

HIGH-SPEED CHASE ON THE INFORMATION SUPERHIGHWAY: THE EVOLUTION OF CRIMINAL LIABILITY FOR INTERNET PIRACY

I. INTRODUCTION

The Internet is known by many names: the Information Superhighway, the World Wide Web,¹ the National Information Infrastructure,² or simply “the Net.” However confusing this terminology may be, most people in modern countries today are very much aware of the Internet and its growing popularity. The Computer Industry Almanac estimates that by the end of 1998, approximately 150 million people worldwide were “surfing” the Internet, up from nearly 40 million in 1995.³ Nowadays, the number of Internet users is growing exponentially, expected to reach an estimated 320 million by 2001 and 720 million by 2006.⁴

1. Although the World Wide Web is actually only a component of the Internet, it is commonly perceived to be synonymous with the Internet itself. See *ACLU v. Reno*, 929 F. Supp. 824, 836 (E.D. Pa. 1996), *aff'd*, *Reno v. ACLU*, 521 U.S. 844 (1997).

2. The National Information Infrastructure is actually a broader concept that “encompasses digital, interactive services now available, such as the Internet, as well as those contemplated for the future.” BRUCE A. LEHMAN & RONALD H. BROWN, U.S. DEP’T OF COMMERCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 2 n.5 (1995), available in *U.S. Patent and Trademark Office* (visited Sept. 14, 1999) <<http://www.uspto.gov/web/offices/com/doc/ipnii/index.html>> [hereinafter NII WHITE PAPER].

3. See *North America Is the Leading Region for Internet Users According to the Computer Industry Almanac*, PR NEWSWIRE, Aug. 17, 1999, available in LEXIS, News Library, PR Newswire File.

4. See *id.* (“North America will remain the leading region for Internet users until at least 2005. It will grow from about 83 million Internet users at year-end 1998 to nearly 230 million by year-end 2005. West Europe is growing faster than North America and will be a close second by 2005 with over 202 million Internet users. The Asia-Pacific region is growing even faster

Such massive growth inevitably breeds some unwanted weeds in the garden. The Internet's sheer size and anonymous nature allow countless Internet users to illegally pirate computer software and distribute it on the Internet without fear of apprehension.⁵ Due to the ease with which software can be copied and distributed worldwide—virtually instantaneously—copyright owners have become reluctant to make their protected works readily available on the Internet without reasonable assurances against massive piracy.⁶ For the software industry alone, rampant copyright infringement now accounts for billions of dollars in worldwide losses each year.⁷ Naturally, software companies and other copyright-based industries have urged the federal government for years to strengthen copyright protections in order to address the problem.⁸

In 1993, President Clinton formed the Information Infrastructure Task Force for the purpose of articulating and implementing the Administration's policy regarding the Internet, which it has termed the National Information Infrastructure ("NII").⁹ This policy was first articulated in a report by the Working Group on Intellectual Property Rights in 1995, commonly known as the "White Paper."¹⁰

and will have over 170 million Internet users in 2005.").

5. See Miro Kazakoff, *The Ethics of Piracy Internet: The High Seas for Illegal Downloading*, HARTFORD COURANT, Aug. 28, 1997, at E1; see also Teddy C. Kim, Note, *Taming the Electronic Frontier: Software Copyright Protection in the Wake of United States v. LaMacchia*, 80 MINN. L. REV. 1255, 1266 (1996) ("Because of the Internet's global breadth, and the ease with which it is navigated, a perpetrator can be very remote from the actual 'crime scene.'").

6. See S. REP. NO. 105-190, at 8 (1998).

7. See John G. Spooner, *Wizards to Thwart Pirates: Microsoft Registration Wizard for Office 2000 Premium Edition*, PC WEEK, Dec. 14, 1998, available in 1998 WL 25003887 (noting that worldwide losses from piracy in 1995, 1996, and 1997 cost the software industry \$13.3 billion, \$11.2 billion, and \$11.4 billion respectively).

8. See 141 CONG. REC. S14,550 (daily ed. Sept. 28, 1995) (statement of Sen. Hatch) (discussing the need to enact "rules of the road" to protect copyrighted works traveling on the Information Superhighway). See generally NII WHITE PAPER, *supra* note 2 (suggesting clarification and amendment of the Copyright Act of 1976 to ensure that the NII reaches its full potential).

9. See NII WHITE PAPER, *supra* note 2, at 1.

10. See generally NII WHITE PAPER, *supra* note 2 (report prepared by the Clinton administration to address intellectual property rights in light of new

The Working Group, headed by Secretary of Commerce Ronald Brown and Commissioner of Patents and Trademarks Bruce Lehman, argued that, while copyright protection for creative works on the NII was necessary for the NII to develop to its full potential, relatively few amendments to existing copyright law were required.¹¹ Accordingly, the Working Group's White Paper proposed a few select amendments to the Copyright Act of 1976 ("Copyright Act")¹² in order to "take proper account of the current technology."¹³

Based upon the Working Group's proposals, both houses of Congress proposed several pieces of legislation, which eventually culminated in the passage of two acts in 1998: the No Electronic Theft Act ("NET Act")¹⁴ and the Digital Millennium Copyright Act ("DMCA").¹⁵ These acts were eagerly supported and acclaimed by copyright-based industries, such as software companies, movie studios, record companies, and book publishers. However, in its "high-speed" attempt to curtail the problem of Internet piracy, Congress appears to have given more consideration to the interests of these powerful industry groups than to those of the general public, for whom the benefits of copyright law were originally intended.¹⁶

This Comment will examine the current state of criminal liability for software piracy on the Internet in light of the newly enacted No Electronic Theft Act and Digital Millennium Copyright Act. Part II is a short survey of the Internet, outlining its origins and its various forms of communication. Part III discusses how federal copyright law, including the NET Act, addresses criminal copyright infringement on the Internet and who is affected by it. Part IV examines the DMCA's criminal provisions and their potential impact on this area of copyright law. Finally, Part V asserts that while the

technologies, particularly the Internet).

11. See NII WHITE PAPER, *supra* note 2, at 17.

12. Pub. L. No. 94-553, 90 Stat. 2541 (1976) (codified as amended at 17 U.S.C. §§ 101-1101 (1976)).

13. NII WHITE PAPER, *supra* note 2, at 212.

14. Pub. L. No. 105-147, 111 Stat. 2678 (codified as amended in scattered sections of 17 U.S.C. and 18 U.S.C.).

15. Pub. L. No. 105-304, 112 Stat. 2860 (codified as amended in scattered sections of 17 U.S.C.).

16. See *infra* Part V.

NET Act necessarily fills a void in the Copyright Act, the DMCA is too vague, overbroad, and potentially more harmful than helpful to the public. Part V also posits several alternatives to the drastic criminal measures prescribed by the DMCA.

II. A ROADMAP OF THE INFORMATION SUPERHIGHWAY

A. *Origin of the Internet*

The Internet was created in 1969 as an experimental project of the Advanced Research Project Agency, and was originally called ARPANET.¹⁷ This was a network¹⁸ of computers owned by the military, defense contractors, and university laboratories conducting defense-related research.¹⁹ Soon, ARPANET expanded beyond its origins in the United States to connect to universities, corporations, and people all around the world.²⁰ During this process, the Defense Advanced Research Projects Agency (“DARPA”) developed rules and procedures, called “protocols,” for sending and receiving data between computers on the network.²¹ Thus, ARPANET eventually came to be known as “DARPA Internet,” and finally just the “Internet.”²²

As ARPANET grew, similar networks were developed to link universities, research facilities, businesses, and individuals together.²³ Eventually, each of these private networks were all linked together, allowing users of any computer linked to one of the networks to transmit communications to each other.²⁴ This series of linked networks—which are linked computer networks themselves—formed the backbone of the modern day Internet.²⁵ The Internet now

17. See *ACLU v. Reno*, 929 F. Supp. 824, 831 (E.D. Pa. 1996).

18. A “network” is a group of computers linked together in order to exchange files and messages (and to share equipment such as printers). See *id.* at 830-31.

19. See *id.* at 831.

20. See *id.*

21. See Needham J. Boddie, II et al., *A Review of Copyright and the Internet*, 20 CAMPBELL L. REV. 193, 195 (1998).

22. See *ACLU*, 929 F. Supp. at 831.

23. See *id.* at 832.

24. See *id.*

25. See *id.*

consists of a collection of national, regional, and local networks running under a standardized set of protocols.²⁶

Although the Internet is subsidized by the federal government of the United States, no single entity owns it, nor is there any centralized authority or control over it.²⁷ Rather, regional networks are connected so that they may all communicate with each other.²⁸ Thus, if one network becomes inaccessible, information is re-routed through other networks until it reaches its intended target.²⁹ Due to the Internet's international scope, however, it is not politically feasible for any *single* authority to control all the traffic of information on the Internet.³⁰ Many countries have different standards concerning distribution and copyright protection of information over the Internet.³¹ Thus, if regulations are to govern the Internet as a whole, they must be agreed upon by international treaty and implemented individually by each participating country.³²

B. Accessing the Internet

There are two common methods used to access the Internet. Users may either employ a computer connected to a network which gives them access to the Internet,³³ or they may use a personal computer with a modem³⁴ to connect onto such a network. These

networks are controlled by a wide variety of commercial, academic,

26. This standardized set of protocols is also known as "Internet Protocols." See Boddie et al., *supra* note 21, at 195-96.

27. *See id.* at 196.

28. *See id.*

29. *See ACLU*, 929 F. Supp. at 831.

30. *Cf. id.* at 832 (asserting that it is not "technically feasible for a single entity to control all of the information conveyed on the Internet").

31. *See* Shira Perlmutter, *Future Directions in International Copyright*, 16 CARDOZO ARTS & ENT. L.J. 369, 370-71 (1998). However, Perlmutter notes that while many countries have individual approaches to various issues, "a tremendous amount of harmonization has taken place on the core concepts of copyright." *Id.* at 370.

32. *See id.* at 372-73. International trade agreements also sometimes incorporate copyright provisions as a component. *See id.* at 373.

33. *See ACLU*, 929 F. Supp. at 832.

34. A device used to connect a personal computer over a telephone line to a larger computer or computer network. *See id.*

and governmental organizations.³⁵

Typically, individuals obtain Internet access through a commercial Internet Service Provider ("ISP"), which offers modem access to its own Internet-linked network.³⁶ An ISP generally charges monthly or hourly fees, depending on the type of account, for access to the Internet.³⁷ National commercial services, such as America Online, Prodigy, and Microsoft Network, offer their own online content³⁸ in addition to Internet access.³⁹

Although these commercial services are most popular, many students, faculty, and researchers may also access the Internet through their respective colleges, universities, libraries, and institutions.⁴⁰ Educational institutions frequently employ their own network, linked directly to the Internet, so that students and professors may have free access to the Internet using computers on campus.⁴¹ Similarly, many employers link their office computer networks to the Internet in order to provide their employees with access to other businesses, online services, and various sources of valuable information worldwide.⁴²

In addition, individuals can access the Internet using a "bulletin board system" ("BBS"), a local dial-up computer service where users can exchange ideas and information.⁴³ BBSs range from a single computer with only one line, allowing only one user at a time, to multiple computers linked together servicing multiple users simultaneously.⁴⁴ Some are free, while others charge a small fee for access.⁴⁵ Unlike ISPs, however, not all BBSs offer direct access to the Internet.⁴⁶

35. *See id.*

36. *See id.* at 833.

37. *See id.*

38. Such as news services, chat rooms, bulletin boards, and online shopping services.

39. *See ACLU*, 929 F. Supp. at 833.

40. *See id.* at 832.

41. *See id.*

42. *See id.* at 832-33.

43. *See id.* at 833.

44. *See id.* at 833-34.

45. *See id.* at 834.

46. *See id.*

C. Communicating on the Internet

When accessing the Internet, a user must also employ the appropriate method of communication.⁴⁷ This mostly depends upon which type of information and by what means the user wishes to send and/or receive data over the Internet. The most common methods are:

- (1) electronic mail (“e-mail”),⁴⁸
- (2) automatic mailing list services (“listservs”),⁴⁹
- (3) newsgroups, such as USENET,⁵⁰
- (4) Internet Relay Chat (“IRC”),⁵¹
- (5) “Telnet” real time remote computer operation,⁵² and
- (6) remote information retrieval, such as File-Transfer Protocol (“FTP”),⁵³ or the World Wide Web (“Web”).⁵⁴

Of these methods, IRC, USENET, FTP, and the Web are most commonly used to transfer pirated software over the Internet.⁵⁵ IRC

47. *See id.*

48. E-mail is comparable to regular postal mail, but far more efficient; one need only address a message to one or more people and then transmit it electronically over the Internet. *See id.*

49. Listservs are automatic mailing list services which forward messages sent by subscribers (usually on a particular topic) to the rest of the subscribers in the group. *See id.*

50. Newsgroups, such as USENET, are distributed message databases which present open discussions and exchanges on particular topics. *See id.*

51. IRC is a “global chat network,” made up of a series of chat servers all over the world, which allows multiple users to type messages to each other, or “chat,” in real time. *See* Andy Patrizio, *Despite Stricter Laws, Internet Piracy Flourishes*, CMP TECHWIRE, Apr. 7, 1998, available in 1998 WL 9295014. Some commercial ISPs and Web sites offer their own version of IRC, called “chat rooms,” which allow users to converse in private or in public forums set aside for specific discussion. *See* Boddie et al., *supra* note 21, at 199-200.

52. Telnet allows users to remotely access and control computers that are physically located elsewhere. *See id.* at 200.

53. FTP is the protocol used to list the names of computer files located on a host computer, or “server,” so that a user may easily download files from that server onto his or her own local computer. *See* ACLU, 929 F. Supp. at 835.

54. *See id.* at 836.

55. *See* Jerome Woody, *Computer Lovers Should Beware of Net Piracy*, SYRACUSE HERALD-JOURNAL, Oct. 1, 1998, at 20, available in 1998 WL 4382323.

is a convenient forum for users to advertise and request pirated software in disguised chat rooms.⁵⁶ USENET is an extensive conglomeration of newsgroups that allows users to discuss topics of interest and to exchange computer files.⁵⁷ FTP host computers act as a convenient repository for pirates to store illegal software, easily downloadable with the proper username and password.⁵⁸

The most well-recognized of these methods, however, is the World Wide Web.⁵⁹ The Web was originally developed at CERN, the European Particle Physics Laboratory, to allow international teams of researchers and engineers to easily share information amongst themselves.⁶⁰ The Web was designed to serve as a universal online database, able to store a vast array of information and accessible to users around the world.⁶¹ To this day, it is by far the “most advanced information system developed on the Internet.”⁶²

The Web is based on the Hypertext Markup Language (“HTML”) and programs that “browse”⁶³ the Web by displaying HTML documents, which contain text, images, sound, animation, or video.⁶⁴ HTML documents, also known as “Web sites,” often have links to other documents on the Internet, which can be accessed by simply clicking on them with a computer mouse.⁶⁵ The Web itself is simply a series of such documents stored in various computers around the world.⁶⁶ It was designed so that anyone with a computer could become part of the Web by simply running the appropriate

56. See Patrizio, *supra* note 51. Some software pirates even use programs called “bots,” which automatically advertise and receive orders for pirated software on IRC channels. *See id.*

57. See Kazakoff, *supra* note 5, at E1.

58. *See supra* note 53.

59. *See* *ACLU v. Reno*, 929 F. Supp. 824, 836 (E.D. Pa. 1996).

60. *See* Boddie et al., *supra* note 21, at 201.

61. *See id.*

62. *ACLU*, 929 F. Supp. at 836.

63. Such as Netscape’s Navigator or Microsoft’s Internet Explorer.

64. *See ACLU*, 929 F. Supp. at 836.

65. *See id.*

66. *See id.*

software on a computer and attaching it to the Internet.⁶⁷ Consequently, like the Internet, no single organization controls the Web, nor is there any centralized point from which anyone may monitor the Web's content.⁶⁸

Several helpful services are available, however, to search the Web when one needs to find particular information. These services, called "search engines,"⁶⁹ allow users to search for Web sites by picking a subject category or by using key words to focus on a topic.⁷⁰ For example, a user looking for biographical information on Justice Learned Hand would simply type "Learned Hand" into a search engine, and then be presented with a list of Web sites about Justice Hand or sites that refer to his name. Such services, combined with the accessible nature of the Internet, make the Web the largest, most versatile source of information in the world.⁷¹

D. Software Piracy on the Internet

Unfortunately, the accessible nature of the Internet has also manifested some definite drawbacks. Despite efforts by vendors and anti-piracy groups, software piracy⁷² is flourishing on the Internet.⁷³ Software is a particularly attractive commodity due to its relatively high value on the black market and the fact that a perfect reproduc-

67. *See id.* at 838.

68. *See id.* However, many national governments have restricted the use of pornography on host computers located within their national borders. *See* Robyn Forman Pollack, Comment, *Creating the Standards of a Global Community: Regulating Pornography on the Internet – An International Concern*, 10 TEMP. INT'L & COMP. L.J. 467, 488 (1996).

69. Such as Yahoo, Lycos, Infoseek, Altavista, or HotBot.

70. *See ACLU*, 929 F. Supp. at 837.

71. *See* the "Findings of Fact" section in *ACLU*, 929 F. Supp. at 830-49, for more background information on the Internet.

72. "Piracy" is the term popularly used to describe the unauthorized duplication of software programs, sound recordings, films, etc. *See* Mary Jane Saunders, *Criminal Copyright Infringement and the Copyright Felony Act*, 71 DENV. U. L. REV. 671, 671 n.2 (1994).

73. *See* Patrizio, *supra* note 51. On October 1, 1999, the author of this article conducted a query on Altavista, a comprehensive search engine, which found more than 2 million Web sites that contain the word "warez"—slang for pirated software.

tion may be made in only a matter of seconds.⁷⁴ Pirated software, commonly known as “Warez,”⁷⁵ on the Internet, is openly advertised on Web sites, IRC channels, and newsgroups worldwide because these sites provide the perfect forum for pirates to conveniently sell and trade pirated software to the general public.⁷⁶

Software pirates normally fall into one of three categories: (1) organized pirates, consisting of hackers who copy on a large scale and usually for profit; (2) individual computer users, who copy software from the Internet, friends, or colleagues in order to avoid paying its retail price; and (3) corporate employees, individuals in the workplace who copy unlicensed software, with or without management approval.⁷⁷

An experienced pirate, or hacker, can breach the copy protections of virtually any computer program, some worth thousands of dollars, and sell it for a mere fraction of its value.⁷⁸ Internet users need only request what they want on an IRC channel or search for it on a Web site, and may thereby download a full version of that software in a matter of minutes.⁷⁹ However, many pirates simply distribute their “Warez” for free as a way of garnering notoriety and respect among their peers.⁸⁰ Others seem to engage in software pi-

74. See Saunders, *supra* note 72, at 678.

75. “Warez” is a slang word for software that has been stripped of its copy protection and made available on the Internet for downloading. See *Business/Edge: Learning Computer Language*, STAR-LEDGER (Newark, N.J.), Oct. 5, 1998, at O25.

76. IRC channels are a veritable black market for pirates to advertise Web sites linked to pirated software. See Patrizio, *supra* note 51.

77. See Greg Short, *Combatting Software Piracy: Can Felony Penalties for Copyright Infringement Curtail the Copying of Computer Software?*, 10 SANTA CLARA COMPUTER & HIGH TECH. L.J. 221, 222 (1994). Of the three categories, some commentators consider corporate pirates to be the most unmanageable type of pirate. See *id.*; see also Amy Cortese, *A Felonious Crime: Software Copyright Infringement*, INFORMATION WEEK, Sept. 14, 1992, at 14 (quoting Ron Palenski, general counsel for Information Technology Association of America, commenting that software piracy is mostly within corporations).

78. See Woody, *supra* note 55, at 20. For instance, the author has seen programs such as Adobe Photoshop, a photographic imaging program which normally retails at over \$500, offered on IRC channels for only \$10.

79. See *id.*

80. See *id.*

racy simply for the sake of anarchy, as a way to thumb their noses at the government and software industry.⁸¹

What is more problematic is that software pirates can make themselves completely anonymous and thus difficult for the authorities to track down via the Internet. Anonymous remailers⁸² are popular for this purpose, making it virtually impossible to trace an e-mail message to its actual sender.⁸³ Pirates can also adopt an alias, subscribe to an account under that assumed name, and thereby access the Internet "disguised."⁸⁴ Skilled pirates can also hack people's phone records and Internet accounts to assume their electronic identity.⁸⁵ Often, pirates will store their bootlegged software on a publicly accessible remote computer, such as an FTP server,⁸⁶ where thousands of copies can be downloaded in a matter of hours.⁸⁷ By the time the machine's owner has discovered the pirated software

81. See Kim, *supra* note 5, at 1264-65. Pirates and users alike have no compunctions about software piracy. "It becomes a hobby. It becomes a game," says Peter Beruk of the Software Publishers Association, discussing college-age pirates. "It almost becomes a bragging thing." Kazakoff, *supra* note 5, at E1.

82. Anonymous remailers are remote computers that intercept an e-mail transmission and resend it to the intended recipient stripped of the sender's e-mail address. Countries with strict privacy laws, such as Finland, commonly host such computers. See Noah Levine, *Establishing Legal Accountability for Anonymous Communication in Cyberspace*, 96 COLUM. L. REV. 1526, 1530-37 (1996) (discussing various problems caused by anonymous remailers and countervailing privacy considerations).

83. See Steven Levy, *How to Launder Your E-Mail*, WIRED, June 1994, at 50.

84. See Steven S. Ross, *Public Relations in Cyberspace*, PUB. REL. J., May 1995, at 36-37; see also Marjorie Lambert, *Information Highway Patrol Pirates, Peeping Toms and Bandits Are Just a Few of the Criminals Who Lurk on the Internet*, SUN-SENTINEL (Ft. Lauderdale, Fla.), May 28, 1995, at 1G (discussing how when "shielded by anonymity, computer users may stalk others electronically, send obscene or offensive material to unwilling recipients or hack into computer files to gain confidential information or alter records").

85. See Joshua Quittner, *Automata Non Grata*, WIRED, Apr. 1995, at 119-21 (Author notes the ease with which pirates can assume other people's electronic identities. One expert commented that "this kind of thing is happening all the time these days," and "it's getting to be a real nuisance.").

86. See *supra* note 53.

87. See Marc S. Friedman & Kristin Bissinger, "Infojacking": *Crimes on the Information Superhighway!*, 507 PLI/PAT 1107, 1121 (1998).

and deleted it, the damage has already been done and the pirate is nowhere to be found.

Software piracy on the Internet has not only hurt the entire software industry, but has adversely affected the United States economy.⁸⁸ The Software Publishers Association (“SPA”), an organization created to fight Internet piracy,⁸⁹ estimates that nearly half of the 523 million new software programs used in 1996 were pirated.⁹⁰ The SPA also claims that the software industry loses more than \$13 billion a year from piracy.⁹¹ These losses are ultimately absorbed by the consumer because software companies are forced to raise their prices to offset the fiscal impact on their business.⁹²

In an era when the United States economy relies heavily on job opportunities and the profits generated by copyrighted works, software piracy has become a severe bane on the economic growth of the United States.⁹³ Since more than half of U.S. workers are employed in information-based jobs, the potential profits lost by piracy

88. See Short, *supra* note 77, at 221 (Author notes that “[b]y 1990, software piracy in the United States accounted for approximately \$2.4 billion in lost income per year for software manufacturers, up from approximately \$500 million per year” in 1980. “Worldwide, the losses are estimated to have been \$10-12 billion in 1990.”).

89. Also known as the “Software Police,” the SPA’s approach towards fighting software piracy is to identify suspect pirates or companies and, with the use of a court order, search for and seize any copies of unlicensed software. See *id.* at 228.

90. See *Cybersleuths track down pirates abusing copyrights*, DALLAS MORNING NEWS, May 19, 1997, at 1D.

91. See John Borland, *SPA Sues Net Pirates*, CMP TECHWIRE, Oct. 23, 1997, available in 1997 WL 18041523; see also Kim, *supra* note 5, at 1270 (noting that Europe accounts for 39% of the worldwide losses, followed by Asia at 29% and the United States and Canada at 21%; in China, 98% of the software in use is pirated).

92. See Timothy D. Howell, Comment, *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, 621 (1996).

93. See *Clinton Statement Regarding the Digital Millennium Copyright Act*, U.S. NEWSWIRE, Oct. 12, 1998, available in 1998 WL 13606322 (stating that “American copyright-based industries . . . contribute more than \$60 billion annually to the balance of U.S. trade”); see also NII WHITE PAPER, *supra* note 2, at 10 (stating that “[m]ore than half of the U.S. work force is in information-based jobs, and the telecommunications and information sector is growing faster than any other sector of the U.S. economy”).

translate into countless lost jobs and lower wages.⁹⁴ Software piracy hurts small companies most, however, because they lose income necessary to continue operating and remain competitive.⁹⁵ Consumers also suffer because less competition means fewer innovative goods and services will be available on the market. This translates into “a reduction in profits for manufacturers, a reduction in money available for investment and research in new products, and, consequently, more expensive software for the consumer.”⁹⁶

III. RULES OF THE ROAD: COPYRIGHT LAW ON THE INTERNET

Federal copyright law is derived from Article I, section 8, clause 8 of the United States Constitution⁹⁷ and is governed by the Copyright Act of 1976.⁹⁸ In its purest form, copyright law is aimed at protecting the original expression of ideas.⁹⁹ The fundamental purpose of the constitutional grant of copyright, however, is to encourage individuals to produce and disseminate their creative works for the benefit of the public.¹⁰⁰ By granting authors exclusive rights to their creations, copyright law creates such an incentive.¹⁰¹

94. See 136 CONG. REC. H13316 (daily ed. Oct. 27, 1990) (statement of Rep. Moorhead) (stating that lost sales due to copyright infringement worldwide could be “translated into 300,000 to 600,000 jobs lost for the American worker”).

95. See Vicky Gerl Neumeyer, Comment, *Software Copyright Law: The Enforceability Sham*, 35 LOY. L. REV. 485, 485 (1989).

96. Short, *supra* note 77, at 223-24.

97. U.S. CONST. art. I, § 8, cl. 8, also known as the “Copyright Clause,” states: “Congress shall have Power . . . [t]o promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

98. Pub. L. No. 94-553, 90 Stat. 2541 (1976) (codified as amended at 17 U.S.C. §§ 101-1101 (1976)).

99. See 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.01(A), at 2-7 (1999) [hereinafter NIMMER ON COPYRIGHT].

100. See *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975); see also *Computer Assocs. Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 711 (2d Cir. 1992) (discussing how “[t]he interest of the copyright law is not in simply conferring a monopoly on industrious persons, but in advancing the public welfare through rewarding artistic creativity, in a manner that permits the free use and development of non-protectable ideas and processes”).

101. See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984); see also *Mazer v. Stein*, 347 U.S. 201, 219 (1954)

Nonetheless, there has always been a “delicate equilibrium” between the competing interests of the public and the copyright owner.¹⁰² While the copyright owner wishes to reap the maximum rewards from his or her creation, the public wishes to have as much access to the author’s work as it can. Thus, copyright law affords protection to authors and inventors as an incentive to create, but it must also “appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation.”¹⁰³

A. Copyright Act of 1976

1. Historical overview

The inception of modern copyright law began when Congress enacted the Copyright Act of 1909,¹⁰⁴ which sought to codify the principles underlying the Copyright Clause.¹⁰⁵ Over time, the Copyright Act of 1909 became problematic because the statutory scheme clearly did not contemplate the development of computers and high technology. Thus, the Copyright Act of 1976 rewrote much of copyright law—except where it applied to copyrighted works embodied in computers.

This issue awaited further study by the Commission on New Technological Uses of Copyright Works, which issued its final report in 1978, leading to the adoption of the Computer Software Copyright Act of 1980.¹⁰⁶ This Act amended the list of definitions under the Copyright Act to include “computer program.”¹⁰⁷ The 1980 Act also replaced 17 U.S.C. § 117 with a provision that allows a lawful owner

(“[E]ncouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in ‘Science and useful Arts.’”).

102. *Computer Assocs.*, 982 F.2d at 696.

103. *Id.*

104. Pub. L. No. 60-349, 35 Stat. 1075, 1082 (1909).

105. U.S. CONST. art. I, § 8, cl. 8; *see also supra* notes 99-103 and accompanying text.

106. Pub. L. No. 96-517, 94 Stat. 3015 (1980).

107. *See id.* ch. 38, sec. 211, § 10(a), 94 Stat. at 3028. A “computer program” is defined as “a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.” 17 U.S.C. § 101 (1994).

of a computer program to make copies provided they are “created as an essential step in the utilization of the computer program” or for “archival purposes.”¹⁰⁸

2. Copyright protection under the Copyright Act

The Copyright Act protects “original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.”¹⁰⁹ Copyright law thus protects the original expression of an idea but not the idea itself.¹¹⁰ The Copyright Act lists several types of works eligible for protection, such as literary works,¹¹¹ musical works, dramatic works, motion pictures, and sound recordings.¹¹² In keeping pace with technology, the definition of “literary works” has expanded to include all forms of digitized expression, including text, sounds, images, video, and data.¹¹³ Thus, computer software has become eligible for copyright protection under the umbrella of “literary works.”¹¹⁴

Once a copyright has been established, its owner has the following exclusive rights:

- (1) to reproduce the copyrighted work in copies or phono-

108. 17 U.S.C. § 117 (1994).

109. *Id.* § 102(a). A work is “fixed” when it is “sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.” *Id.* § 101.

110. *See id.* § 102(b). The term “original” refers to any work created through an author’s own independent effort, *see Alfred Bell & Co. v. Catalda Fine Arts*, 191 F.2d 99, 102-03 (2d Cir. 1951), and possessing some expression of creativity, *see Feist Publications v. Rural Tel. Serv. Co.*, 499 U.S. 340, 350-51 (1991).

111. “‘Literary works’ are works, other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tapes, disks, or cards, in which they are embodied.” 17 U.S.C. § 101.

112. *See id.* § 102.

113. *See Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1249 (3d Cir. 1983).

114. *See Sega Enters., Ltd. v. Accolade, Inc.*, 785 F. Supp. 1392, 1399 n.4 (N.D. Cal. 1992).

- records;
- (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.¹¹⁵

Copyright on an international scale is governed by the Berne Convention for the Protection of Literary and Artistic Works,¹¹⁶ which required Congress to amend the Copyright Act to provide measures for the mutual enforcement of copyrights between nations.¹¹⁷ The Berne Convention provides authors with a minimum set of internationally recognized rights, including reproduction, adaptation, performance, and other forms of communication to the public.¹¹⁸ However, the Berne Convention did not implement any specific means for copyright owners to enforce their rights, nor did it impose penalties on member states that fail to satisfy their obligations.¹¹⁹

These deficiencies were solved by the Agreement on Trade-Related Aspects of Intellectual Property Rights ("TRIPS

115. 17 U.S.C. § 106 (1994 & Supp. 1998).

116. Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, 828 U.N.T.S. 221 (amended Oct. 2, 1979) [hereinafter Berne Convention].

117. Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, 102 Stat. 2853.

118. See Berne Convention, *supra* note 116, at 227-31, 241-45.

119. See Perlmutter, *supra* note 31, at 372-73.

Agreement”),¹²⁰ which became effective in 1995 following the Uruguay Round negotiations and the creation of the World Trade Organization.¹²¹ The TRIPS Agreement incorporates the substantive provisions of the Berne Convention and provides detailed enforcement mechanisms which participating countries must make available to copyright owners.¹²² The World Intellectual Property Organization (“WIPO”) Treaties, signed in 1996 and implemented by the DMCA in 1998, provide further remedies for copyright owners to enforce their rights internationally.¹²³

3. The fair use doctrine

A copyright holder’s exclusive rights are subject to numerous restrictions, among them the doctrine of “fair use.” The fair use doctrine actually *permits* the infringement of a copyright owner’s exclusive rights, provided that certain conditions are met.¹²⁴ The Copyright Act lists four factors to be considered in determining 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.¹²⁵

The fourth factor is generally considered the most important,¹²⁶ and commercial use of a copyrighted work ordinarily weighs against a finding of fair use.¹²⁷

120. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, 331 I.L.M. 1125, 1197.

121. See Perlmutter, *supra* note 31, at 374.

122. See *id.* at 374-75.

123. See *supra* notes 185-86 and accompanying text.

124. See 17 U.S.C. § 107 (1994).

125. *Id.*

126. See NII WHITE PAPER, *supra* note 2, at 79.

127. See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 451 (1984).

4. Criminal liability under the Copyright Act

Copyright infringement was not a criminal offense until 1897, 107 years after the first federal copyright act was passed, by virtue of a congressional amendment.¹²⁸ However, those criminal provisions were limited to unlawful performances and representations of copyrighted dramatic and musical compositions that were “willful and for profit.”¹²⁹ Such copyright infringement was treated as a misdemeanor, punishable by imprisonment for up to one year.¹³⁰

In 1909, copyright law was substantially revised and its criminal provisions were expanded to cover infringement of all copyrighted material.¹³¹ The 1909 Act’s legislative history indicates that the rationale behind these changes was to provide protection against pirates who “were both financially irresponsible and transient in their business locations, making injunctions and civil damages futile.”¹³²

In 1971, the criminal provisions of the Copyright Act of 1909 were expanded to cover willful, for-profit infringement of sound recordings, in response to losses of over \$100 million in the recording industry from record and tape piracy.¹³³ Then, in 1974, criminal penalties for infringement of sound recordings were increased due to the perception that “record piracy is so profitable that ordinary penalties fail to deter prospective offenders.”¹³⁴ Congress raised the maximum fine for copyright infringement of a sound recording,¹³⁵ but refused to increase the maximum prison sentence because it considered copyright infringement “essentially

128. See Act of May 31, 1790, ch. 15, 1 Stat. 124 (first federal copyright act); Act of Jan. 6, 1897, ch. 4, 29 Stat. 481 (first criminal provisions).

129. Act of Jan. 6, 1897, 29 Stat. at 482.

130. See *id.*

131. See Copyright Act of 1909, ch. 320, § 28, 35 Stat. 1075, 1082.

132. John Lindenberg-Woods, *The Smoking Revolver: Criminal Copyright Infringement*, BULL. COPYRIGHT SOC’Y 63, 66 (1979). Thus, nomadic performers, such as traveling thespian groups, who performed copyrighted works without permission while moving from town to town, could be prosecuted under the Copyright Act. See *id.*

133. See Saunders, *supra* note 72, at 674.

134. H.R. REP. NO. 93-1581, at 4 (1974).

135. See 17 U.S.C. § 506(a) (1978) (raising the maximum fine for first time offenders to \$25,000 and for repeat offenders to \$50,000).

an economic offense.”¹³⁶

The Copyright Act of 1976 made several more revisions. The “willfully and for profit” mens rea requirement was modified to “willfully and for purposes of commercial advantage or private financial gain.”¹³⁷ Courts found that this mens rea requirement did not require actual causation, but that an infringer need only have *intended* to receive a commercial advantage or financial gain.¹³⁸ Criminal penalties were also increased; for general copyright infringement, the maximum fine was increased to \$10,000, whereas for sound recordings and motion pictures, the maximum fine was increased to \$25,000.¹³⁹

In 1982, in response to strong lobbying pressure from the motion picture and sound recording industries, Congress increased the criminal penalties for the reproduction or distribution of sound recordings, motion pictures, or other audiovisual works.¹⁴⁰ The legislative history indicates concerns over hundreds of millions of dollars lost per year due to the widespread growth of piracy in those industries and “the huge profits to be made, while the relatively lenient penalties provided by the current law have done little to stem the tide.”¹⁴¹ Perhaps more importantly, there was a concern over the reluctance among federal prosecutors and judges to prosecute copyright infringement because they regarded it as less serious than a felony, which resulted in less prosecutions as well as more lenient

136. H.R. REP. NO. 93-1581, at 4.

137. 17 U.S.C. § 506(a). “Willful” infringement requires that the act be voluntary, with knowledge that it was prohibited by law, and with the intent of violating the law. *See* 4 NIMMER ON COPYRIGHT, *supra* note 99, § 15.01, at 15-8 & n.13. In passing § 506(a), Congress stressed that there should be “important safeguards to ensure that isolated but unauthorized copying, and ordinary business disputes are not subject to felony penalties.” 138 CONG. REC. H11,130 (daily ed. Oct. 3, 1992) (statement of Rep. Hughes).

138. *See* *United States v. Cross*, 816 F.2d 297, 301 (7th Cir. 1987); *see also* *United States v. Moore*, 604 F.2d 1228, 1235 (9th Cir. 1979) (holding that defendant could be convicted under 17 U.S.C. § 506(a) even though there was insufficient evidence that she realized either a commercial advantage or private financial gain from an alleged conspiracy to infringe copyrights).

139. Repeat offenders faced fines of up to \$50,000 and up to two years in prison, or both. *See* 17 U.S.C. § 506(a).

140. *See* 18 U.S.C. § 2318 (1982).

141. S. REP. NO. 97-274, at 4 (1982).

sentences in the few cases actually pursued.¹⁴² Thus, under the 1982 legislation, criminal penalties for the unauthorized reproduction or distribution of at least sixty-five copies of a motion picture, or at least one hundred copies in the case of sound recordings, within a 180-day period were increased to a maximum fine of \$250,000, up to five years in prison, or both.¹⁴³

In 1992, the continual, rapid growth of piracy encouraged Congress to establish felony penalties for *all* categories of copyright infringement under the Copyright Felony Act of 1992.¹⁴⁴ This amendment was primarily in response to the tremendous growth of lost profits due to software piracy, estimated at \$2.4 billion in 1990.¹⁴⁵ The software industry argued that the piracy which plagued the motion picture and record industry in the previous decade was now crippling the software industry and that, therefore, the same criminal penalties ought to be employed as a remedy.¹⁴⁶ Congress thus expanded the penalty of a \$250,000 fine, up to five years in prison, or both, to apply to any case of infringement in which at least ten infringing copies of a copyrighted work, with an aggregate value of more than \$2500, have been made within a 180-day period.¹⁴⁷ It is not clear, though, why Congress chose to include *all* types of works, rather than only software.¹⁴⁸

142. *See id.* at 6.

143. *See* 18 U.S.C. § 2319(b)(1), (b)(2).

144. Pub. L. No. 102-561, 106 Stat. 4233 (1992).

145. *See Criminal Sanctions For Violation of Software Copyright, 1992: Hearings on S. 893 Before the Subcomm. on Intellectual Property and Judicial Administration of the House Comm. on the Judiciary, 102nd Cong., 2nd Sess. 26, 27 (1992)* (statement of Gail Penner on behalf of the Software Publishers Association).

146. *See* S. REP. NO. 102-268, at 2 (1992) (noting that the increased penalties for infringement of motion pictures and sound recordings had encouraged federal prosecutors to “actively investigate and prosecute criminal infringement cases in these industries, providing effective deterrence of piracy”).

147. *See* 18 U.S.C. § 2319(b) (1992). For repeat offenders, the maximum prison sentence was raised to ten years. *See id.* § 2319(b)(2).

148. Some commentators believe that Congress “opted for simplicity,” see 4 NIMMER ON COPYRIGHT, *supra* note 99, § 15.01, at 15-15, n.101, while others posit that Congress simply wished to avoid “adopting a piecemeal approach to copyright legislation,” see Saunders, *supra* note 72, at 680.

In 1994, this steady increase in the criminalization of copyright law was impeded, however, by the *United States v. LaMacchia*¹⁴⁹ decision, which demonstrated how perpetrators could only be prosecuted under the Copyright Act for electronic copyright infringement if they realized a commercial advantage or private financial gain, but not for non-profit Internet piracy.¹⁵⁰

B. A Problem in Enforcement: The LaMacchia Loophole

In 1994, David LaMacchia, a twenty-one year old computer hacker attending the Massachusetts Institute of Technology (“MIT”), set up a BBS called Cynosure on MIT’s computer network.¹⁵¹ LaMacchia actively encouraged his users to upload popular software programs onto Cynosure. He then transferred these programs to a second BBS named Cynosure II, where they could be downloaded by users who knew the Cynosure password.¹⁵² The resulting worldwide traffic on MIT’s computers, generated by the lure of free software, alerted the federal authorities.¹⁵³

A federal grand jury subsequently indicted LaMacchia for violation of the federal wire fraud statute, but not for copyright infringement.¹⁵⁴ Unlike the criminal copyright statute, 17 U.S.C. § 506(a), the federal wire fraud statute did not require the government to prove that LaMacchia had personally profited from the scheme to defraud.¹⁵⁵ However, based on *Dowling v. United States*,¹⁵⁶ the

149. 871 F. Supp. 535 (D. Mass. 1994).

150. *See id.* at 545.

151. *See LaMacchia*, 871 F. Supp. at 536.

152. *See id.*

153. *See id.*

154. *See id.* at 536-37; 18 U.S.C. § 1343 (1994) (federal wire fraud statute).

155. *See United States v. Silvano*, 812 F.2d 754, 759-60 (1st Cir. 1987).

156. 473 U.S. 207 (1985). In *Dowling*, the defendant had shipped bootlegged Elvis Presley recordings via interstate commerce and was convicted of interstate transportation of stolen property under the National Stolen Property Act (18 U.S.C. § 2314). *See id.* at 208-09. The Supreme Court held that the statute did not apply, establishing that “Congress has finely calibrated the reach of criminal liability [in the Copyright Act], and therefore absent clear indication of Congressional intent, the criminal laws . . . do not reach copyright-related conduct.” *See LaMacchia*, 871 F. Supp. at 545 (quoting 3 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 15.05, at 15-20 (1993)).

district court held that the wire fraud statute could not be applied to LaMacchia's actions and thereby dismissed the indictment.¹⁵⁷

This decision exposed a "loophole" in copyright law—software pirates, as well as other copyright infringers, could not be held criminally liable for copyright infringement unless it could be shown that they had somehow profited financially from their infringement.¹⁵⁸

LaMacchia's acquittal incited legislators to consider new ways of imposing criminal sanctions for software piracy on the Internet.¹⁵⁹ Proponents for a stricter standard argued that the *LaMacchia* decision opened the floodgates for Internet pirates to freely trade illegal software and would thereby discourage authors from disseminating their creative works.¹⁶⁰ Opponents, however, contended that broadening the scope of criminal copyright infringement would be "unnecessary and [would] risk causing more harm than good to the balance of rights established by the Copyright Act."¹⁶¹

C. Congressional Response: The No Electronic Theft Act

On December 16, 1997, the No Electronic Theft Act ("NET Act")¹⁶² was signed into law, amending §§ 101 and 506(a) of Title 17 and § 2319 of Title 18 of the United States Code. The NET Act reduced the standard for criminal copyright infringement by adding a

157. See *LaMacchia*, 871 F. Supp. at 545. Judge Stearns emphasized in his opinion that "[c]riminal as well as civil penalties should probably attach to willful, multiple infringements of copyrighted software even absent a commercial motive on the part of the infringer," but stressed that it was the legislature's role to impose such criminal liability. *Id.*

158. See Kim, *supra* note 5, at 1256.

159. See *id.* at 1256-57.

160. See NII WHITE PAPER, *supra* note 2, at 10-11 (arguing that authors will be discouraged from making their creative works available to the public in the absence of adequate protections).

161. David J. Loundy, *E-Law 4: Computer Information Systems Law and System Operator Liability*, 21 SEATTLE U. L. REV. 1075, 1169-70 (1998).

162. Pub. L. No. 105-147, 111 Stat. 2678 (1997). President Clinton signed the NET Act on Dec. 16, 1997, "making it a criminal act to share copyrighted materials—even if there is no profit involved." Jeri Clausing, *Clinton Signs Internet Copyright Act*, N.Y. TIMES, CYBER TIMES (Dec. 17, 1997) <<http://www.nytimes.com/library/cyber>>.

provision to § 506 which does not require that the infringement be done for the purpose of commercial advantage or private financial gain.¹⁶³

Under § 506(a)(2), defendants may now be prosecuted for mere willful infringement,¹⁶⁴ by reproduction or distribution, of any copyrighted work with a retail value of more than \$1000.¹⁶⁵ The NET Act also amended the definition of “financial gain” to include “receipt, or expectation of receipt, of anything of value, including the receipt of other copyrighted works.”¹⁶⁶ This new definition thereby expanded the scope of criminal copyright law to prohibit bartering and trading of protected works.

Criminal penalties are provided under § 2319 of Title 18. Individuals convicted of *willfully* copying or distributing one or more copies of a copyrighted work on the Internet valued at \$1000 or more

163. “The NET Act clarifies that when Internet users or any other individuals sell pirated copies of software, recordings, movies or other creative works, use pirated copies to barter for other works, or simply take pirated works and distribute them broadly even if they do not intend to profit personally, such individuals are stealing.” 143 CONG. REC. H9883, H9885 (daily ed. Nov. 4, 1997) (statement of Rep. Goodlatte, author of the NET Act).

164. Congress emphasized that “the willfulness standard should be satisfied if there is adequate proof that the defendant acted with reckless disregard of the rights of the copyright holder. In such circumstances, a proclaimed ignorance of the law should not allow the infringer to escape conviction. Willfulness is often established by circumstantial evidence, and may be inferred from the facts and circumstances of each case.” *Id.* at H9884 (statement of Rep. Coble).

165. See 17 U.S.C. § 506(a) (Supp. 1999). The section now reads:

Any person who infringes a copyright willfully either—

(1) for purposes of commercial advantage or private financial gain, or

(2) by the reproduction or distribution, including by electronic means, during any 180-day period, of 1 or more copies or phonorecords of 1 or more copyrighted works, which have a total retail value of more than \$1,000,

shall be punished as provided under section 2319 of title 18, United States Code. For purposes of this subsection, evidence of reproduction or distribution of a copyrighted work, by itself, shall not be sufficient to establish willful infringement.

Id.

166. 17 U.S.C. § 101 (1998).

can now be sentenced to up to one year in prison.¹⁶⁷ For ten or more copies valued at \$2500 or more, an individual can be sentenced to up to three years in prison for a first offense, and up to six years for subsequent offenses.¹⁶⁸ When infringement is committed for the purpose of commercial advantage or private financial gain, an individual can be sentenced to up to five years in prison.¹⁶⁹ Fines may be imposed as an alternative or in addition to these sentences.¹⁷⁰ The statute of limitations for criminal prosecution was increased from three to five years.¹⁷¹

The NET Act also permits a victim of a willful copyright infringement to submit an impact statement concerning the extent and scope of the loss suffered, including the estimated economic impact on the victim.¹⁷² Based on these impact statements, the United States Sentencing Commission is ordered to set sentencing guidelines that are “sufficiently stringent to deter such a crime,” considering “the retail value and quantity” of the infringed works.¹⁷³ Clearly, Congress intended to create a strong criminal deterrent for copyright infringers.

Some critics argue that the NET Act “closes a loophole that doesn’t really exist.”¹⁷⁴ They contend that the Copyright Act by itself was sufficient to address the problem of software piracy and that the NET Act “upsets the constitutional balance provided by the Copyright Act.”¹⁷⁵ The danger is that users may accidentally copy a copyrighted work that they believe is available as “fair use” but will in fact subject them to prosecution under the NET Act.¹⁷⁶

The Act’s broad coverage also has the potential to criminalize minor violations which have traditionally been the subject of civil

167. See 18 U.S.C. § 2319(c)(3) (1998).

168. 18 U.S.C. § 2319(c)(1)-(2). These crimes are considered felonies. See 143 CONG. REC. H9883, H9885 (statement of Rep. Goodlatte).

169. See 18 U.S.C. § 2319(b).

170. See *id.* § 2319(b)-(c).

171. See 17 U.S.C. § 507 (1998).

172. See 18 U.S.C. § 2319(d)(1).

173. 28 U.S.C. § 994 (1998) (historical and statutory notes).

174. David J. Loundy, *The Good, Bad, Ugly of Copyright Law Rewrites*, CHICAGO DAILY L. BULL., Jan. 8, 1998, at 20.

175. *Id.*

176. See *id.*

copyright infringement actions. Prior to the NET Act, criminal liability for copyright infringement was aimed at deterring only the most serious instances of infringement.¹⁷⁷ However, the NET Act's low threshold—willful receipt or expectation of receipt of a copyrighted work “of value”—can potentially encompass a much greater proportion of the Internet population, perhaps even a majority.¹⁷⁸ The Act could potentially give federal prosecutors and judges a great deal of discretion, and plenty of firepower, to prosecute relatively minor infringers.¹⁷⁹

However, Congress has emphasized that the NET Act is only aimed at people who have acted *intentionally*.¹⁸⁰ Whether this intent requirement excludes individuals who mistakenly believe they are making a “fair use” of a copyrighted work but nevertheless intended to use that work is unclear. As a safeguard, Congress also included a provision in § 506(a) which emphasizes that “evidence of reproduction or distribution of a copyrighted work, by itself, shall not be sufficient to establish willful infringement.”¹⁸¹

Previously, courts have interpreted the willfulness requirement quite strictly, such that accidental or mistaken infringement is normally not sufficient to satisfy the willfulness standard.¹⁸² Therefore, courts will most likely interpret this amended provision in

177. See *supra* Part III.A.4.

178. Even a proponent of the NET Act, Senator Orrin Hatch, recognized that the NET Act exceeds the traditional boundaries of copyright law and may potentially ensnare the innocent or minor infringer. See 143 CONG. REC. S12689, S12690 (daily ed. Nov. 13, 1997) (statement of Sen. Hatch).

179. See *id.* at S12689.

180. In enacting the bill, Congress stressed that there was “no intention on our part to make it easier to go after people when they were not acting intentionally.” 143 CONG. REC. H9883, H9885 (statement of Rep. Frank).

181. 17 U.S.C. § 506(a) (Supp. 1999).

182. See *United States v. Cross*, 816 F.2d 297, 300 (7th Cir. 1987) (affirming jury instruction which defined “willfully” as an act “committed by a defendant voluntarily, with knowledge that it was prohibited by law, and with the purpose of violating the law, and not by mistake, accident or in good faith”); *Kepner-Tregoe, Inc. v. Vroom*, No. 98-7258, 1999 U.S. App. LEXIS 18460, at *13 (2d Cir. Aug. 9, 1999) (professor’s use of copyrighted materials, even though he was “clearly aware” that a trial court and an appellate court had found his company guilty of the same infringement, constituted willful infringement sufficient enough to warrant the maximum statutory damages award of \$100,000).

a similar manner so as to prevent accidental or minor infringers from being easily prosecuted under the NET Act.

IV. PAVING A NEW INFORMATION SUPERHIGHWAY

A. *The Digital Millennium Copyright Act*

The Digital Millennium Copyright Act (“DMCA”)¹⁸³ was enacted on October 28, 1998, during the dying days of the 105th Congress.¹⁸⁴ The DMCA implemented the WIPO Copyright Treaty¹⁸⁵ and the WIPO Performances and Phonogram Treaty,¹⁸⁶ which were signed by the United States in 1997.¹⁸⁷ The WIPO treaties obligated signatory countries to provide “adequate legal protection and effective legal remedies against the circumvention of effective technological measures” that copyright owners use to protect their works from piracy.¹⁸⁸

In addition, the DMCA limits the liability of telephone companies and ISPs for copyright infringement in certain situations.¹⁸⁹ The DMCA also grants additional protection for analog works, sound recordings, and copyright management information.¹⁹⁰ Moreover, the DMCA provides sweeping fair use exemptions, which allow libraries, schools, and others to make limited use of

183. Pub. L. No. 105-304, 112 Stat. 2860 (codified as amended in scattered sections of 17 U.S.C.).

184. See *Clinton Statement on the Digital Millennium Copyright Act*, U.S. NEWSWIRE, Oct. 28, 1998, available in 1998 WL 13606936.

185. World Intellectual Property Organization: Copyright Treaty, Dec. 20, 1996, 36 I.L.M. 65 (1997).

186. World Intellectual Property Organization: Performances and Phonogram Treaty, Dec. 20, 1996, 36 I.L.M. 76 (1997).

187. See *Clinton Statement on the Digital Millennium Copyright Act*, *supra* note 184 (“The treaties will grant writers, artists, and other creators of copyrighted material global protection from piracy in the digital age.”).

188. WIPO Copyright Treaty, *supra* note 185, at art. 11.

189. Provided that such “service providers” satisfy three threshold requirements and several other obligations imposed by Title II of the DMCA. See Ian C. Ballon & Keith M. Kupferschmid, *Third Party Liability under the Digital Millennium Copyright Act: New Liability Limitations and More Litigation for ISPs*, 3 No. 8 CYBERSPACE LAW 3, 3 (1998).

190. See H.R. REP. NO. 105-796 (1998).

copyrighted materials.¹⁹¹

B. Title I of the Digital Millennium Copyright Act

To further the goals of the WIPO treaties,¹⁹² the DMCA was designed to prohibit the circumvention of technological measures, e.g. passwords or encryption measures, and the devices or services that circumvent such technological measures.¹⁹³ The DMCA provides both civil and criminal remedies for violations of these provisions.

The DMCA's so-called "anti-circumvention" provision prohibits the "circumvention"¹⁹⁴ of any "technological measure"¹⁹⁵ used by a copyright owner that "effectively controls access" to his or her copyrighted work.¹⁹⁶ Thus, if a pirate hacks a password or some form of encryption to obtain access to a copyrighted software file, he or she will be in violation of federal copyright law. However, the effective date of the anti-circumvention provision has been deferred for two years until after the date of its enactment, i.e. October 28, 2000.¹⁹⁷ During those two years, and every three years thereafter,

191. "It's an unbelievably broad exemption," remarked Marybeth Peters, head of the U.S. Copyright Office, in discussing the fair use exemption's role in the expanded world of copyright. Mo Krochmal, *Copyright Bill Expands Fair-Use Rights*, CMP TECHWIRE, Oct. 13, 1998, available in 1998 WL 19757846.

192. "These treaties . . . will lead to better legal protections for U.S. copyrighted materials . . . around the world, and thus will contribute to increased U.S. exports and foreign sales of this valuable intellectual property, and to a decrease in the unacceptably large levels of piracy these products experience today in far too many overseas markets." 144 CONG. REC. H10615, H10619-20 (daily ed. Oct. 12, 1998) (statement of Rep. Berman).

193. See S. REP. NO. 105-190, at 11 (1998).

194. Circumvention means "to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner." 17 U.S.C. § 1201(a)(3)(A) (Supp. 1999).

195. Although a "technological measure" is not defined, the DMCA specifies that such a measure "effectively controls access to a work" if it "requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work." *Id.* § 1201(a)(3)(B).

196. *Id.* § 1201(a).

197. See *id.* § 1201(a)(1)(A).

the DMCA requires the Librarian of Congress, on the recommendation of the Register of Copyrights, to conduct a formal “on the record” rulemaking proceeding to determine whether the anti-circumvention provision will “adversely affect” an individual’s or institution’s ability to make non-infringing uses of a “particular class of copyrighted works.”¹⁹⁸ The Librarian is then required to issue a three-year waiver of the anti-circumvention provision to any class of copyrighted works for which that prohibition has “adversely affected,” or is likely to affect, the availability of fair use and other non-infringing uses.¹⁹⁹

The DMCA also prohibits the manufacture, import, offer to the public, or provision of any device or service which circumvents a “technological measure that effectively controls access to a [copyrighted] work.”²⁰⁰ Section 1201(a)(2), the so-called “anti-device” provision, applies to all devices or services that satisfy one of three criteria:

- (1) is primarily designed or produced for the purpose of circumventing a technological measure;
- (2) has only limited commercially significant purpose or use other than to circumvent a technological measure; or
- (3) is marketed for use in circumventing a technological measure.²⁰¹

Using the same three criteria, § 1201(b) prohibits devices or services that circumvent a technological measure “that effectively protects a right of a copyright owner.”²⁰² Although § 1201(a)(2) and § 1201(b) are worded similarly and employ similar tests, the Senate Report indicates that “they are designed to protect two distinct rights and to target two distinct classes of devices.”²⁰³ While § 1201(a)(2) is designed to protect access to a copyrighted work, § 1201(b) is

198. *Id.* § 1201(a)(1)(C).

199. *Id.* § 1201(a)(1)(D).

200. *Id.* § 1201(a)(2).

201. *See id.*

202. *Id.* § 1201(b)(1). The DMCA provides that “a technological measure ‘effectively protects a right of a copyright owner . . .’ if the measure, in the ordinary course of its operation, prevents, restricts, or otherwise limits the exercise of a right of a copyright owner.” *Id.* § 1201(b)(2)(B).

203. S. REP. NO. 105-190, at 12 (1998).

designed to protect “the traditional copyright rights of the copyright owner.”²⁰⁴

Both provisions are intended to prevent the trafficking of so-called “black boxes,” devices intended to “facilitate circumvention of technological measures for purposes of gaining access to or making a copy of a work.”²⁰⁵ Section 1201(b) is somewhat controversial, however, because it became effective immediately upon the DMCA’s enactment, rather than requiring the Librarian of Congress to “filter” out its flaws as required by § 1201(a).²⁰⁶

The DMCA explicitly exempts several activities in seeking to preserve the fair use doctrine. First and foremost, it exempts nonprofit libraries, archives, and educational institutions from criminal penalties and possibly civil remedies if such institutions can demonstrate that they were using the work in good faith for fair use and not for any other purpose.²⁰⁷ The DMCA also exempts many private activities, including reverse engineering, encryption research, privacy protection measures, and security testing.²⁰⁸ Lastly, the DMCA provides a “savings clause” which states that it does not “affect rights, remedies, limitations, or defenses to copyright infringement, including fair use.”²⁰⁹

C. Criminal Penalties under the Digital Millennium Copyright Act

In enacting the DMCA, Congress clearly intended to create strong disincentives for potential infringers, such as software pirates, by imposing severe criminal penalties for a variety of offenses.

204. *Id.* Thus, if a technological protection measure is designed to prevent a copyrighted work from being *copied* but does nothing to prevent *access* to the work, then the manufacturer of a circumventing device may be in violation of § 1201(b), but not § 1201(a)(2). Conversely, if a technological protection measure is designed to prevent *access* to a copyrighted work, but provides no additional protection against copying, displaying, performing or distributing the work, then the manufacturer of a circumventing device may be in violation of § 1201(a)(2), but not § 1201(b). *See id.*

205. 144 CONG. REC. E2136-02, E2137 (daily ed. Oct. 12, 1998) (statement of Rep. Bliley).

206. *See* 17 U.S.C. § 1201(b).

207. *See id.* § 1201(d).

208. *See id.* § 1201(f), (g), (i), (j).

209. *Id.* § 1201(c).

Under § 1204, any person who “willfully or for purposes of commercial advantage or private financial gain” violates §§ 1201 or 1202 is subject to:

- (1) A fine of up to \$500,000 and/or jail sentence of up to five years for the first offense; and
- (2) A fine of up to \$1,000,000 and/or jail sentence of up to ten years for any subsequent offense.²¹⁰

The statute of limitations for criminal prosecution is five years, similar to the NET Act.²¹¹ The Senate Report indicates that the willfulness standard applicable under this subsection “is identical to the standard used in [17 U.S.C. § 506] to establish criminal violations.”²¹² Thus, prior case law interpreting the “willful” mens rea requirement under § 506 will presumably apply to prosecutions under § 1204.

D. Future Ramifications of the Digital Millennium Copyright Act

The DMCA is a voluminous tome of wordy and vague prohibitions, incorporated from assorted bills pending for years before Congress prior to its enactment.²¹³ It is a product of compromise between the competing interests of two major groups: the software industry, movie studios, record companies and book publishers, versus 40,000 libraries, various educational institutions, and a few consumer groups.²¹⁴ In some cases, these groups negotiated for months before they agreed on draft legislation that satisfied every group’s agenda.²¹⁵ As a result, the DMCA is not only

210. *Id.* § 1204(a).

211. *Id.* § 1204(c).

212. S. REP. NO. 105-190, at 39 (1998).

213. See Malla Pollack, *The Right to Know?: Delimiting Database Protection at the Juncture of the Commerce Clause, the Intellectual Property Clause, and the First Amendment*, 17 CARDOZO ARTS & ENT. L.J. 47, 99 n.282 (1999) (discussing the various versions of the DMCA as it progressed along its “convoluted path through Congress”).

214. See Robert Samuelson, *Flow of Info-Copyright Protection Proposals Could Profoundly Crimp Viewing and Reading Habits*, CHI. TRIB., Sept. 18, 1998, at 29.

215. See Senator Orrin G. Hatch, *Toward a Principled Approach to Copyright Legislation at the Turn of the Millennium*, 59 U. PITT. L. REV. 719, 749-50 (1998).

extremely long, but *far* from being easily comprehensible.²¹⁶

1. Overbreadth

The statutory language of the DMCA is at times so broad that it is difficult to discern exactly what it prohibits. The “anti-device” provisions state that “[n]o person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof” that circumvents a technological measure or protection afforded thereby.²¹⁷ These provisions purportedly target “black boxes,”²¹⁸ but nothing in the DMCA’s statutory language or legislative history suggests that its application is *limited* to such devices. If one takes the language of the statute to mean what it literally says, then many relatively minor infringers may be unnecessarily caught in the wide net cast by the DMCA.

For example, some Internet users have created “Warez” pages, or Web sites that advertise or link to pirated software that is located elsewhere on the Internet.²¹⁹ The owners of these Web sites, often high school or college-age kids, do not usually pirate the software themselves, but merely locate it elsewhere on the Internet using specialized search engines. They then provide “links” on their Warez pages, which allow visitors to download pirated software by simply clicking on such links. Therefore, while a Warez page does not actually supply pirated software, it acts as an intermediary that provides a convenient listing of pirated software available for download from the Internet.

Nevertheless, the owners of Warez pages may be in violation of § 1201(b)(1)(B) because they “offer to the public” a “service” which has “only limited commercially significant purpose or use other than

216. The text of the DMCA, more than 60 pages long, now comprises roughly a third of the size of the entire Copyright Act itself. See Edward Samuels, *Rights on the Net: The Digital Millennium Copyright Act*, 17 No. 1 CABLE TV & NEW MEDIA L. & FIN. 1, 1 (1999).

217. 17 U.S.C. §§ 1201(a)(2), 1201(b).

218. See *supra* note 205 and accompanying text.

219. See *supra* notes 75-81 and accompanying text.

to circumvent a technological measure.”²²⁰ Although it is not clear whether Warez page owners are direct infringers in this sense, because they do not usually hack the software themselves, it is very likely that they can be held contributorily liable for supplying the means by which the Internet community can find and download such pirated software.²²¹

The willfulness and “commercial advantage or private financial gain” requirements under § 1204 are easily satisfied in most cases because nearly all Warez pages feature advertisements which earn the owner a small fee every time a user clicks on it. Warez page owners may thus be held criminally liable for felony copyright infringement, even though they may have played absolutely no part in hacking or supplying the pirated software in question. Although it is not likely that such offenders will be prosecuted under the DMCA due to the nature of their crimes, the mere fact that they *can* be prosecuted demonstrates how broadly the language of § 1201 is worded and how much discretion is afforded to federal prosecutors and judges.²²²

Also, it is important to note that the anti-circumvention measure *does not actually require copyright infringement* of a protected work, but only that a defendant circumvent a technological measure which *controls access* to a protected work. Section 1201(a)(1)(A) provides “[n]o person shall circumvent a technological measure that effectively controls access to a work protected under this title.”²²³ On its face, this provision applies to the act of circumvention *per se*, and does not require the circumvention to have been done for the purpose of infringing a protected right.²²⁴ The anti-circumvention

220. 17 U.S.C. § 1201(b)(1)(B).

221. A court would very likely deem most Warez pages to be incapable of “substantial noninfringing uses.” *See Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 442 (1984) (holding that the use “need merely be capable of substantial noninfringing uses” in order to escape contributory liability).

222. *See* 143 CONG. REC. S12689, S12690 (daily ed. Nov. 13, 1997) (statement of Sen. Hatch) (discussing the increased discretion given to prosecutors and judges).

223. 17 U.S.C. § 1201(a)(1)(A).

224. *See* Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354, 415

provision thus applies regardless of whether the access gained infringes a protected right in the work. In contrast, the anti-device provisions limit their scope to circumvention of measures that protect “a right of the copyright owner.”²²⁵

The DMCA’s legislative history indicates that the copyright industries insisted, and Congress apparently conceded, that this discrepancy is necessary because legal enforcement of copyright rights is too cumbersome and inefficient to address concerns about copying over the Internet.²²⁶ Proponents contended that by limiting the prohibition on circumvention to infringing uses, Congress would “provide a roadmap to keep the purveyors of ‘black boxes’ and other circumvention devices and services in business . . . [which would] reduce the legal protection for . . . [self-help] technologies to an inadequate and ineffective level.”²²⁷ Thus, the argument follows, if copyright law recognizes circumvention as a legitimate way to make privileged uses of copyrighted works, it will become more difficult to sue manufacturers and vendors of circumvention software.²²⁸

(1999). Professor Benkler provides an excellent discussion of how the DMCA’s technological protection provisions can restrain free speech and parody due to their overbreadth. *See id.* at 415-29 (“The copyright owner is privileged to include a protection measure. By doing so, the owner erects a legal barrier between the user and the user’s privileged uses of the work. The barrier is legal, not technical or physical, because circumvention technology exists. What prevents the privileged use is that it is illegal to circumvent the barrier. A more narrowly tailored law, one that enhances penalties for an infringing use achieved by knowing circumvention of a technological protection measure, for example, would not have this effect.”).

225. 17 U.S.C. § 1201(b)(1)(A).

226. *See The WIPO Copyright Treaties Implementation Act: Hearing on H.R. 2281 Before the Subcomm. on Telecommunications, Trade, & Consumer Protection of the House Comm. on Commerce*, 105th Cong. 106 (1998) (testimony of Steven J. Metalitz on behalf of Motion Picture Association of America) (discussing limitations of linking act of circumvention to infringement).

227. *Id.* at 57.

228. *See Benkler, supra* note 224, at 425.

The Supreme Court rejected a very similar argument, however, in *Sony Corp. of America v. Universal City Studios, Inc.*²²⁹ At the time when the video cassette recorder (“VCR”) was first being introduced into the market, Universal brought suit against VCR manufacturers for contributory infringement of its motion pictures, contending that the VCR permitted its users to freely copy home movies without having to pay a licensing fee for additional copies.²³⁰ The Supreme Court held that VCRs were capable of being used for time shifting, that time shifting was a legitimate use, and hence that VCR manufacturers could not be sued for contributory infringement simply for manufacturing and selling equipment that could be used for infringing as well as noninfringing uses.²³¹ Thus, manufacturers of devices with bona fide noninfringing uses cannot be sued simply because these devices can also be used to make infringing uses.²³²

Carried into this context, the *Sony* decision could protect manufacturers and sellers of technology that is primarily designed for acceptable circumvention because, under the *Sony* rationale, they could only be held liable if it is shown that they intended to aid circumvention for illegal purposes. Under the plain language of § 1201(a)(1)(A), if the act of circumvention itself is illegal, then there is absolutely no way to make fair use of a copyrighted work that is protected by a technological measure without violating the DMCA. Moreover, copyright owners can go after manufacturers and sellers of any product that permits circumvention, without needing to prove specific acts of infringement. Thus, a challenge to the anti-circumvention provision could possibly prevail under the rationale employed in *Sony*.

2. Vagueness

The DMCA’s rather vague language could also potentially undermine some valid uses of software that were previously considered fair use. Foreseeably, individuals who mistakenly believe

229. 464 U.S. 417 (1984). While *Sony* expressly concerned only contributory liability for copyright infringement, its rationale is quite persuasive in this context.

230. *See id.* at 442.

231. *See id.* at 442-56.

232. *See id.*

they are making a fair use of software on the Internet may be in violation of § 1201's anti-circumvention or anti-device provisions and thereby become subject to felony prosecution. The DMCA contains a "savings clause,"²³³ which is geared towards preserving fair use and other copyright infringement defenses, but this clause does not obviate the problem because the fair use doctrine is inherently uncertain and case-specific.²³⁴ In close cases, the DMCA's broadly worded provisions will undoubtedly weigh against a finding of fair use where it appears that a defendant's conduct falls under the Act's sweeping coverage. The uncertainty caused by the DMCA's vague language and the consequent fear of liability may therefore have a chilling effect on the public's exercise of the fair use defense, despite the savings clause.²³⁵

For instance, many Warez page owners believe that by disclaiming their involvement in the actual pirating of software and by cautioning visitors that they may only *evaluate* such software for a limited time, they will be exempt from any sort of copyright liability.²³⁶ This belief stems from the fair use doctrine, which often

233. See 17 U.S.C. § 1201(c)(1) (1999) ("Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title.").

234. See Jessica Litman, *Reforming Information Law in Copyright's Image*, 22 U. DAYTON L. REV. 587, 611 (1997) ("[F]air use is a limited privilege that applies in particular cases only after a searching, fact-specific inquiry."); see also *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 577 (1994) ("The task [of determining fair use] is not to be simplified with bright-line rules, for the statute, like the doctrine it recognizes, calls for case-by-case analysis.").

235. See Litman, *supra* note 234, at 612 (discussing how the possibility of liability creates undesirable self-censorship and a chilling effect on free speech).

236. For example, Warez Universe, a popular Warez page, has the following disclaimer:

I, under penalties of perjury solemnly declare and affirm the following: . . . Nothing on this page is illegal the way it is. If you use this page for anything other than educational or entertainment purposes, I am not held responsible for your actions or anything as a result of this page. Misuse could result in breaking the law so use at YOUR OWN RISK!!! I do not use any of these games or apps on my computer. But if you want to try a game YOU MUST DELETE it within 24 hours of downloading even if you can't get it to work!

Warez Universe (visited Sept. 18, 1999) <<http://www.warezuniverse.net/>

permits a *de minimis*, or minimal use, of a copyrighted work for the purpose of evaluating a product.²³⁷ However, due to § 1201's broad language, as long as there is a "circumvention of a technological measure" or protection afforded thereby,²³⁸ the unwary Warez page owner may still be subject to criminal liability. The DMCA thus fails to provide adequate notice to Warez page owners and Internet users alike that this activity may not be justified as fair use.

Also, since fair use is a defense to *copyright infringement*, the doctrine may not be a defense to the *independent* anti-circumvention provision under § 1201(a)(1), which does not require copyright infringement in order to apply in some situations.²³⁹ The House Report states that "where the access is authorized, the traditional defenses to copyright infringement, including fair use, would be fully applicable."²⁴⁰ However, the Report further explains, "an individual would not be able to circumvent in order to gain unauthorized access to a work, but would be able to do so in order to make fair use of a work which he or she has acquired lawfully."²⁴¹

This presents a problem for parody and other fair uses of copyrighted works because such uses are often made *without* the authorization or knowledge of the work's owner, since in most cases he or she does not wish to be parodied. Section 1201(a)(1) effectively makes unauthorized fair use illegal where the work is protected by a technological measure, since individuals need to access a work in order to make fair use of it. The very purpose of the

main.html>.

237. See *Sony Corp.*, 464 U.S. at 450 ("[A] use that has no demonstrable effect upon the potential market for, or the value of, the copyrighted work need not be prohibited in order to protect the author's incentive to create."). Such is the case with shareware, which software companies generally issue as "samples" for the public to evaluate. The downloading of warez, however, is not likely to be considered a fair use because most people who download pirated software prefer to keep it, rather than purchase the legal version; thus, the copyrighted work is used in its entirety and its potential market is severely impacted – two strong countervailing considerations against a finding of fair use. See 17 U.S.C. § 107 (1994).

238. 17 U.S.C. § 1201(a)-(b) (Supp. 1999).

239. See *supra* notes 223-25 and accompanying text.

240. H.R. REP. NO. 105-551, at 18 (1998).

241. *Id.*

fair use doctrine is thereby eviscerated. Parodists and satirists will be hard pressed to obtain the permission of copyright owners to parody their works.

3. Severe criminal penalties

Perhaps even more importantly, the DMCA imposes some rather harsh criminal penalties on copyright infringers.²⁴² For instance, imagine that a software pirate, such as David LaMacchia, “offer[ed] to the public” a “service,” such as Cynosure, which circumvents the technological measures of copyrighted software for profit.²⁴³ Cynosure would easily satisfy § 1201’s third criterion, since it was a service “marketed . . . for use in circumventing a technological measure [or protection afforded thereby] that effectively controls access to a [copyrighted] work” by encouraging users to upload and download copyrighted software that has been pirated.²⁴⁴

LaMacchia could thereby be subject to criminal penalties under § 1204 and would face a prison sentence of up to *five years* and/or a fine of up to \$500,000 for the first violation, and *ten years* and/or a fine of up to \$1,000,000 for each subsequent offense.²⁴⁵ No one would doubt that LaMacchia deserves a strong penalty for the “incident” at MIT, but should he be sentenced to *five or ten years* in prison? Most convicted rapists and murderers, whose crimes society regards as much more heinous, do not serve that much time.²⁴⁶

4. The section 1204 “loophole”

Section 1204(a) is strikingly similar to the provisions of 17 U.S.C. § 506(a)(1).²⁴⁷ However, § 1204 does not address infringement cases which do not involve a “commercial advantage or

242. See *supra* text accompanying note 210.

243. 17 U.S.C. § 1201(b)(1).

244. 17 U.S.C. § 1201(a)(2)(C), (b)(1)(C); see also *supra* Part III.B.

245. See 17 U.S.C. § 1204(a) (Supp. 1999).

246. The U.S. Department of Justice reported that from 1992 through 1994 the average person convicted of a violent offense was sentenced to ten years in prison but served slightly less than five years in prison. See ALLEN J. BECK & LAWRENCE A. GREENFELD, BUREAU OF JUSTICE STATISTICS, U.S. DEPT. OF JUSTICE, VIOLENT OFFENDERS IN STATE PRISON: SENTENCES AND TIME SERVED 2 (1995).

247. Compare 17 U.S.C. § 1204(a) with 17 U.S.C. § 506(a)(1) (1998).

private financial gain.”²⁴⁸ This poses yet another *LaMacchia* loophole, which the NET Act will obviously not be able to address retroactively. Is this just an oversight, or has Congress purposefully excluded a “fall back” provision, such as the NET Act amendment in § 506(a)(2), from § 1204 in order to balance out its harsh criminal penalties? The DMCA’s legislative history does not explain this discrepancy.²⁴⁹

This omission, whether purposeful or not, will inevitably lead to the very same problem posed by the *LaMacchia* case. For example, if a software pirate obtains a software program and hacks away its copyright protection, that pirate has effectively violated § 1201(a) of the DMCA by circumventing a technological measure that controls access to a copyrighted work.²⁵⁰ However, if that pirate does not make a profit or obtain any sort of commercial advantage from his or her actions, then that pirate cannot possibly be subject to § 1204 because he or she has not obtained any “commercial advantage or private financial gain.”²⁵¹ In cases where there is infringement of a copyrighted work valued at more than \$1000, the amended § 506(a)(2) will still permit prosecution of that individual, but what about those situations where a technological measure is circumvented, but no copyright has been infringed?

V. CONCLUSION: CRACKS IN THE PAVEMENT

In just the past two years, the state of criminal liability for copyright infringement on the Internet has been drastically altered. Where previously many of the large copyright industries complained that copyright law did not deter software pirates and lacked proper redress for “electronic” copyright infringement, they are now afforded several new criminal remedies against potential infringers under both the NET Act and DMCA. However, in its attempt to preserve the rights of copyright owners, Congress has bowed too far

248. 17 U.S.C. § 1204(a) (Supp. 1999).

249. The House Report only indicates that the standard used “is identical to the standard used in [17 U.S.C. § 506] to establish criminal violations.” S. REP. NO. 105-190, at 39 (1998). However, the language of § 1204 clearly does not incorporate the NET Act amendment to § 506.

250. See 17 U.S.C. § 1201(a).

251. *Id.* § 1204(a).

to the interests of powerful industry groups by adopting a policy of enacting copyright legislation that is formulated solely through the process of negotiation and compromise between such groups.²⁵²

The problem with this approach is that the interests of the general public, the group most affected by such legislation, are woefully underrepresented.²⁵³ Perhaps the greater problem is that the public is generally uninformed about copyright law, has no direct or immediate interest in preserving the public domain, and is consequently uninterested in the ramifications of pro-author copyright legislation, such as the DMCA. Lobbying by opposing industry groups does not serve as an effective proxy for the consumer interests of the public at large, especially where those interests vary significantly.²⁵⁴ In such situations, the rights of copyright owners are generally increased at the expense of the

252. See Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 314-15 (1989) (arguing that when it comes to copyright legislation, Congress has “agreed that if the industry representatives would invest the time and energy to develop a bill that all of them endorsed, Congress would refrain from exercising independent judgment on the substance of the legislation”).

253. See 4 NIMMER ON COPYRIGHT, *supra* note 99, § 15.01, at 15-3 to 15-4 (discussing the figures detailing the costs of piracy which industry groups provided to Congress for the purpose of debating over legislation). Figures provided to Congress by industry groups are inherently unreliable because such groups have their own self-interests at stake and fail to account for the fact that not all copyright infringers would be willing to pay for their products if they were unable to acquire them for free. See *id.* at 15-3.

254. Cf. Daniel A. Farber, *Free Speech Without Romance: Public Choice and the First Amendment*, 105 HARV. L. REV. 554, 561 (1991) (arguing that lobbying by producers of intellectual property does not “fully reflect the ultimate social benefit of information production”); Litman, *supra* note 252, at 312 (contending that in drafting the Copyright Act of 1976, “the public’s interests were not somehow approximated by the push and shove among opposing industry representatives”). The House Report for the DMCA indicates the interested parties: “the DMCA enjoys widespread support from the motion picture, recording, software, and publishing industries, as well as the telephone companies, long distance carriers, and other [Internet service providers]. It is also supported by the Information Technology Industry Council, which includes the leading computer hardware manufacturers, and by representatives of individual creators, such as the Writers Guild, the Directors Guild, the Screen Actors Guild, and the American Federation of Television and Radio Artists.” S. REP. NO. 105-190, at 9 (1998).

public's free access to copyrighted works and the public domain.

A. *The No Electronic Theft Act*

Few would argue that the NET Act is not a necessary measure, although perhaps it should have a higher threshold upon which to impose liability.²⁵⁵ Nevertheless, software pirates like David LaMacchia should not be permitted to escape liability simply because they did not receive a pecuniary benefit from their conduct. This would defeat one of the most basic philosophies underlying copyright law: authors have the moral right to control their own original creations, reap the benefits of their labor, and protect the integrity of their works.²⁵⁶ The NET Act provides copyright owners with an adequate deterrent to protect these rights where the infringer has not obtained a commercial advantage or private financial gain. There is little danger that an accidental or minor infringer will be prosecuted under the NET Act in light of its limitation to strictly *intentional* cases of infringement.²⁵⁷

The Department of Justice's first conviction under the NET Act is illustrative. On August 20, 1999, Jeffrey Gerard Levy, a 22-year-old student at the University of Oregon, pled guilty to violations of the NET Act for storing thousands of pirated software files on the university's network, so that they could be downloaded by the public for free.²⁵⁸ On average, over five hundred pirated files were being downloaded off of the university network within a two-hour period.²⁵⁹ This high amount of "traffic" alerted the university's administrators, who subsequently notified the U.S. Attorney's office.²⁶⁰

With Levy's guilty plea, he now faces three years in prison and a \$250,000 fine, but will likely only get probation and a fine, according to the U.S. Attorney's office.²⁶¹ Such a punishment seems

255. See *supra* note 178 and accompanying text.

256. See 17 U.S.C. § 106A (1994).

257. See *supra* notes 180-82 and accompanying text.

258. See Andy Patrizio, *DOJ Cracks Down on MP3 Pirate*, WIRED NEWS (Aug. 23, 1999) <www.wired.com/news/news/politics/story/21391.html>.

259. See *id.*

260. See *id.*

261. See *id.*

appropriate since this case is strikingly similar to *LaMacchia* and is clearly not an accidental or minor case of infringement. By prosecuting such high profile cases, the Department of Justice and the software industry hope to effectively deter the Internet community from committing online piracy.²⁶²

B. *The Digital Millennium Copyright Act*

While the NET Act is arguably a necessary measure for the effective enforcement of criminal copyright law, the viability of the DMCA's anti-circumvention and anti-device provisions is dubious at best. The DMCA is overbroad, in that its provisions are so sweeping that even relatively minor infringers may be subject to felony penalties, and underinclusive, in that it poses yet another *LaMacchia* loophole. The statutory language of § 1201 is so vague and ambiguous, that it barely provides notice to even the most highly trained legal mind. Imagine how much of a surprise it will pose to the everyday Internet user who unknowingly violates its mandate. Perhaps more importantly, the DMCA's broad scope appears to criminalize uses of copyrighted works that were formerly protected as fair use.²⁶³ And § 1204's criminal provisions impose such disproportionate fines and penalties that one has to question their propriety in comparison to much more violent and odious felonies.

Finally, consider the constitutional objective proscribed by the Copyright Clause: "To promote the Progress of Science and useful Arts."²⁶⁴ As the Supreme Court espoused in *Fogerty v. Fantasy, Inc.*, "[t]he monopoly privileges that Congress has authorized, while 'intended to motivate the creative activity of authors and inventors by the provision of a special reward,' are limited in nature and must

262. *See id.* ("More convictions like Levy's will hopefully get [Internet] users to get on the straight and narrow and use the files legally 'We still think the best way to combat piracy is to make it easier to buy rather than to steal.'").

263. *See supra* Part IV.D.2.

264. U.S. CONST. art. I, § 8, cl. 8. *See also* *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 338, 349 (1991) ("The primary objective of copyright is not to reward the labor of authors, but 'To promote the Progress of Science and useful Arts.'"); *Mazer v. Stein*, 347 U.S. 201, 219 (1954) ("[C]opyright law . . . makes reward to the owner a secondary consideration.").

ultimately serve the public good.”²⁶⁵

The DMCA does not further this basic premise of copyright law. Its broad language and severe criminal penalties in no way encourage authors to disseminate their original works to the public, other than to provide the industries that support them with a greater profit margin. On the contrary, the DMCA *discourages* the general public from making fair use of copyrighted works with its confusing language and harsh criminal penalties and thereby *defeats* the fundamental purpose of copyright law: to grant the public greater access to creative works of original authorship.²⁶⁶ Congress has thus failed to “appropriately limit the extent of [copyright] protection so as to avoid the effects of monopolistic stagnation,”²⁶⁷ but has rather unnecessarily accorded a whole new set of rights to copyright owners.

C. *The Alternatives*

Internet piracy is not an incurable problem. It is simply the by-product of new technology and the inability of pre-existing law to adapt to the new digital environment. Therefore, to address the problem, only a few simple changes to copyright law prior to the DMCA were absolutely necessary. In its White Paper, the Working Group noted:

With no more than minor clarification and limited amendment, the Copyright Act will provide the necessary balance of protection of rights – and limitations on those rights – to promote the progress of science and the useful arts. Existing copyright law needs only the fine tuning that technological advances necessitate, in order to maintain the balance of the law in the face of onrushing technology.²⁶⁸

The Working Group reasoned that most gaps in copyright law only require an explanation as to how they may be remedied by

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

266. *See Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975).

267. *Computer Assocs. Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 696 (2d Cir. 1992).

268. NII WHITE PAPER, *supra* note 2, at 17.

existing law, while others present “rights or limitations that clearly fit within the spirit of the law but the letter of the law is in need of clarification to avoid uncertainty and unnecessary litigation.”²⁶⁹ As concluded by the Working Group:

Throughout more than 200 years of history, with periodic amendment, United States law has provided the necessary copyright protection for the betterment of our society. The Copyright Act is fundamentally adequate and effective. In a few areas, however, it needs to be amended to take proper account of the current technology. The coat is getting a little tight. There is no need for a new one, but the old one needs a few alterations.²⁷⁰

The DMCA, however, has taken the Working Group’s narrowly tailored proposal²⁷¹ and expanded it beyond the scope of its intended use. The Working Group’s original proposal for § 1201 prohibited the import, manufacture, or distribution of any device or service whose primary purpose or effect was to circumvent a protection measure “which prevents or inhibits the violation of any of the exclusive rights of the copyright owner under [17 U.S.C. § 106].”²⁷² This relatively simple yet effective measure would have protected the exclusive rights of copyright owners under § 106 to the extent that those rights were threatened by the perils of Internet piracy. By limiting the coverage of § 1201 to those exclusive rights which were already protected under the Copyright Act, the Working Group sought to maintain the balance of interests between authors and the public.²⁷³

Section 1201(a)(1), however, carries this goal to an entirely new level by creating a new cause of action that permits copyright owners to prosecute circumventors of their protective devices—even where their exclusive rights have not been violated. Such an added level of

269. *Id.* at 211-12.

270. *Id.* at 212 (referring to Thomas Jefferson’s analogy: the law must keep pace with the times, or else it is like requiring a man to wear a boy’s coat).

271. *See id.* app. I (proposed legislation).

272. *Id.* app. I at 6.

273. *See id.* at 230.

protection is wholly unnecessary and runs counter to the fundamental purposes of copyright law.²⁷⁴

There are also several other adequate alternatives. Professor I. Trotter Hardy prepared an analysis of the future of copyright law in relation to the Internet for the United States Copyright Office, in which he sets forth several “responses” to the problem of Internet piracy.²⁷⁵

First, Professor Hardy suggests that we simply do nothing.²⁷⁶ In light of the popular perception that home-copying for non-commercial use is lawful, it may be difficult if not impossible to prevent such activity.²⁷⁷ Rather, it may be better to wait “until things ‘settle down’” before responding to the problem with hasty legislation or court decisions that may be “inapt or irrelevant tomorrow.”²⁷⁸

Second, Professor Hardy suggests that we simply educate the public about the importance of copyright law, so as to encourage them to “follow the rules” out of a sense of responsibility.²⁷⁹ While this solution alone may be inadequate, there are certainly benefits which can be derived from making the public aware of the importance of intellectual property to the U.S. economy.

The Working Group found that “[m]ost people do not have a very clear idea about the role of intellectual property law in encouraging creativity and the importance of intellectual property to [the United States’] economic well-being.”²⁸⁰ If the public is made aware of the detrimental effects that a simple download of pirated software has on the American economy, then to some extent they may be discouraged from engaging in such activity.²⁸¹ However, this task is difficult because individuals have trouble understanding the

274. See *supra* Part IV.D.1.

275. See I. Trotter Hardy, United States Copyright Office, *Project Looking Forward: Sketching the Future of Copyright in a Networked World* (May 1998) <<http://lcweb.loc.gov/copyright/cypub/thardy.pdf>>.

276. See *id.* at 264.

277. See *id.*

278. *Id.* at 265.

279. *Id.* at 266-67.

280. NII WHITE PAPER, *supra* note 2, at 201.

281. See *id.* at 201-02.

technicalities of intellectual property law and “generally do not appreciate the impact that an unauthorized use of a protected work can have in that market.”²⁸²

Finally, Professor Hardy suggests that technology itself may be the key to solving the problem of Internet piracy, particularly in light of the fact that technology is essentially its cause.²⁸³ Professor Hardy argues that restrictive technologies, such as encryption,²⁸⁴ watermarks,²⁸⁵ digital objects,²⁸⁶ proprietary viewers²⁸⁷ and the like, raise the costs of unauthorized use—in terms of time and trouble—above the benefits of such use, thereby discouraging Internet piracy.²⁸⁸ In other words, when the time and trouble needed to commit piracy outweigh the value of the software’s purchase price, individuals will naturally prefer to purchase such works rather than pirate them. Even the Working Group acknowledged that restrictive technologies are necessary to counter Internet piracy, but concluded

282. *Id.* at 202-03.

283. *See Hardy, supra* note 275, at 269-76. For example, technological restrictions can require an the use of an original disk or CD in order for a software program to function, print text on red-colored paper to reduce the quality of photocopies for software manuals, or scramble an internal broadcast signal so that it is garbled unless viewed with descrambling hardware. *See id.* at 270.

284. Encryption is the scrambling of computer software in such a way that it becomes incomprehensible unless decoded. *See id.* at 61-68 (overview of encryption technologies).

285. A watermark is an alteration of “a small percentage of the bits that make up a digital work” which is “invisible or nearly so to the human eye, but can be detected by computer programs designed for that purpose.” *Id.* at 303-04.

286. A digital object is “a unit of information such as a story, a movie, an image, a game, a computer program, or any other informational work, that is encrypted and then ‘wrapped’ inside a software ‘envelope.’” *Id.* at 71.

287. A proprietary viewer is “a software package that makes information available to someone, either literally by displaying it on-screen for ‘viewing,’ or more generally by making it accessible in whatever way is appropriate to the content,” without ever actually giving the contents of the information to the “viewer.” *Id.* at 76-77.

288. *See id.* at 272-76. For instance, the publishing industry relies on the fact that although technology allows people to make near perfect copies of books, they are discouraged from doing so because the cost of making copies of a book is usually more than the purchase price of the original book. *See id.* at 272.

that they “likely will not be effective unless the law also provides some protection for the technological processes and systems used to prevent or restrict unauthorized uses of copyrighted works.”²⁸⁹

Nevertheless, it is clear that plenty of alternatives exist which do not take away the substantive rights of the general public to the public domain. These alternatives, along with new technologies to be developed in the future, can effectively counter the damaging effects of Internet piracy without countering the underlying policies of copyright law. However, in its “high-speed” attempt to chase down software pirates on the Internet, Congress has unnecessarily upset the “delicate equilibrium” that existed between copyright owners and the general public for the greater part of this century.²⁹⁰

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289. NII WHITE PAPER, *supra* note 2, at 230.

290. *See* Computer Assocs. Int’l, Inc. v. Altai, Inc., 982 F.2d 693, 696 (2d Cir. 1992); *see also supra* Part III.A.4.

* The author would like to thank the talented editors and staff of the *Loyola of Los Angeles Law Review* and Professor Laurence Helfer for their invaluable assistance and support in writing this article.