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Column

Intellectual Property Regimes for the Information Age: Policies of the United States, the European Union and the World Intellectual Property Organization

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Intellectual Property Regimes for the Information Age: Policies of the United States, the European Union and the World Intellectual Property Organization†

Ron Reiling*

I. Introduction

1. Nicholas Negroponte, Director of MIT's Media Lab,[1] describes the transformation to the Information Age best in *Being Digital:* the intra-global economy is shifting from "atoms" to "bits."[2] For a large segment of the intra-global economy, the creation and distribution of products will change from assembling and moving physical goods, such as books or CD-ROMs, to assembling and moving intellectual assets, or digital bits.

2. The information age infrastructure will facilitate the creation of a huge marketplace of licensing opportunities. With the shift from atoms to bits, the intellectual property regimes will become even more important in the 21st century. Intellectual property laws are the mechanism for converting humankind's ideas into intellectual assets that can be licensed in the vast new intra-global marketplace.

3. The United States, the European Union and the World Intellectual Property Organization ("WIPO")[3] are all in the process of laying a new groundwork of

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1 For more information on MIT's Media Laboratory, see *Media Laboratory* (visited Mar. 24, 1997) <http://www.media.mit.edu/>.

2 NICHOLAS NEGROPONTE, BEING DIGITAL 4 (1995).

3 For more information on WIPO, see *WIPO home page* (visited Mar. 23, 1997) <http://www.wipo.org>.

intellectual property concepts for the digital economy. This Column examines the emerging rules of the road for intellectual property in the information age by comparing and contrasting the intellectual property regimes proposed in the United States ("U.S.") White Paper[4] and other U.S. legislation, the European Union ("E.U.") Green Paper[5] and other European Community ("E.C.") directives, and the recent WIPO Geneva Conference Treaties.[6] These efforts attempt to lay the groundwork for a digital update of the intellectual property laws applicable to the information age.

4. The Clinton Administration created the Information Infrastructure Task Force in 1993 to articulate and implement the Administration's vision for the information age.[7] The task force formed a Working Group that examined the intellectual property implications of the information age, and made recommendations on appropriate changes to U.S. intellectual property laws.[8] The Working Group published the U.S. White Paper in September, 1995, and parts of it have been introduced as legislation.[9] The White Paper concludes that the existing patent and trademark laws can function in the environment of the information age without any significant amendments.[10] Furthermore, it finds that the "Copyright Act is fundamentally adequate and effective" for the information age.[11] Therefore, the Working Group recommends amending the Copyright Act in only a few areas: transmission of copies, public performance rights for sound recordings, library exceptions, reproduction for the visually impaired, criminal offenses, technological protection, and copyright management information.[12]

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4 INFORMATION INFRASTRUCTURE TASK FORCE, THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS: INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE (1995) [hereinafter WHITE PAPER].

5 *The EU Green Paper: Copyright and Related Rights in the Information Society*, E.U. Doc. COM (95) 0382 final (Oct. 31, 1995), (visited Nov. 19, 1996) <http://gnew.gn.apc.org/media/eugp.html> [hereinafter *Green Paper*].

6 *See Draft Treaty on Certain Questions Concerning the Protection of Literary and Artistic Works,* WIPO Doc. CRNR/DC/4 (Aug. 30, 1996) [hereinafter *Draft Literary and Artistic Works Treaty*].

7 *See About the President's IITF* (visited Nov. 19, 1996) <http://www.iitf.nist.gov/about.html>.

8 *See id.*

9 *See* H.R. 2441, 104th Cong. (1995); S. 1284, 104th Cong. (1995).

10 *See* WHITE PAPER, *supra* note 4, at 236-37.

11 *See id.* at 212.

12 *See id.* at 213-36.

5. The European Union published the Green Paper[13] in August, 1995. The Green Paper is similar to the United States approach in its finding that copyright law needs certain amendments to accommodate an increasingly digital economy. One of the primary concerns was that different levels of protection exist among the European Union member states, resulting in obstacles to the creation of an information society.[14] Harmonization of these levels of protection is necessary to create and maintain a balance between the interests of all parties -- content providers, distributors, users, and network operators of Internet services.

6. The lengthy WIPO negotiations on modernizing the Berne convention resulted in a Diplomatic Conference held in Geneva, December, 1996. The Conference participants considered three new multilateral treaties: 1) Protection of Literary and Artistic Works;[15] 2) Protection of Rights of Performers and Producers of Phonograms;[16] and 3) Intellectual Property in Respect to Databases.[17] The Treaties are not a new text of the Berne Convention, but a new treaty that provides a higher degree of protection than Berne and that is open to Berne and non-Berne members alike.[18] The Conference concluded in the adoption of a new Copyright Treaty,[19] and a new Performances and Phonograms Treaty.[20] These treaties will go into effect upon the signature ratification by 30 countries.[21] The Conference was unable to reach an agreement concerning databases.[22]

7. The treaties are important for two reasons. First, they will have a direct impact on whether or not copyright law remains a sufficiently strong basis for protecting network distributed content. As discussed above, unauthorized access to

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13 *See Green Paper*, *supra* note 5.

14 *See id.* at ch. 1(I)(A)(a).

15 *See Draft Literary and Artistic Works Treaty, supra* note 6.

16 *See Basic Proposal for the Substantive Provisions of the Treaty for the Protection of Rights of Performers and Producers of Phonograms,* WIPO Doc. CRNR/DC/5 (Aug. 30, 1996).

17 *See Basic Proposal for the Substantive Provisions of the Treaty on Intellectual Property in Respect to Databases,* WIPO Doc. CRNR/DC/6 (Aug. 30, 1996).

18 *See Draft Literary and Artistic Works Treaty, supra* note 6.

19 *See* WIPO Copyright Treaty, Dec. 23, 1996, 36 I.L.M. 65 (1997) [hereinafter Copyright Treaty].

20 *See* WIPO Performances and Phonograms Treaty, Dec. 23, 1996, 36 I.L.M. 76 (1997).

21 *See* Copyright Treaty, *supra* note 19, 36 I.L.M. at 74 (art. 20).

22 *See Recommendation Concerning Databases*, WIPO Doc. CRNR/DC/100 (Dec. 23, 1996).

works may impart the user with the full economic value of the work, whether or not a copy has been made. Second, these treaties are likely to be the last major statement on international intellectual property law for at least a decade.[23] Neither TRIPs[24] nor the Berne Convention[25] are likely to undergo further revision for some time.

II. Transmission of Copies

8. Under United States law a copyright owner has an exclusive right to publicly "distribute copies" of a work copyrighted under the current Copyright Act.[26] A copy is a material object, in which a work is fixed and from which the work can be perceived, reproduced, or communicated.[27] It is questionable whether this distribution right covers the digital transmission of a work.[28] For example, suppose one transmits a copy of a work from one computer to 10 others over the Internet. After transmission, the original copy usually stays in the transmitting computer.[29] A transmission may cause numerous other copies of the work to be distributed to other computers. The question is whether a copy was distributed within the meaning of the Copyright Act.

9. The U.S. White Paper legislation would provide that copies are distributed by transmission, and that these transmissions fall within the exclusive distribution

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23 The Berne Convention was last modified ten years ago.

24 Agreement on Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, Final Acts Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, 36 I.L.M. 1197 (1994).

25 The Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1986, 828 U.N.T.S. 221; Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, 102 Stat. 2853 (effective in the United States on Mar. 1, 1989) (codified at 17 U.S.C. § 101 (1994)) [hereinafter Berne Convention].

26 17 U.S.C. § 106(3) (1994).

27 *See* 17 U.S.C. § 101 (1994).

28 *See* Agee v. Paramount Communications, Inc., 59 F.3d 317, 325 (2d Cir. 1995) (holding that "merely transmitting a sound recording to the public on the airwaves does not constitute a 'distribution'"); Los Angeles News Serv. v. Reuters Television Int'l, Ltd., 942 F. Supp. 1265, 1270 (C.D. Cal. 1996) (stating that the plaintiff "fails to show that the fiber link transmission violates section 106 because it is a distribution"); *see also* WHITE PAPER, *supra* note 4, at 213.

29 *See* WHITE PAPER, *supra* note 4, at 213.

right of the copyright owner.[30] This proposed amendment would not create a new right.[31] The Copyright Act defines transmission as it relates to the performance or display of a work.[32] The U.S. White Paper legislation would amend to the definition of "transmit" to include a definition of a transmission of a reproduction.[33] The new law would amend the definition of "publication" to recognize that a work may be published via distribution of the work to the public by transmission.[34] Import prohibitions would be further expanded to cover importation into the United States by transmission.[35] Cross-border transmission of copies of copyrighted works would be subject to the same restrictions as if they were physically shipped.[36]

10. The E.U. Green Paper proposes to include digital transmissions in the dissemination of a work.[37] One of the most difficult issues raised in the Green Paper is the matter of applicable law when multiple countries are involved. The Green Paper argues that the basic rule of applicable law for electronic transmissions should govern the parties' choice in freely negotiated contracts.[38] The difficulty is that E.U. member states' laws vary widely on permitted transfers of rights in works through contracts.[39] A rule is needed to determine when freedom of contract should be subordinate to national contracting-transferability rules.

11. Article 8 of the new WIPO Copyright Treaty[40] clarifies the broad language of article 9(1) of the Berne Convention, which already provides an exclusive right to control reproduction "in any manner or form."[41] The scope of article 9(1) now

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30 *See* H.R. 2441 § 2(b)(2), 104th Cong. (1995); S. 1284 § 2(b)(2), 104th Cong. (1995).

31 *See* WHITE PAPER, *supra* note 4, at 213.

32 17 U.S.C. § 101.

33 WHITE PAPER, *supra* note 4, at 217; *see also* H.R. 2441 § 2(b)(2); S. 1284 § 2(b)(1).

34 *See* H.R. 2441 § 2(b)(1); S. 1284 § 2(b)(1).

35 *See* H.R. 2441 § 2(c); S. 1284 § 2(c).

36 *See id.*

37 *See Green Paper*, *supra* note 5, at ch. 2(V).

38 *See id.* at ch. 2(I)(1).

39 *See id.*

40 Copyright Treaty, *supra* note 19, 36 I.L.M. at 70 (art. 8).

41 Berne Convention, *supra* note 25, 828 U.N.T.S. at 239 (art. 9(1)).

includes "temporary reproduction" in the definition of a reproduction.[42] This provision codifies, on an international basis, copyright protection for ordinary uses of content in random access memory ("RAM") and online activities for all types of works. This provides further support for the rule set forth in the E.E.C. Software Directive[43] and U.S. cases such as *MAI Systems Corp. v. Peak Computer, Inc.*[44] This proposal will be a lightning rod for communications companies concerned about liability for transitory or temporary copies along their networks.[45] The Treaty also expressly provides for the protection of computer programs by defining them as literary works.[46]

III. Copyright Management Information

12. The copyright management information associated with a work -- such as the name of the copyright owner and the terms and conditions for licenses of the work -- are critical to efficient product distribution in the information age. Copyright management information provides a user with important information about a work. The accuracy of such information enables consumers to find and make authorized uses of copyrighted works on the Internet. Reliable information will also facilitate efficient licensing and reduce transaction costs for both fee-based and royalty-free licensable uses of copyrighted works.

13. Accordingly, the U.S. White Paper legislation would prohibit the falsification, alteration, or removal of any copyright management information.[47] The legislation also contains a knowledge requirement; therefore, inadvertent falsification, alteration, or removal would not be a violation.[48]

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42 Copyright Treaty, *supra* note 19, 36 I.L.M. at 70 (art. 8) ("[A]uthors . . . shall enjoy the exclusive right of authorizing any communication of their work to the public of their works, by wire or wireless means . . . .").

43 *See* Council Directive 91/250, 1991 O.J. (L 122).

44 MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511, 518 (9th Cir. 1993) (holding that "'copying' for purposes of copyright law occurs when a computer program is transferred from a permanent storage device to a computer's RAM").

45 *See Controversial Section in Copyrights Deleted, But Carriers May Want More,* COMM. DAILY, Dec. 23, 1996, *available in* 1996 WL 12301580; *Treaty May Inhibit Messaging,* ELECTRONIC MESSAGING NEWS, Nov. 27, 1996, *available in* 1996 WL 8540311.

46 *See* Copyright Treaty, *supra* note 19, 36 I.L.M. at 69 (art. 4).

47 *See* H.R. 2441 § 4; S. 1284 § 4; *see also* WHITE PAPER, *supra* note 4, at 236.

48 *See id.*

14. The E.U. Green Paper calls for a centralized collective administration that would cover all classes of works: books, software, images, sounds, etc.[49] A key impediment to the production of multimedia works is the requirement of obtaining multiple clearances. The failure to obtain just one clearance can block the creation of a work. The cumulative price of obtaining clearances seriatim would make the cost of the final multimedia work prohibitively high. The Green Paper, however, concludes that these considerations are not sufficient to justify more compulsory licensing or dilution of intellectual property rights.[50] Instead, it attempts to promote the establishment of a centralized, one-stop, voluntary collective administration of all works.[51] What it does not specify is how this collective administration will be accomplished.

15. Article 12 of the Copyright Treaty,[52] similar to the U.S. White Paper and E.U. Green Paper proposals, seeks to provide safeguards against the removal of copyright identifiers.[53] The Treaty requires included countries to adopt legislation prohibiting the distribution, importation, or communication of works with knowledge that copyright management information has been removed.[54]

IV. Database Protection

16. Historically, databases have been denied copyright protection. In the United States, the *Feist Publications v. Rural Telephone Services Co.* decision, which denied copyright protection to an author of a telephone directory, illustrates how database protection has been withheld.[55] A database contains information that cannot be copyrighted[56] and the mere selection and arrangement of information may

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49 *See Green Paper*, *supra* note 5, at ch. 1(III)(B).

50 *See id.* at ch. 2(VII)(1)(c).

51 *See id.* at ch. 2(VIII).

52 *See* Copyright Treaty, *supra* note 19, 36 I.L.M. at 71 (art. 12).

53 *See id.*

54 *See id.*

55 *See* Feist Publications v. Rural Tel. Servs. Co., 499 U.S. 340, 363 (1991) (holding that facts are not copyrightable because they are not original works of authorship).

56 *See id.* at 347.

not be enough.[57]

17. Although the White Paper did not specifically address database protection, the United States Congress recently introduced legislation to protect databases.[58] The Database Investment and Intellectual Property Antipiracy Act of 1996 would protect databases -- the compilation of which required a substantial investment of resources -- from having its contents used or extracted without permission of the database owner.[59]

18. The E.C. has already adopted a database directive that requires member states to implement laws to protect databases by 1998.[60] Once implemented, the directive would provide copyright protection to database selection and arrangement. The directive would not extend protection to the underlying contents of the database.[61] Further, it provides sui generis rights for database makers[62] who demonstrate "a substantial investment in either the obtaining, verification or presentation" of the database's contents.[63] The rights provide protection against the extraction or re-utilization of the contents of the database.

19. The WIPO Geneva Conference recently considered a draft treaty on database protection.[64] This treaty would have gone beyond existing copyright and patent law to protect collections of data and other material that may be neither original nor novel, but that require a substantial investment to collect, present or organize.[65] Ultimately, the Geneva Conference did not result in the adoption of a database treaty. Instead, the Conference recommended that WIPO study the matter

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57 *See id.* at 348-49 (finding that the selection and arrangement of a factual compilation are eligible for copyright protection only if independently created and minimally creative).

58 H.R. 3531, 104th Cong. (1996).

59 *See id.* §§ 3-4.

60 Parliament and Council Directive 96/9, art. 16, 1996 O.J. (L 77), 20 [hereinafter E.C. Database Directive].

61 *See id.* at art. 3.

62 *See* Richard Raysman & Peter Brown, *European Database Protection*, N.Y.L.J., Feb. 13, 1996, at 3 (discussing that a sui generis right is aimed at protecting an author's investment of resources in the compilation of a database).

63 E.C. Database Directive, *supra* note 60, at art. 7.

64 *See Basic Proposal for the Substantive Provisions of the Treaty on Intellectual Property in Respect to Databases,* WIPO Doc. CRNR/DC/6 (Aug. 30, 1996).

65 *See id.* at art. 1.

further.[66]

20. The impetus for sui generis protection of databases comes from two sources. The first is the E.C.'s effort to harmonize the originality standard for copyright among the member states.[67] The second force pushing protection is that of online database companies such as Dow Jones, Reuters, and West Publishing, who want an independent basis for protecting databases of materials.[68]

21. Much controversy surrounds the proposed database protections. For example, the Information Industry Association strongly supports the proposed database protections.[69] Others warn about the potential negative impact on Internet routing infrastructure, domain names, and search engines.[70] Many Asian countries object to the treaty's lack of sufficient study, lack of domestic consultation, high risks of contributory liability and overly strong protection mechanisms.[71] The political reality is that the European Community already has such legislation,[72] and the United States has proposed legislation.[73]

V. Technical Protection

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66 *See Recommendation Concerning Databases*, WIPO Doc. CRNR/DC/100 (Dec. 23, 1996).

67 *See* Council Directive 93/98, 1993 O.J. (L 290) 9.

68 *See* Daniel T. Brooks, *Databases: The New Corporate Asset and Liability*, in 14TH ANNUAL COMPUTER LAW INSTITUTE, at 9, 9 (PLI Patents, Copyrights, Trademarks & Literary Property Course Handbook Series No. 345, 1992); *see also* Information Industry Association, *U.S. Industry Needs Legislation to Protect Investment in Databases* (visited Feb. 23, 1997) <http://www.infoindustry.org/ppgrc/prc/prdoc001.htm>; *NII Copyright Protection Act of 1995: Hearings on H.R. 2441 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 104th Cong. 69 (1996) (testimony of Barbara A. Munder, Senior Vice President of the McGraw-Hill Companies on behalf of the Information Industry Association).

69 *See* Information Industry Association, *Database Protection - The Time Is Now* (visited Feb. 4, 1997) <http://www.infoindustry.org/ppgrc/prc/prdoc005.htm>.

70 *See Software Developer's Comments on the WIPO Database Treaty* (visited Feb. 2, 1997) <http://www.base.com/gordoni/thoughts/wipo-db.html>.

71 *See U.S. Rethinks Strict Copyright Treaty Stance*, INTERACTIVE DAILY, Dec. 16, 1996, *available in* 1996 WL 13462482; *Gov't to Adopt Tough Stand at WIPO Conference*, FIN. EXPRESS, Nov. 25, 1996, *available in* 1996 WL 14479969; Suman Sahai, *The Hindu Editorial*, THE HINDU, Dec. 14, 1996, *available in* 1996 WL 1418329.

72 *See* E.C. Database Directive, *supra* note 60.

73 *See* H.R. 3531, 104th Cong. (1996).

22. Copyright owners are likely to look to technology, in addition to the law, for protection of their works. There is an entire industry devoted to serving the market for technical protection services and devices.[74] Such technological protection, however, will be ineffective without laws that prohibit interference with technical protections.[75]

23. The U.S. White Paper legislation includes an anticircumvention provision to prohibit the importation, manufacture, or distribution of any device or the provision of any service used primarily to circumvent any copy protection system.[76] This provision would not eliminate the risk that protection systems will be compromised, but it would reduce that risk by providing a disincentive through the imposition of criminal sanctions.[77]

24. In principle, the concept of prohibiting distribution of devices or services that circumvent copy protection systems has much support.[78] Difficulties arise, however, in deciding the details of such a provision. For example, computers can be used to enable circumvention, and therefore could be illegal devices if the prohibition on circumvention devices is drafted too broadly. At the same time, copy protection systems could be used to prevent the making of copies that would otherwise be authorized by the United States *Sony Corp. V. Universal City Studios, Inc.* decision[79] or by fair use.[80] Accordingly, a balance must be struck between the interests of content providers, who want a very broad scope for this provision, and device

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74 *See* Brooke C. Wheeler, *Defend Your Rights*, MACUSER, Nov. 1, 1996, *available in* 1996 WL 2090097; Information Technology Association of America, *Discussion Paper: Intellectual Property Protection in Cyberspace: Towards a New Consensus*, Dec. 12, 1996, *available in* 1996 WL 710185.

75 *See generally* Neil A. Smith & Andrew V. Smith, *Technological Protection Devices and Copyright Law*, 3 B.U. J. SCI. & TECH. L. 7 (1997) (discussing changes necessary in copyright law to accommodate the growing use of technical protection devices).

76 H.R. 2441 § 4, 104th Cong. (1995); S. 1284 § 4, 104th Cong. (1995).

77 *See* H.R. 2441 § 4; S. 1284 § 4.

78 *See* Pamela Samuelson, *Intellectual Property Issues Raised by the National Information Infrastructure*, in PLI'S SECOND ANNUAL INSTITUTE FOR INTELLECTUAL PROPERTY LAW, at 43, 46-47 (PLI Patents, Copyrights, Trademarks & Literary Property Course Handbook Series No. 454, 1996).

79 *See* Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 454-55 (1984) (finding that it is not copyright infringement to use a Betamax to record television programs broadcast on public airwaves for time-shift viewing purposes).

80 *See* 17 U.S.C. § 107 (1994) (use of a copyrighted work, including use by reproduction, for such purposes as criticism and teaching is not an infringement of copyright).

manufacturers, who want a very narrow scope.[81] No compromise is in sight at this time.

25. The E.U. Green Paper addresses technical systems for protection and identification. Unlike the White Paper, the Green Paper does not specify any requirements or prohibited activities. Instead it discusses a voluntary system for encoding works with identifying electronic tags and a mandatory system of hardware to read such tags.[82] The Green Paper proposes that any identification, technical protection, and rights-management schemes should be voluntary.[83]

26. Article 11 of the Copyright Treaty requires contracting parties to provide legal protection against the circumvention of effective technological measures.[84] This provision tries to marry the original U.S. White Paper proposal on technical protection with a somewhat more narrow formulation. It would impose modest safeguards for technical protection at the international level, and also provide an enforcement mechanism.

27. In the U.S. White Paper legislation and at the WIPO Conference, technical protection has been very controversial. The provisions focus on devices[85] and device manufacturers do not want to be liable for copyright infringement. In addition, others fear a lock-up of public-domain content by technical means.[86]

VI. Service Provider Liability

28. The U.S. White Paper addressed service provider liability.[87] The basic model consists of three elements, two of which are relatively uncontroversial. It would exempt all entities offering basic telephone services[88] from copyright liability

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81 *See generally Deal in Works on Digital Video Copyright Principles*, COMM. DAILY, Jan. 26, 1996 (contrasting the positions of content providers, and device manufacturers).

82 *See Green Paper*, *supra* note 5, at ch. 2(IX)(3).

83 *Id.*

84 *See* Copyright Treaty, *supra* note 19, 36 I.L.M. at 71 (art. 11).

85 *See* WHITE PAPER, *supra* note 4, at 183-200.

86 *See* James Boyle, *Sold Out*, N.Y. TIMES, May 1, 1996, § 4 (Op-Ed), at 15.

87 *See* WHITE PAPER, *supra* note 4, at 114; *see also NII Copyright Protection Act of 1995: Joint Hearing on H.R. 2441 and S. 1284 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary and the Senate Comm. on the Judiciary*, 104th Cong. 4 (1995) [hereinafter *Joint Hearings*] (statement of Sen. Carlos J. Moorehead); *id.* at 32 (statement of Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks).

88 *See* WHITE PAPER, *supra* note 4, at 32.

for temporary copies of works made by communications companies' switches in the course of transporting a data packet. In return for certain limitations on their copyright liability, service providers would agree to "take-down" infringing material upon proper notice from the copyright owner.[89]

29. Curiously, the proposed White Paper legislation is silent on this issue. This is because the Clinton Administration was unable to reach a consensus on whether service providers should be subject to strict liability, a reduced level of liability, or no liability.[90] The issue is extremely complex, both technically and politically. Throughout the spring of 1996, there was a major inter-industry negotiation that failed to produce a viable result.[91] That failure has stalled congressional consideration of the White Paper legislation, and prompted the communications companies to launch a lobbying campaign against the effort to update the Berne Convention.[92]

30. Although there has been some dispute over what limitation there should be on liability and what constitutes good notice, these issues are fairly well resolved. The copyright community rejected allowing communications companies to boot-strap their existing copyright immunity into the digital arena because it would make virtually everyone immune except Prodigy, America Online, and CompuServe.[93] On the other hand, the goal of the content providers has been to ensure that service providers are left with enough exposure to copyright liability to motivate them to be partners in conducting anti-piracy work.[94]

31. Unlike the White Paper, the E.U. Green Paper does not specifically address the liability of infrastructure providers, allowing this to fall upon the member states.

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89 *See NII Copyright Protection Act of 1995: Hearings on S. 1284 Before the Senate Comm. on the Judiciary*, 104th Cong. (1996) (statement of William W. Burrington, Assistant General Counsel and Director of Public Policy, America Online, Inc.), *available in* 1996 WL 10163295; Barry D. Weiss, *Barbed Wires and Branding in Cyberspace: The Future of Copyright Protection*, in UNDERSTANDING BASIC COPYRIGHT LAW 1996, at 397, 404 (PLI Patents, Copyrights, Trademarks & Literary Property Course Handbook Series No. 450, 1996).

90 *See* Weiss, *supra* note 89, at 415-16.

91 *See id.* at 415.

92 *See* Samuelson, *supra* note 78, at 43, 46-47.

93 *See NII Copyright Protection Act: Hearings on H.R. 2441 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 104th Cong. 22 (1996) [hereinafter *House Hearings*] (statement of Jack Valenti, President and CEO, Motion Picture Association of America, Inc.).

94 *See* Weiss, *supra* note 89, at 416.

32. Of the Copyright Treaty, article 8 addressing service provider liability is perhaps the most interesting and important proposal on the "digital agenda" at WIPO.[95] The mere "making available" of a work "for access" -- such as on an Internet server -- is covered.[96] This provision requires authorization by copyright owners for electronic distribution of copyrighted works. By focusing on access, the provision takes an important step toward establishing a right not tied to traditional notions of copying or physical distribution.

VII. Conclusions

33. The primary reason for the delay of enactment of the U.S. White Paper legislation is that new players are motivated by their strategic business models which put them at odds with the computer industry on certain policy issues. The question behind these policy debates is which of these three previously separate industries gets to sell its products in the huge converged information technology marketplace? For example, computer companies, consumer electronics companies, and communication companies are now direct competitors because all of their products are based on digital electronics.

34. Communications companies, increasingly interested in becoming Internet service providers as well as pure conduit providers, are concerned about their potentially increased liability for copyright infringement. At the House Judiciary Committee hearings on the White Paper legislation, some witnesses argued that the bill should not go forth until a resolution is found, specifically arguing for some limitation on the strict liability standard.[97] Congress, along with most of the industry players, is looking for a balance of the responsibilities between content providers and service providers.[98]

35. We have reviewed the emerging rules of the road for intellectual property in the information age from the United States, Europe, and World Intellectual Property Organization perspectives. Existing patent, copyright, and trademark regimes do work in the information age to convert bits into intellectual assets. Only the copyright law needs some fine tuning at the margins -- a digital update.

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95 Copyright Treaty, *supra* note 19, 36 I.L.M. at 74 (art. 20).

96 Under the Treaty, service providers will be liable for making works available "in such a way that members of the public may access these works from a place and time individually chosen by them," for example, web pages. *Id.*

97 *See House Hearings*, *supra* note 93, at 262 (statement of Dr. Cornelius J. Pings, President, Ass'n of American Universities, and Stephen M. Heaton, General Counsel and Secretary, CompuServe, Inc.).

98 *See Joint Hearings, supra* note 87, at 23 (statement of Sen. Leahy).

However, much controversy remains over technical protection, service provider liability, and protection of databases, and we have yet to see what enacted United States legislation will look like. The new WIPO treaties are likely to result in changes to United States and European Community law in the near future.