology is more like prior technology A or prior technology B, instead of focusing on specific intellectual property doctrine. More importantly, though, the time has not yet arrived to implement a sui generis approach. Technology is just beginning to address the problem it has created, and technical solutions such as encryption and trusted systems may prove to hold an adequate solution for the easy pirating of digital products.[81] Once new legal regimes are created, they are quite difficult to "undo." The approach suggested by Perritt lends itself to a continued surveillance of the issue so that, for example, the technological protection capabilities that are currently in testing and development stages in the laboratory[82] will have the opportunity to be tested in the marketplace, where their strengths and weaknesses will be more readily apparent. If market failure

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77. *See id.*

78. *See* Plant Variety Protection Act, 7 U.S.C. §§ 1611, 2321-2582 (1994).

79. *See* Semiconductor Chip Protection Act of 1984, 17 U.S.C. §§ 901-914 (1994).

80. *See* Orphan Drug Act, Pub. L. 97-414, 96 Stat. 2049 (amending scattered sections of 21 U.S.C., 26 U.S.C., 35 U.S.C., and 42 U.S.C. (1994)).

81. *See* Mark Stefik, *Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 BERKELEY TECH. L.J. 137 (1997).

82. For example, one of the technologies being developed is the "trusted printer," which can automatically log a billing transaction every time a document is printed, embed hidden watermarks in the document to foil would-be counterfeiters, and understand and obey "digital rights" language which serves as a catalog of a user's rights in that document. *See id.* at 139-44.

is evident (i.e. if holes in the protection scheme continue to create a disincentive for creative and inventive works to be produced), then the more drastic measure of crafting a new regime can be undertaken.

Perritt's approach is also preferable to that suggested in the second category (a revision, expansion, and in some cases reinterpretation of the copyright law as suggested by the Working Group). The implicit difficulty in relying heavily on copyright law[83] to solve the problem of pirating is doing so without also encroaching on the public's fair use rights. Collectively, the proposals set forth in the NII White Paper do not overcome this difficulty. For example, the Working Group's proposals for an exclusive "transmission right" and interpretation of a temporary RAM copy to be a "copy" for copyright purposes seem to signal the end of the "first sale doctrine" as applied to digitally transmitted documents.[84] The first sale doctrine normally gives a user who lawfully purchases a copy the right to sell or dispose of that particular copy as he wishes, without liability for copyright infringement.[85] However, under the Working Group's proposal, forwarding your copy of an electronic file to a friend would be an infringement in two ways: the transmission itself would be unlawful, and the temporary copy created in RAM on your computer would also be an unlawful copy. The Working Group also supports the expansion of copyright law to impose strict liability on ISPs for acts of infringement committed by its users,[86] and the outlawing of decryption technology that may have substantial noninfringing uses.[87] Again, these policies place unnecessary burdens on the public where none should rightfully exist.

Perritt's approach, on the other hand, balances the public interest with the rights of property owners. He urges that caching should not be considered an infringement for copyright purposes, and in the alternative, fair use should clearly apply.[88] He also notes that the defense of an

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83. The Working Group dismisses patent, trademark, and trade secret doctrines as needing no revision at the present time. *See* NII WHITE PAPER, *supra* note 62, at 236-37.

84. *See id.* at 28, 213-21. *See also*, Pamela Samuelson, *The Copyright Grab*, WIRED, Jan. 1996, at 134.

85. *See* 17 U.S.C. § 109 (1996).

86. *Compare* Religious Technology Center v. Netcom On-line Communications Services, 907 F. Supp. 1361 (1995) (ISPs cannot be held strictly liable for the actions of their users) *with* NII WHITE PAPER, *supra* note 62, at 114-23 (stating the current law as imposing strict liability on ISPs for the actions of their users). *See also* Giorgio Bovenzi, *Liabilities of System Operators on the Internet*, 11 BERKELEY TECH. L.J. 93 (1996) (considering potential theories of imposing liability on service providers and system operators for the actions of their system's users).

87. This policy is contrary to the Supreme Court's holding in *Sony Corp. v. Universal Studios, Inc.* 464 U.S. 417 (1984) (copyright owners cannot stop distribution of technology which has substantial noninfringing uses). *See also* Julie Cohen, *Some Reflections on Copyright Management Systems and Laws Designed to Protect Them*, 12 BERKELEY TECH. L.J. 161 (1997).

implied license could be utilized in the online scenario. If a content provider puts material on the World Wide Web, he is granting an implied license for the file to be cached, since it can only be viewed using web browser software, which creates cached copies of the files it accesses. As a final protection of the public domain, Perritt suggests that the "copyright misuse" doctrine, recently recognized by the 5th Circuit, can prevent copyright owners from usurping the fair use privileges of the public.[89]

Thus, in the vigorously debated area of online intellectual property, Perritt presents a sound argument that existing legal principles, business strategies, and developing technology strike the most appropriate balance between the rights of intellectual property owners and the rights of the public. Thus, once again, he shows that our traditional legal framework need not be discarded in evaluating online issues.

IV. CONCLUSION

It is perhaps a paradox that, while Perritt insists that the legal issues presented by the NII are not new issues requiring special legal treatment, he has written this book on the subject generically called "Cyberlaw" or "Online Law." The grouping of cyberspace issues together in a single book may lead casual observers to believe that the author has made such a categorization for the purposes of establishing a distinct body of law for this technology. Perritt, of course, clearly intended quite the opposite effect and, as discussed above, his cogent analysis amply supports that position.

Law and the Information Superhighway may also be viewed as a paradox because, while it addresses a medium in which instant access to information and fast-paced change are obvious qualities, the book is published in slow-to-deliver and cumbersome-to-update paper form, rather than electronically. Thus, although the book will be supplemented annually via pocket parts,[90] it will consistently lag behind in this rapidly changing field. One alternative would be to publish the book in digital form, with supplements available online from the publisher, which would

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88. *See* PERRITT, INFORMATION SUPERHIGHWAY at 436. One exception Perritt notes, however, is that limitations should be placed on how cached copies may be used. For example, America Online should not be able to cache copies of a web site which requires a fee to access, and then allow subsequent users to access its cached version for free. *Id.*

89. *See* PERRITT, 1997 SUPPLEMENT, *supra* note 11, at 58; *see also* DSC Communications Corp. v. DGI Technologies, Inc., 81 F.3d 597 (5th Cir. 1996) (affirming district court's refusal to enjoin the booting up of allegedly infringing telephone switch microprocessor cards, based on copyright misuse defense).

90. The book's initial publication date was January 5, 1996, and the first pocket part supplement (the substance of which was incorporated in this review), which totalled over 100 pages, was released on December 13, 1996.

allow the seamless integration of supplements with the original text.[91] However, no matter how often the author or publisher updates a book on the subject of the Information Superhighway, whether in paper or digital form, the book will never keep up with the almost-daily developments in this field. Thus, perhaps the task of reporting on these daily changes is best left to web sites such as that of the author's own Center for Information Law and Policy.[92] Certainly plenty of sources of information are available online, most of them for free.[93]

In the face of Professor Perritt's thorough treatment of NII legal history and case law, and convincing comparisons of NII issues to analogous legal problems in other, traditional contexts, any potential paradoxes presented by the book are mere sidebars which do little to distract the reader's attention. *Law and the Information Superhighway* is a comprehensive, accurate, and insightful survey of the application of law to the developing information infrastructure, and is a welcome addition to the growing body of literature in this field. Its broad coverage of *all* of the converging communications technologies, not only the Internet, make it a unique and valuable roadmap of the law for any lawyer or non-lawyer who may venture onto the Information Superhighway. Whether Perritt is correct in his view that existing legal categories and paradigms are adequate to resolve the problems presented by the development of the information infrastructure remains to be seen, but his clear presentation of the issues in *Law and the Information Superhighway* will remain useful no matter what unpredictable turns technology and the law may take.

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91. Several software companies offer this option for purchasers of their CD-ROM products that require updates (for example, movie review products). *See, e.g. Microsoft Cinemania™ Updates* (visited Feb. 1, 1997) <http://www.msn.com/cinemania>.

92. *See Villanova Center for Information Law and Policy* (visited April 2, 1997) <http://www.law.vill.edu>.

93. For a "point of entrance" to the virtual library of legal information available online, see *Berkeley Technology Law Journal* (visited May 8, 1997) <http://server.berkeley.edu/BTLJ>.