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ADDRESSES

Global Intellectual Property in the Twenty-First Century

The Honorable Bruce A. Lehman*

As we approach the twenty-first century, and all that we hope it brings, I do not need to tell any of you that this is an important and exciting time to be an IP practitioner.

On the legislative front, as Congress tackles such issues as the proposed revisions to the Copyright Act¹ and other legislation dealing with the information infrastructure,² ensuring protection for copyrighted works in the digital environment is a major challenge. But it could not be a more exciting, or nerve-wracking, experience in Washington, depending on your perspective. Of course, the goal of such legislation is not to excite, per se, but rather to clarify existing law and to adapt it to the reality of the National Information Infrastructure (“NII”).³ Congress will make these deci-

* Assistant Secretary of Commerce and Commissioner of Patents and Trademarks. University of Wisconsin, B.S. 1967, J.D. 1970. This Address was delivered on April 12, 1996 at the Fourth Annual Conference on International Intellectual Property Law and Policy at Fordham University School of Law. Footnotes were supplied by the *Fordham Intellectual Property, Media & Entertainment Law Journal*.

1. Recently proposed revisions to the Copyright Act, 17 U.S.C. §§ 101-210 (1994), include the Music Licensing Reform Act of 1996, S. 1619 and S. 1628, 104th Cong., 2d Sess. (1996), and the Copyright Term Extension Act of 1995, S. 483, 104th Cong., 2d Sess. (1996), S. 1284, H.R. 989 and H.R. 2441, 104th Cong., 1st Sess. (1995).

2. S. REP. NO. 357, 104th Cong., 2d Sess. (1996).

3. The NII is a “convergence of communications industries into a seamless web of communications networks, computers, databases and consumer electronics” providing the American people with almost immediate access to a wealth of information. NAT’L TELECOMMUNICATIONS & INFO. ADMIN., U.S. DEP’T OF COM., THE NATIONAL INFORMATION INFRASTRUCTURE: AGENDA FOR ACTION, 58 Fed. Reg.

sions affecting the development of both the NII and the Global Information Infrastructure (“GII”)⁴ against the backdrop of a veritable quantum shift in the way both America and the world will communicate, be entertained, receive its information, and do business, well into the next century.

Over the past forty years, there has been a tremendous transformation in both the U.S. and global economies, as many Americans have begun to derive their livelihoods from products of their minds, as opposed to manual labor.⁵ Today, much of our gross domestic product is attributable

49,025, 49,025 (1993).

4. The GII has “a global network of networks . . . linking every country, every town, every village, providing not just telephone service, but high-speed data and video as well.” Vice President Albert Gore, *Bringing Information to the World: The Global Information Infrastructure*, 9 HARV. J.L. & TECH. 1, 2 (1996) (emphasis added).

5. See, e.g., U.S. Competitiveness: *Assessing the Impact of Government Activities on Productivity and Living Standards Before the Subcomm. on Technology of the House Comm. on Science*, 104th Cong., 1st Sess. (1995) (statement of Allan I. Mendelowitz, Managing Director, International Trade, Finance, and Competitiveness Issues, General Government Div.) (“Since World War II the U.S. economy has been transformed by technological and global political and economic changes that have presented opportunities and challenges for businesses, workers, and the government.”); G. Pascal Zachary, *Era of Growth: Behind Stocks’ Surge Is An Economy in Which Big U.S. Firms Thrive*, WALL ST. J., Nov. 22, 1995, at A1 (noting the emergence of a globally integrated economy); see also Timothy D. Howell, *Intellectual Property Pirates: Congress Raises the Stakes in the Modern Battle to Protect Copyrights and Safeguard the United States Economy*, 27 ST. MARY’S L.J. 613, 619 n.15 & 16 (1996) (citing examples of how society has been transformed by the increasing reliance on information); Gabriel Garcia, *Economic Development and the Course of Intellectual Property Protection in Mexico*, 27 TEX. INT’L L.J. 701, 715 n.46 (1992) (“Between 1947 and 1986, U.S. exports containing valuable intellectual property increased from 9.9% to 27.4% as compared to all U.S. exports.”) (citing INTELL. PROP. RIGHTS, GLOBAL CONSENSUS, GLOBAL CONFLICT? 4 (R. Michael Gadbaw and Timothy J. Richards eds., 1988)); Herbert Ungerer, *EC Competition Law in The Telecommunications, Media, and Information Technology Sectors*, 19 FORDHAM INT’L L.J. 1111, 1113-14 (1996) (noting a wave of mega-mergers in the communications industries taking place in Europe and the United States which “imply a transformation of the core of our economies comparable only to the Industrial Revolution that shaped the nineteenth century”). But see John H. Sheridan, *The Global Economic Engine*, INDUSTRY WK., May 20, 1996, at 16 (noting that while manufacturing jobs have decreased from 33.7% of the total U.S. non-farm employment in 1950 to 15.7% of the American jobs, “[t]he business of ‘making things’ remains a bulwark of the increasingly interlinked global economic systems.”).

directly to information and entertainment industries that have an interest in protecting their valuable products through intellectual property laws.⁶

While patent and trademark law, and the activities and materials they protect, play a distinct role in the growth and success of the GII, it is really copyright law and the works that it protects—software, motion pictures, music, and literature—that will likely have the greatest impact on the GII in the twenty-first century.⁷

While these products of our information and entertainment industries already account for a significant portion of our economy and our exports to the rest of the world,⁸ the growth of the NII into a true GII offers many additional opportunities for the development of these IP-oriented industries in America. At present, the content available via the GII is fairly noncommercial, at least when compared to its potential as a commercial outlet.⁹ Recent decisions, how-

6. See *National Information Infrastructure Copyright Protection Act: Hearings on S. 1284 Before the Senate Comm. on the Judiciary*, 104th Cong., 2d Sess. (1996) (statement of Kenneth R. Kay, Executive Director of Creative Incentive Coalition) (“In 1993, the most recent year for which complete statistics are available, the U.S. copyright industries accounted for 3.7% of the U.S. Gross Domestic Product[,] employed three million American workers, and racked up foreign sales of \$45.8 billion.”).

7. See Benjamin R. Kuhn, *A Dilemma in Cyberspace and Beyond: Copyright Law for Intellectual Property Distributed Over the Information Superhighways of Today and Tomorrow*, 10 TEMP. INT’L & COMP. L.J. 171, 172 (1996) (discussing the need for strengthening domestic intellectual property law to provide sufficient protection for information or entertainment products transmitted over computer information networks); Ungerer, *supra* note 5, at 1116 (discussing “the principles spelled out by the Brussels G-7 ministerial meeting on the Information Society” that will “apply to the global information infrastructure through, *inter alia*, ensuring privacy and data security . . . and protecting intellectual property rights”).

8. See *Impact on International Competitiveness of Replacing the Federal Income Tax: Hearings Before the House Comm. on Ways and Means*, 104th Cong., 2d Sess. (1996) (written statement of the High-Technology Tax Restructuring Group) (“The United States is now the world’s largest exporter in technology trade, measured [by] royalty and license fees flowing into the United States for use of intellectual property.”). In 1994, for example, “the United States earned \$22.4 billion on inflows of royalties and license fees from abroad.” *Id.*

9. David Ward, *All Power to the Cybernauts: The Information Superhighway*

ever, by telecommunications carriers, such as MCI and AT&T, to make Internet access available to their customers,¹⁰ clearly underscore the potential commercial reach of the GII and its ability to become a true global marketplace with a significantly enlarged base of users.

Nevertheless, I believe it is axiomatic that if creators and distributors of commercial products cannot adequately protect their products, they will not make them available on the GII. Moreover, unless the risk of unauthorized reproduction and distribution of protected works is substantially reduced, the GII will not realize its full commercial potential.

The Working Group on Intellectual Property of the Information Infrastructure Task Force,¹¹ through its hearings,

Can't Expand Democracy Unless Everyone has Access to the Internet, GUARDIAN (London), Feb. 22, 1995, at 20 (citing a poll conducted by Louis Harris Associates in October 1994 that found that fewer than 10% of Internet users were interested in electronic shopping, while approximately 40% were interested in health care information, news, consumer ratings, and educational services); see also Ilene Knable Gotts & Alan D. Rutenberg, *Navigating the Global Information Superhighway: A Bumpy Road Lies Ahead*, 8 HARV. J.L. & TECH., 275, 275-76 (noting that while the "commercial potential of on-line computer systems is staggering," most consumer experience to date "has been limited to stand-alone personal computer use as part of a closed system"); Kuhn, *supra* note 7, at 180 (explaining that while "commercial . . . businesses are the fastest growing segment of the Internet," some businesses are reluctant to exploit this new marketplace because of security issues).

10. Katherine Long, *Can Long Distance Companies Offer Easy, Inexpensive Internet Access? You Make the Call*, SEATTLE TIMES, May 5, 1996, at C1; Julie Pitta, *The Cutting Edge; Big Guys Force ISP's to Improve or Die; Internet: Small-time Access Providers Face an Uncertain—Some Would Even Say Grim—Future*, L.A. TIMES, Sept. 9, 1996, at D1. Subsequent to the delivery of this Address, Sprint Corp. announced its decision to offer Internet service. Kim Cleland, *Sprint Joins Net Race*, ADVERTISING AGE, Aug. 26, 1996, at 17.

11. The Working Group on Intellectual Property ("Working Group"), chaired by Commissioner Bruce Lehman, is part of the Information Policy Committee, one of three committees that form the Information Infrastructure Task Force ("IITF"). See INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 1 (1995), available at *Information Infrastructure Task Force: Notice* (visited Jan. 18, 1997) <<http://www.iitf.nist.gov/ipc/ipr-wg/ipwg-pubs/ipnii.html>> [hereinafter WHITE PAPER]. The IITF, convened by President Clinton in February, 1993, consists of members of 18 federal agencies and works with both Congress and the private sector to develop

the Green Paper,¹² and the subsequent White Paper,¹³ examined the ability of current IP laws to keep pace with technological change. Generally, it found that copyright law needs only a fine-tuning to accommodate the protection of copyrighted works in the digital environment.¹⁴

For much of our nation's history, of course, technology has been relatively crude, and attempts to copy and distribute protected works for economic gain have required an expenditure of both time and resources by would-be infringers.¹⁵ Indeed, to make piracy profitable in the past, one would have had to set up a printing operation and run off many copies of a protected work. Over time, though, as technology improved, copying became easier. The advent and prevalence in the last generation of photocopying reproduction and videocassette taping greatly expanded both the possibilities and the reality of widespread copying of protected works and content. Both types of reproduction are inexpensive, routine, efficient, and feasible from a techno-

policies that implement the Administration's vision for the NII. *Id.* Within that general body, the Working Group was established to examine intellectual property issues related to the NII and to recommend any necessary changes to U.S. law and policy. *Id.*

12. INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: A PRELIMINARY DRAFT OF THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1994), available at Information Infrastructure Task Force: A Preliminary Draft of the Report of the Working Group on Intellectual Property (visited Jan. 18, 1997) <http://www.iitf.nist.gov/ipc/ipr-wg/ipwg_draft.html> [hereinafter GREEN PAPER].

13. See WHITE PAPER, *supra* note 11, at 1.

14. *Id.* at 212 (noting that the present Copyright Act is fundamentally adequate and effective, requiring only minor amendments to reflect current technology); see also *id.* at 17 (noting that neither weakening nor strengthening dramatically copyright owners' rights in the NII is in the public interest). The changes proposed by the Working Group in the Green Paper are directed toward better protecting copyright owners' works given recent technological advances. See GREEN PAPER, *supra* note 12, § IV.

15. See Fred H. Cate, *The Future of Communications Policymaking*, 3 WM. & MARY BILL RTS. J. 1, 20 (1994) (stating that the United States' "intellectual property law was designed for a world in which copying was difficult, economically impractical and relatively easy to regulate").

logical standpoint¹⁶—at least if one could learn how to operate a copier or program a VCR.

The publishers and content providers have always had a bit of a different perspective on protecting their content; they have often viewed widespread photocopying and videotaping as lost sales.¹⁷ As technology has continued to evolve and facilitate our abilities to reproduce and distribute copyrighted works,¹⁸ the digital age has caused us once again to

16. See Garcia, *supra* note 5, at 714 (“[R]elatively straightforward and inexpensive technologies for the reproduction of audio and videotapes, and also radio and television broadcasts, have greatly increased piracy of these works.”); *cf.* United States v. Larracunte, 952 F.2d 672, 673 (2d Cir. 1992) (affirming the conviction of defendant for criminal copyright infringement where defendant used a “video counterfeiting laboratory—78 VCRs, 1670 counterfeit videocassettes of movies . . . and various videotape copying equipment” to illegally copy at least 65 copyrighted films over a six month period).

17. See American Geophysical Union v. Texaco, Inc., 60 F.3d 913, 931 (2d Cir. 1994) (finding that photocopying journal articles causes substantial harm to the value of the publications’ copyrights); Larracunte, 952 F.2d at 674 (noting that the retail value of the illegally copied videotapes was \$193,596—an average of \$73 a tape for 2652 bootlegged tapes); Taylor v. Meirick, 712 F.2d 1112, 1122 (7th Cir. 1983) (finding plaintiff to have lost sales amounting to \$19,300 due to a copyright infringement lasting three years); New York Chinese TV Programs, Inc. v. U.E. Enter., No. 89 Civ. 6082 RWS (KAR), 1991 WL 113283, at *9 (S.D.N.Y. June 14, 1991) (finding plaintiff to have lost profits amounting to \$90,907.20); Manufacturers Technologies, Inc. v. Cams, Inc., 728 F. Supp. 75, 82-83 (D. Conn. 1989) (finding plaintiff’s 35 lost sales to have amounted to \$348,538 in lost profits over the course of four years); Greg Short, *Combating Software Piracy: Can Felony Penalties for Copyright Infringement Curtail the Copying of Computer Software?*, 10 COMPUTER & HIGH TECH. L.J. 221, 221 (1994) (estimating that by 1990 software piracy accounted for “\$2.4 billion in lost income per year for software manufacturers, up from \$500 million per year” in 1980); Amy E. Simpson, *Copyright Law and Software Regulations in the People’s Republic of China: Have the Chinese Pirates Affected World Trade?*, 20 N.C. J. INT’L L. & COM. REG. 575, 614 (1995) (“The [United States International Trade Commission] reported that over 193 U.S. companies lost \$23.8 billion, or 2.7% of total worldwide sales of intellectual property-related goods to piracy.”) (citing Gabriel E.L. Richerand, *GATT, Intellectual Property Rights and the Developing Countries*, 25 COPYRIGHT BULL., No. 3 1991, at 5.). *But see* Universal City Studios, Inc. v. Sony Corp. of Am., 480 F. Supp. 429, 456 (C.D. Cal. 1979) (rejecting an argument that videotaping television programs for non-commercial viewing impacted adversely on the commercial attractiveness of broadcasting for advertisers), *aff’d*, 464 U.S. 417 (1984).

18. Cate, *supra* note 15, at 20 (noting that an increasing amount of information is digital and that the technologies to copy this information are affordable and widespread in society).

reexamine the ability of our laws to protect works from unauthorized reproduction and distribution.

Given the emergence of the GII and the reality of a globally interactive publishing and information services system, we must address a new technological leap forward. The great irony of the GII is that it is both simplifying and complicating our lives. The *good* news is that the GII allows for the quick, efficient, and technically perfect reproduction and distribution of copyrighted works.¹⁹ The *bad* news is that it allows for the quick, efficient, and technically perfect reproduction and distribution of copyrighted works. Unless this rift is substantially reduced, the GII will never realize its full commercial potential for both users and content providers.

Now, different people view the cyberworld being created around them differently. Some wax eloquent about “surfing the ‘Net;”²⁰ others are too technophobic to use a fax machine.²¹ It’s unreasonable, then, to expect either general con-

19. See Gore, *supra* note 4, at 2 (explaining that the GII is virtually a “global network . . . enabl[ing] Americans to communicate across national boundaries and continental distances as easily as [Americans] communicate across state separations today”).

20. See, e.g., Ann Imse, *Computer Helps You Find Lowest of The Low Fares*, ROCKY MOUNTAIN NEWS, Mar. 24, 1996, at 15W (“Recently, I spent a day surfing the ‘Net with the newspaper’s flashiest equipment and found dozens of travel agencies offering to sell me tickets on-line.”); Keith Morelli, *Plant City Police Now Surfing the ‘Net*, TAMPA TRIB., Mar. 11, 1996, at 1 (reporting that the police department created an “electronic police substation” so the people of Tampa can now get information, including crime-prevention tips, online instead of having to go to the police station for it); Raoul V. Mowatt, *Catching Criminals in the Web*, CINCINNATI ENQUIRER, June 30, 1996, at E3; Nancy Thorsen, *Computers Give Access to Ancient Life: Third-graders Join Archaeologists Via ‘Net*, CINCINNATI ENQUIRER, Mar. 26, 1996, at B1 (stating that “surfing the ‘net” allows students to follow and communicate with archaeologists investigating Mayan civilization).

21. See Patrick Beach, *Can’t Understand Technology and Don’t Want To*, DES MOINES REG., Apr. 2, 1996, at 1 (“If you want to smash your VCR and hurl your computer into the trash because you can’t figure them out, you are not alone.”); Catherine Saillant, *Information Highway Bypassing Many Campuses; Computers: The Obstacles Include Teachers Who are Technophobes. Instruction and Students’ Access to the Equipment Vary Widely*, L.A. TIMES, Feb. 4, 1996, at B1; *Technophobia Still Hindering an Easy Life for Britain’s Workers*, UNIVERSAL NEWS SERV., Apr. 2, 1996 (noting that many people find sending and receiving data, connecting to net-

sensus on, or universal acclaim for, the recommendations contained in the White Paper²² or the legislation pending currently before Congress.²³ Certainly, then, reasonable minds may differ as to the best way to protect intellectual property in the GII.²⁴

works, or surfing the 'net to be a daunting prospect, despite the widespread use of computers).

22. INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995). For a discussion of the impact of the White Paper, see generally Kuhn, *supra* note 7, at 171; Andrea Sloan Pink, *Copyright Infringement Post Isoquantic Shift: Should Bulletin Board Services Be Liable?*, 43 U.C.L.A. L. REV. 587 (1995); Laurent Belsie, *Who Pays for What on Tomorrow's Internet?*, CHRISTIAN SCI. MONITOR, Oct. 25, 1995, at 1 (assessing the impact of the White Paper on the "value of information in the coming information age").

For criticisms of the White Paper, see James Boyle, *Overregulating the Internet*, WASH. TIMES, Nov. 14, 1995, at A17 (stating that the White Paper is a radical measure that will decrease dissemination by: (1) restricting drastically the "fair use" of copyrighted material; (2) making a document read on the screen of a Web browser a copyright violation; and (3) holding on-line producers strictly liable for copyright violations by their members); J. David Loundy, *Bill to Amend Copyright Act Needs Work*, CHI. DAILY L. BULL., Oct. 12, 1995, at 6 (stating that the White Paper "did not address many of the concerns people had about the Green Paper" and that some of the proposals were not well thought out); James V. Mahon, *A Commentary on Proposals for Copyright Protection on the National Information Infrastructure*, 22 RUTGERS COMPUTER & TECH. L.J. 233 (1996) (criticizing the White Paper for straining to apply current copyright law to a medium that is substantially different from the traditional media for which copyright law was developed).

23. See *supra* note 2 (citing pending legislation); see also Gary Chapman, *Copyright Bill Would Infringe on the Internet's Real Promise*, L.A. TIMES, May 20, 1996, at D7 (criticizing pending legislation as contrary to public policy); Charles H. Kennedy, *Internet Not Immune to Copyright Law*, L.A. TIMES, May 27, 1996, at D6 (defending proposed amendments to the Copyright Act); Mike Snider, *Opposition Grows to Copyright Reform*, U.S.A. TODAY, Feb. 14, 1996, at 2B (discussing telecommunications companies' opposition to pending legislation).

24. See, e.g., Jane C. Ginsburg, *Putting Cars on the "Information Superhighway": Authors, Exploiters, and Copyright in Cyberspace*, 95 COLUM. L. REV. 1466, 1488-89 (1995) (suggesting two approaches to discover and attack the problem of unauthorized dissemination of written work); Marci A. Hamilton, *The TRIPS Agreement: Imperialistic, Outdated, and Overprotective*, 29 VAND. J. TRANSNAT'L L. 613, 630 (1996) (arguing that private societies should be employed to enforce copyright owners' rights); Kuhn, *supra* note 9, at 196 (stating that the World Intellectual Property Organization ("WIPO") and the international community should create an international standard of copyright protection, based on the foundation of the national treatment principle, because disparate levels of national copyright protection measures still exist); R. Bruce Rich & Elizabeth Stot-

Yet, I believe that most of us in the field of intellectual property can agree that driving on the Information Superhighway²⁵ requires some rules of the road. Cyberspace²⁶ should not be a virtual Dodge City, run by electronic vigilantes and terrorized by “cyberpirates.”²⁷ It is not some otherworldly outland, simultaneously ungovernable and not to be governed by the laws that apply to everyone else. It is, though, a vast electronic landscape which challenges our

land Weiswasser, *Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights*, 7 NO. 12 J. PROPRIETARY RTS. 7, 13 (1995) (describing the Working Group’s conclusion that technological devices should be developed and utilized to protect against copyright infringement on the NII, and devices or products whose purpose is to avoid, bypass, remove, or circumvent the detection of copyright infringement should be prohibited in an amendment to the Copyright Act); Short, *supra* note 17, at 230 (discussing Senator Orrin Hatch’s (R-Utah) call for stricter penalties for copyright infringement).

25. According to one commentator, “[t]he ‘information superhighway’ is a ‘broadband, multimedia electronic network through which digitally coded information (voice, video, text, data, graphics . . .) runs to and from any point in the network to any other point in the network.’” Stacey J. Rappaport, *Rules of the Road: The Constitutional Limits of Restricting Indecent Speech on The Information SuperHighway*, 6 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 301, 305 (1995) (quoting Richard E. Wiley, *Who Will Be the Players on the Information Superhighway?*, in 3 COMM. LAW 1994, at 793, 799 (PLI Pats., Copyrights, Trademarks & Literary Prop. Course Handbook Series No. 400, 1994)).

26. “Cyberspace” has been defined in a variety of ways. See, e.g., Donna A. Gallagher, *Free Speech on the Line: Modern Technology and the First Amendment*, 3 COMM.LAW CONSPECTUS 197 n.2 (1995) (defining cyberspace as “where computer-mediated communications take place, such as exchanging messages and information, and accessing on-line services and data”) (citing Michael Bauwens, *What is Cyberspace?*, COMPUTERS IN LIBRS., Apr. 1994, at 42); Lawrence H. Tribe, *The Constitution in Cyberspace: Law and Liberty Beyond the Electronic Frontier*, HUMANIST, Mar. 26, 1991, at 15 (noting that Cyberspace is a place “without physical walls or even physical dimensions” in which interaction occurs as if it happened in the real world and in real time, but constitutes only a “virtual reality”).

27. Howell, *supra* note 5, at 616-18 (noting that modern day pirates “lurk along the communication highway and menace the intellectual property industry by highjacking audio recordings, motion pictures, television broadcasts, and computer software [using such weaponry as] photocopiers, digital audio tape recorders, video cassette recorders, cable descramblers, and computers”); Mark Morril, *Not All Speech in Internet Age Need be Free*, FRESNO BEE, Apr. 28, 1996, at B5 (defining “cyberpirates” as “those who would copy and disseminate copyrighted materials online without compensation to the creator”).

previous notions of protection based on concepts of territoriality, and clearly demands a rethinking of how creativity and commerce are to be protected in a digital universe.

The protection of intellectual property internationally, as Vice President Gore has often stated, is absolutely essential to the success of the GII.²⁸ The protection, management, and enforcement of intellectual property can no longer be considered solely as a matter of one's national policies, but must be viewed in a global context.²⁹ Much as the high seas forced our seafaring ancestors to adopt rules of navigation, laws against piracy, and conventions of maritime and admiralty in order to govern commerce and liability, so too does cyberspace now challenge us to adapt our laws to meet the uncharted waters of copyright protection, and transfer, of content in a digital environment. The GII provides access to cultural resources, transforming and expanding the scope and reach of the arts, the sciences, and humanities, generating new markets for cultural, educational, and scientific products. The GII also has the potential to broaden our experiences and increase our understanding of the world around us.

For centuries, copyright law, with periodic revision, has provided protection for an increasing variety of works of authorship, and changes usually have been in response to advances in technology that affected the operation of the copyright law.³⁰ In turn, new industries and new methods for the

28. Marie D'Amico, *We're Just the Members of the Copyright Band*, 4 DIGITAL MEDIA 18, Sept. 13, 1994 (quoting Vice President Al Gore as saying that the "protection of intellectual property is absolutely essential" to the development of a successful GII).

29. Vice President Albert Gore, *In the New Age of Global Communications Democracy and Liberty must be Protected*, ROLL CALL, Oct. 23, 1995 available in LEXIS, News Library, U.S. File ("The work we do to build up a GII is not in the service of wires or satellites but is in the service of a global vision that can be realized in every neighborhood of the world.").

30. In 1802, Congress extended the benefits of the Copyright Act of 1790 to "arts of designing, engraving, and etching historical and other prints." Act of April 29, 1802, ch. 36, § 2, 2 Stat. 171. In 1831, Congress enacted Chapter 16,

reproduction and dissemination of copyrighted works were developed, producing dramatic effects on commerce and trade, and providing the backbone of a strong economy and social discourse. Copyright protection is not an obstacle to the success of the GII; rather, it is an essential component in developing rules for intellectual property protection that will promote the use of the GII for the distribution of informational, educational, and entertainment products.

Heretofore, most discussions of the GII have been on the technical possibilities provided by the convergence of computer and information technologies.³¹ Nevertheless, the same convergence holds equally significant possibilities for the manner in which informational, educational, and entertainment products will be created, reproduced with unimaginable facility, and made available to consumers all over the world. Trade in this creative content is already a significant component of domestic trade, and is growing substantially

which repealed the 1790 and 1802 Acts and extended copyright to cover musical compositions. *Id.* In 1909, the most extensive revision of the Copyright Act took place in reaction to then recent developments in relevant industries. ALAN LATMAN ET AL., *COPYRIGHT FOR THE NINETIES* 5-12 (3d ed. 1989). In 1976, the current edition was enacted to conform with foreign copyright regimes. *Id.* at 9-10. Finally, in 1988, Congress amended the law to remove inconsistencies with standards set by the Berne Convention, which was ratified by the United States in that year. *Id.* at 12.

31. See, e.g., Nicholas W. Allard, *Copyright from Stone Age Caves to the Celestial Jukebox*, 17 *HASTINGS COMM. & ENT. L.J.* 867, 879-80 (1995) (discussing the effects of technological innovation on copyright law, including both the NII and GII's provision of increased access to "entertainment, communication, and information"); Kuhn, *supra* note 7, at 180-82 (discussing the increased commercial use of the Internet and the emerging satellite industry "based on recent advances in computer and micro-chip technology which has the potential to create 'a truly global Internet in an ever-expanding ethersphere'") (quoting George Gilder, *TELESCOM Ethersphere*, *FORBES ASAP*, Oct. 10, 1994, at 132); see also *Computer Company CEOs Issue Recommendations for Government, Industry Roles in GII*, *PR NEWswire*, Feb. 10, 1995, available in *LEXIS Library*, U.S. File; Commissioner Rachelle B. Chong, *Trends in Communications and Other Musings on Our Future*, 39 *FED. COMM. L.J.* 213, 218 (1994) (stating that the integration of computer and digital networks will enhance productivity and develop economies, infrastructure, and political institutions); Mary Silva Doctor, *A Global Challenge*, *COMPUTERWORLD*, May 1, 1995, at 21 (discussing challenges posed to executives by globalization of business technology).

each year.³² By the same token, the EU Green Paper on copyright and neighboring rights in the information society³³ notes that the GII is equally important to the emerging European Information Society.³⁴

Intellectual property regimes must provide effective mechanisms to realize the economic benefits of technological change. There must be efficient mechanisms for accumulating rights in ways that both facilitate the distribution of creative content and make transactions more efficient. There must also be efficient mechanisms to ensure that rightsholders are paid as products are distributed through the new storage and dissemination systems. Trade in creative content will provide the economic basis to grow the GII well into the twenty-first century. Nevertheless, just as technology has opened up vast new possibilities for transmitting content to users, so too has it created new means for pirating copyrighted works of all types. Effective IP protection is essential to trade in creative content.

As many have noted before, uneven levels of protection can impede legitimate trade in this creative content, from computer programs, books, movies, databases, sound recordings, and—the icon of the Information Age—multimedia works.³⁵ Unless mechanisms are universally in

32. See Simpson, *supra* note 17, at 611 (“[S]ince World War II, the percentage of intellectual property exported from the United States increased from eight to twenty-five percent.”).

33. COMMISSION OF THE EUROPEAN COMMUNITIES, GREEN PAPER ON COPYRIGHT AND THE CHALLENGE OF TECHNOLOGY: COPYRIGHT ISSUES REQUIRING IMMEDIATE ACTION (1988). The Green Paper serves as a consultative document, dealing comprehensively with copyright issues that have emerged in the European Community. *Id.* § 1.6.1, at 15. Those issues include piracy and home copying of sound and audio-visual material, the protection of distribution and rental rights for certain classes of works, and the limitation on the protection available to community right holders in non-Member States. *Id.* § 1.6.2, at 15.

34. See *id.* at Chapter I. The European Information Society is “the overarching EC framework for the telecommunications, media, and information technology sectors.” Ungerer, *supra* note 5, at 1112.

35. See, e.g., Allard, *supra* note 30, at 890 (stating that an international system that does not coordinate the definitions of copyright and copyrightable material

place to bridge differences among systems adopted in different markets, content-based industries in all countries will be handicapped in pursuing the opportunities offered by the GII.

The fact that civil law and common law theories for the protection of intellectual property are grounded in different philosophical bases has given us only a greater challenge.³⁶ In the past, when duplication of works was more difficult, these theoretical differences had very little impact on the practical effect of these laws in the marketplace. Now that a database stored in digital form in Canada can be downloaded by someone in Germany to a computer in Argentina, these differences in legal protection become impor-

will fail to utilize the full potential of the GII, and that each individual NII will be impeded from extending beyond its own borders); Kuhn, *supra* note 7, at 202 ("Uncertainties about the scope of international copyright protection from state to state can affect trade and decisions to commence business and enterprises, and hence distort conditions of competition."); *see also* Stefan Kirchanski, *Protection of U.S. Patent Rights in Developing Countries: U.S. Efforts To Enforce Pharmaceutical Patents in Thailand*, 16 LOY. L.A. INT'L & COMP. L.J. 569, 574-82 (1994) (discussing the difficulty of international enforcement of intellectual property laws, particularly patents, from developing countries' attempts to appropriate inventions from the industrialized world and the resulting strains between industrialized and developing countries); Rich & Weiswasser, *supra* note 24, at 7 (arguing that if domestic and international systems are not in place that permit both creators and owners of intellectual property rights to set and enforce their property rights, the creators and copyright owners will not be willing to put their financial interests at risk).

36. For a discussion of the philosophical differences underlying common law and civil law, see Linda Karr O'Connor, *International and Foreign Legal Research: Tips, Tricks, and Sources*, 28 CORNELL INT'L L.J. 417, 419 (1995); Laurel S. Terry, *An Intro to the European Community's Legal Ethics Code Part I: An Analysis of the CCBE Code of Conduct*, 7 GEO. J. OF LEGAL ETHICS, 1, 17 (1993); *see generally* Laura A. Pitta, *Economic and Moral Rights Under U.S. Copyright Law*, 12 WTR ENT. & SPORTS L. 3 (discussing the philosophical backdrop of the difference between common law and civil in the context of copyright); *cf.* Martin A. Voet, *Patent Litigation in Civil Law Countries*, in GLOBAL INTELLECTUAL PROPERTY SERIES 1993: SUCCESSFUL MULTI-COUNTRY PATENT LITIGATION STRATEGIES, at 95, 97-98 (PLI Pats., Copyrights, Trademarks & Literary Prop. Course Handbook Series No. 366, 1993) (explaining that judges in common law countries typically are practicing lawyers and make decisions after full hearings, while judges in civil law countries typically have little advocacy experience and make decisions based on the facts they deem relevant, unproven submissions of the parties, and technical information available to the court).

tant and make achieving international standards for the harmonization of levels of protection within our differing legal systems critical.

Of equal importance is ensuring the security of the information transmitted through the GII. Customers want to know that they are getting what they pay for, and creators are concerned that the integrity of their works be maintained. This problem transcends intellectual property protection, but is particularly relevant to ensuring that the creators will use the system.

Copyright can be given effect by technological safeguards such as software envelopes, headers, assurances of authenticity, encryption methods, and anti-piracy devices and systems. There will be a need for measures to prevent use of devices or services to overcome these safeguards. There is nothing that one human being can create that another human being cannot find a way to circumvent. This tie-in between copyright and technological measures is foreign to many traditional copyright experts, but will be critical to effective copyright enforcement in the GII.

There is no question that achieving the needed levels of harmonization will be a difficult process. Often, the technical experts responsible for IP policy are not aware of how the issues with which they deal relate to the overall policy objectives of their own governments. IP policy development must take into account broader national objectives.

To that end, I believe that it is critical that developed nations cooperate to develop an international IP regime that will promote the growth of the GII. I endorse the concept of harmonization of levels of legal and technological protection. These norms should be independent of the means by which these levels are achieved in individual countries. It's important that we work together in bilateral, plurilateral, and multilateral fora, especially the World Intellectual Prop-

erty Organization (“WIPO”),³⁷ to address many of these issues. But progress in recognizing their crucial importance to the GII has been slow.

To provide the economic basis for the commercial applications that will enable the development of the GII, levels of intellectual property protection must be harmonized, despite differences in theories of legal protection. Countries must also provide for legal means to ensure that the security of the GII is maintained, and that appropriate technological means are in place to protect intellectual property rights.

I believe it is essential that all the governments of the world concerned with developing the GII work toward achieving high-level, nondiscriminatory intellectual property protection needed for the healthy development, and growth, of the GII. This is especially important over this next year within the WIPO, where work will be done on the Protocol for Updating the Berne Convention for the protection of literary and artistic works,³⁸ and on a New Instru-

37. The United Nations established the WIPO in 1967 to “promote international protection of intellectual property rights and to administer international agreements relating to various aspects of intellectual property.” Nicole Telecki, *The Role of Special 301 in the Development of International Protection of Intellectual Property Rights After the Uruguay Round*, 14 B.U. INT’L L.J. 187, 190 (1996).

38. *Berne Convention for the Protection of Literary & Artistic Works*, 1 B.D.I.E.L. 715 (1994). In December 1996, members of WIPO will convene to draft a protocol to the Berne Convention. *World Trade Organization: Hearings Before the House Subcomm. on Trade of the Comm. on Ways and Means*, 104th Cong., 2d Sess. (1996) (testimony of Eric H. Smith, President, International Intellectual Property Alliance). The protocol will adapt international copyright rules to account for modern technological advances such as digital transmission. *Id.*; see also June M. Besek, *Copyright Law and Multimedia Works: Initiatives to Change National Laws and International Treaties to Better Accommodate Works of New Technology*, in *MULTIMEDIA AND THE LAW 1996: PROTECTING YOUR CLIENTS’ INTERESTS* at 69, 76 (PLI Pats., Copyrights, Trademarks & Literary Prop. Course Handbook Series No. 428, 1996) (noting that the WIPO “is currently working on the development of two international instruments, or treaties, relevant to multimedia works: a Protocol to the Berne Convention; and a ‘New Instrument’ that addresses the rights of producers and performers of phonograms (sound recordings)”). For a general description of the Berne Convention, see Lisa M. Brownlee, *Recent Changes in the Duration of Copyright in the United States and European Union: Procedure and Policy*, 6 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 579, 582-83 n.4. (1996).

ment to improve the protection of performers and producers of sound recordings.³⁹ In addition, I encourage cooperation in resolving the issues which separate us, and achieving improved protection for creative works and authors. To that end, the United States, through the Department of Commerce and the Patent and Trademark Office, is convening an Intellectual Property Conference of the Americas in July of 1996 in Los Angeles to discuss these issues and to pursue a number of IP initiatives on a hemispheric basis.⁴⁰ It is hoped that this will be only the first of many such conferences to tackle these issues on both regional and global bases.

Global intellectual property protection in the twenty-first century—it has already begun.

Thank you.

(1996).

39. See Besek, *supra* note 38, at 79 (“The New Instrument efforts have focused on the rights of performers and producers of phonograms, including moral rights of performers, economic rights of performers in live performances, economic rights of performers in fixed performances, economic rights of phonogram producers, term of protection, distribution rights, enforcement of rights, [and] national treatment . . .”).

40. The conference included discussions about the need for U.S. and foreign governments “to aggressively enforce copyright laws to protect American-made movies, videos and music,” Dawn Yoshitake, *Valenti Urges Government to Stop Film, Music Pirates*, L.A. DAILY NEWS, July 16, 1996, at B1, and the impact of patent piracy on industry innovation in Argentina. *US IPR Meeting Spotlights Argentina*, MARKET LETTER, July 29, 1996, available in Westlaw, News Library, Allnews File.