

SELF-HELP & CONTRIBUTORY INFRINGEMENT: THE LAW AND LEGAL THOUGHT BEHIND A LITTLE 'BLACK-BOX'*

“ ‘[I]ntellectual property is, after all, the only absolute possession in the world. . . . The man who brings out of nothingness some child of his thought has rights therein which cannot belong to any other sort of property ’ ”¹

“ ‘Thou shalt not steal’ has been an admonition followed since the dawn of civilization. . . . [Infringing] conduct . . . however, violates not only the Seventh Commandment, but also the copyright laws of this country.’ ”²

I. INTRODUCTION

Copyright law purports to mark the divide between permissive and non-permissive uses of “original works of authorship.”³ Constitutionally sanctioned, the law seeks “To promote the Progress of Science and useful Arts.”⁴ Accordingly, copyright law functions as authorial stimuli, encouraging the production and dissemination of new works. By granting authors⁵ a limited monopoly⁶ to exploit their works, copyright law provides authors

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¹ Thorvald Solberg, *Copyright Reform: Legislation and International Copyright*, 14 NOTRE DAME L. REV. 343, 358 (1939) (quoting NATHANIEL SOUTHGATE SHALER, THOUGHTS ON THE NATURE OF INTELLECTUAL PROPERTY AND ITS IMPORTANCE TO THE STATE 8 (1878)).

² *Grand Upright Music Ltd. v. Warner Bros. Records, Inc.*, 780 F. Supp. 182, 183 (S.D.N.Y. 1991) (quoting *Exodus* 20:15) (footnote omitted).

³ 17 U.S.C. § 102(a)(1988).

⁴ U.S. CONST. art. I, § 8, cl. 8 (delegating to Congress the power “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”).

⁵ The term “Author” is broadly construed in copyright law to represent one who fixes “original works . . . in any tangible medium of expression.” 17 U.S.C. § 102(a)(1988 & Supp. II 1990). Consequently, upon fixation “[c]opyright protection subsists” *id.*, and “vests initially in the author or authors of the work.” 17 U.S.C. § 201(a)(1988). In *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53 (1884), the Court, in construing the terms “Author” and “Writings,” objected to the assertion that such terms should be restricted to “books only, or writing in the limited sense of a book and its author.” 111 U.S. at 57 (1884). The Court reasoned instead that, “[b]oth these words are susceptible of a more enlarged definition than this. An author . . . is ‘he to whom anything owes its origin’ [and] . . . writing[] . . . is meant . . . to include all forms of writing, printing, engraving, etching, & c., by which the ideas in the mind of the author are given visible expression.” *Id.* at 57-58 (quoting Worcester).

⁶ Section 302(a) of the Copyright Act of 1976 provides, in relevant part and with limited exception, that “[c]opyright in a work . . . endures for a term consisting of the life of the author and fifty years after the author’s death.” 17 U.S.C. § 302(a)(1988). The Copyright Act of 1909, the law in effect prior to enactment of the 1976 Act, provided instead for a twenty-eight year term, commencing on the date of first publication, and a renewal and extension for a further twenty-eight year term. 35 Stat. 1075, 1081

with the economic incentive to continue in their creative endeavors.⁷ Protecting this bundle of exclusive rights is an integral concern of the copyright dynamic. The Copyright Act of 1976⁸ ("Copyright Act") grants to copyright owners⁹ the exclusive right to reproduce, distribute, perform, display, recast, transform or adapt their copyrighted work, or to otherwise authorize such uses.¹⁰ These exclusive rights, particularly those concerning reproduction, distribution, and public performance, provide a legal foundation that has allowed the American motion picture industry to prosper and endure.¹¹

The grant and protection of rights¹² in "motion pic-

(formerly codified as amended at 17 U.S.C. § 24 (1977)), *repealed by* Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (codified as amended at 17 U.S.C. §§ 101-914)(1988)).

⁷ This principle is rudimentary to copyright policy and forms the basis of much discussion in this area of law. *See* Mazer v. Stein, 347 U. S. 201, 219 (1954). "The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement 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.'" *Id.* (quoting U.S. CONST. art. I, § 8, cl. 8). *See also* Sony Corp. of Am. v. Universal City Studios Inc., 464 U.S. 417, 429 (1984).

The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved. It is intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control has expired.

Id.

⁸ Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (codified as amended at 17 U.S.C. §§ 101-914 (1988)).

⁹ "'Copyright owner,' with respect to any one of the exclusive rights comprised in a copyright, refers to the owner of that particular right." 17 U.S.C. § 101 (1988).

¹⁰ Section 106 provides:

Subject to sections 107 through 120, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:

- (1) to reproduce the copyrighted work in copies or phonorecords;
- (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; and
- (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.

17 U.S.C. § 106 (1988 & Supp. II 1990).

¹¹ "America is the largest producer and exporter of movies and TV programming in the world, and contributes \$3.5 billion annually to the U.S. trade balance." *Motion Picture Anti-Piracy Act: Hearings on S. 1096 Before the Senate Subcommittee on Patents, Copyrights and Trademarks*, 102d Cong., 1st Sess. (1991) [hereinafter *Anti-Piracy Act Hearings*] (testimony of Timothy A. Boggs, Vice President, Time Warner Inc., at 1).

¹² The rights subsisting in a "motion picture," and the underlying screenplay ("liter-

ture"¹³ and "audiovisual works"¹⁴ encourages film studios to produce and distribute motion pictures—an art form believed to be one of the last worthy American exports.¹⁵

Recently, motion picture profits have been considerably enhanced by the emergence of the home-video market. Increased accessibility, diverse viewing opportunities, low rental costs, as well as spiraling movie theater ticket prices and the comfort and convenience of home viewing¹⁶ provide viewers greater access to motion pictures, while increasing the industry's overall market potential.¹⁷ Though still considered ancillary, the home-video market now doubles domestic box-office revenue.¹⁸ In this man-

ary work") are usually held by the studio producing the work, even though an individual scriptwriter or director is responsible for having "created" the screenplay and "motion picture" respectively. Section 201(b) of the Copyright Act—the Works Made For Hire provision—authorizes an immediate forfeiture of rights from author to employer. It provides in relevant part, "the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless the parties have expressly agreed otherwise in a written instrument signed by them, owns all of the rights comprised in the copyright." 17 U.S.C. § 201(b)(1988). Section 101 defines a "work made for hire" as:

(1) a work prepared by an employee within the scope of his or her employment; or

(2) a work specially ordered or commissioned for use as a contribution to a collective work, as a part of a motion picture or other audiovisual work . . . if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.

17 U.S.C. § 101 (1988).

¹³ "Motion pictures" are defined in the 1976 Copyright Act as "audiovisual works consisting of a series of related images which, when shown in succession, impart an impression of motion, together with accompanying sounds, if any." 17 U.S.C. § 101 (1988).

¹⁴ "Audiovisual works" are defined as:

works that consist of a series of related images which are intrinsically intended to be shown by the use of machines or devices such as projectors, viewers, or electronic equipment, together with accompanying sounds, if any, regardless of the nature of the material objects, such as films or tapes, in which the works are embodied.

17 U.S.C. § 101 (1988).

¹⁵ See 137 CONG. REC. 79 (1991) (Representative Howard L. Berman (D-Cal.) (describing the fundamental importance of protecting United States' intellectual property rights abroad and the adverse effects that failing to meet this objective would have on the national economic health and competitive well-being).

¹⁶ *Video Rentals Grow at Expense of Moviegoing-EIA Survey*, VIDEO WEEK, Jan. 20, 1992, at 5.

¹⁷ *Id.* The results of a survey conducted by the American Communications Group revealed that 67% of the survey sample preferred home video viewing, up from 50% who reported such a preference two years earlier. Of those who reported increased rental activity, 22% cited the poor quality of network TV, while 14% attributed it to not having had a Video Cassette Recorder ("VCR") earlier. Another 14% of those surveyed cited an improved choice of rental titles, 10% alluded to a perception of renting as "cheaper and 'more preferable'" than going to the movie theater, and 6% noted a tendency to stay at home more. *Id.*

¹⁸ Bart Story, *Screening Customers*, VIDEO STORE, Jan. 20, 1992, at 36 ("Despite . . . volume twice that of domestic box-office revenue, the home video industry is still an 'ancillary market' for theatrical motion pictures. . . . [T]he estimated \$11 billion spent

ner, it has served to enhance the production and dissemination of motion pictures in the United States, thereby demonstrating the achievement of copyright's constitutional ambition.

Ironically, the very characteristics that make the video medium valuable—increased availability, accessibility and diversity—also cause its extreme vulnerability. Works embodied in the video medium are particularly susceptible to unauthorized copying. Two factors that contribute to the growing difficulty of protecting copyrights in video-based works are: 1) infringers' use of high technology devices to easily and inexpensively produce quality unauthorized reproductions,¹⁹ and 2) increased exports to foreign states that have egregiously failed to recognize American copyrights.²⁰ In response, the motion picture industry has collectively turned to the use of an electronic anti-copy signal embodied in pre-recorded videocassettes,²¹ which is intended to make it virtually impossible to successfully reproduce the videocassette. The industry sees its use of such self-help strategies²² as a solution to the problems that home-copying, piracy and inadequate foreign protection of U.S. works have posed to copyright holders in this country. However, the anti-copy signals themselves are vulnerable to circumvention by other technology-based devices. One such device is the "black-box," an inexpensive²³ component whose primary purpose is to circumvent anti-copy signals placed on videocassettes. If left unimpeded, proliferation of black-boxes will frustrate the motion picture industry's self-help policy.

This Note examines the problems that technology and the growing foreign dissemination of U.S. works present to American copyright owners and examines the use of self-help mecha-

... on rental and sale of prerecorded video in 1991 is more than double the estimated \$5 billion U.S. box-office gross."). See also 137 CONG. REC. 79 (1991)(Representative Howard L. Berman (D-Cal.), speaking with regard to his introduction of the Motion Picture Anti-Piracy Act of 1991, S. 1096/H.R. 2367, 102d Cong., 1st Sess. (1991), stated that "[r]ental and sales of video cassettes have actually surpassed in volume theatrical showings and sales of movies to broadcast TV. The success of the retail video business has benefitted consumers, who can rent and buy a wide choice of movies at their convenience and at moderate prices . . .").

¹⁹ See *infra* notes 38-53 and accompanying text for a discussion of the challenges that copy-technology poses to current copyright policy.

²⁰ See *infra* notes 56-70 and accompanying text for a discussion of global protection of American intellectual property rights.

²¹ See *infra* notes 113-116 and accompanying text for an explanation of video-based anti-copy signals.

²² See *infra* notes 71-98 and accompanying text for a discussion of self-help strategies.

²³ The least expensive machines are priced at approximately \$30.00. *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 11).

nisms²⁴ as a solution to these problems. Part II addresses the effect technologically-enhanced reproduction devices²⁵ have on home-copying, video piracy, and the enforcement of U.S. intellectual property rights abroad. Part III examines the use of electric anti-copy signals²⁶ as a practical means of preventing unauthorized copying in the video format. Part IV discusses the black-box, its purpose and function and the threat it presents to self-help protective measures. Part V considers the doctrine of contributory infringement and its applicability to claims against black-box manufacturers²⁷ as well as its shortcomings in effectively protecting rights in video-based works. Part VI discusses the Motion Picture Anti-Piracy Act²⁸ and suggests possible improvements to it. The Act, as currently drafted, would amend existing copyright law to explicitly define an infringer as one who imports, manufactures, or sells any device whose primary purpose is to deactivate or inhibit the proper functioning of anti-copy systems.²⁹

II. PROBLEMS IN VIDEO COPYRIGHT ENFORCEMENT: TECHNOLOGY & THE EXPANSION OF GLOBAL MARKETS

In recent years the number of unauthorized and illegally reproduced videocassettes has increased alarmingly, annually cost-

²⁴ "Self-help mechanism" or "Self-help strategy" is used in this note to refer to any means by which a copyright proprietor takes non-legal action to enforce and protect the rights embodied in her work. This note, however, focuses on self-help mechanisms which are the result of the application of electronic anti-copy signals to pre-recorded videocassette. See *infra* note 26 for a description of anti-copy signals.

²⁵ See *infra* note 40 for examples of technologically-enhanced reproduction devices.

²⁶ "Anti-copy signal" or "Anti-copy system" is used in this note to refer to a process whereby manufacturers of pre-recorded videocassettes add a series of electronic pulses to the vertical blanking interval of the videocassettes. The vertical blanking interval is the area between the picture frames. During playback, the added pulses do not affect the visible video picture as they are in a sense, hidden between the frames.

During an attempt to make a copy of a videocassette treated with an anti-copy signal, "a recording VCR is confused by the invisible pulses and senses the video signal as being significantly stronger than it actually is. To compensate for the false strong incoming signal, the recording VCR then reduces its record level." *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 5). The lowered recording level produces a resulting copy of significantly degraded quality. The copy is left with little or none of its intended entertainment value.

²⁷ Though some black-box manufacturers have been identified, see Alan Citron, *Settlement Reached in Video Piracy Case*, L.A. TIMES, Nov. 13, 1990, at D2 (identifying VSA Ltd., as a manufacturer of a "'movie stabilizer,' which is capable of defeating the anti-copy code used on prerecorded tapes"), most are difficult to identify because they avoid standard channels of distribution by distributing through mail order. See *infra* note 133 and accompanying text for a discussion of the difficulty in identifying black-box manufacturers.

²⁸ S. 1096/H.R. 2367, 102d Cong., 1st Sess. (1991).

²⁹ *Id.* § 3.

ing the motion picture industry an estimated \$600 million³⁰ domestically and more than \$1 billion worldwide.³¹ Unauthorized copying ranges from simple home-taping to reproductions by video dealers who buy one copy of a popular title and then use it to make multiple copies for rental and retail sale,³² to large-scale piracy schemes by major counterfeiting outfits.³³ Factors which facilitate unauthorized copying may be categorically organized along two broad axes. The first is copy-technology, and its protean ability to evolve rapidly. Technological change has been a constant challenge to copyright law.³⁴ It forces legislators

³⁰ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of Representative Howard L. Berman (D-Cal.), at 4).

³¹ Alan Citron, *Settlement Reached in Video Piracy Case*, L. A. TIMES, Nov. 13, 1990, at D2 ("The Hollywood studios . . . maintain that the [motion picture] industry loses more than a billion dollars a year worldwide to video piracy . . .").

³² [V]ideo retailers who play by the rules suffer as well, because the dealer who makes the unlawful copies can attract more business by offering a wider selection without paying for it. The Video Software Dealers Association (VSDA) has stated that "piracy is responsible for an average loss of \$36,000 for every law-abiding video dealer."

Anti-Piracy Act Hearings, *supra* note 11 (testimony of Representative Howard L. Berman (D-Cal.), at 4); "On May 2, 1991, the Brooklyn District Attorney raided 19 video stores and seized 7,612 pirated videocassettes." *Id.* (testimony of Timothy A. Boggs, Vice President, Time Warner Inc., at 2).

³³ "On May 2, 1991. . . the Manhattan D.A. raided a pirate wholesale distributor and two pirate labs, resulting in the largest seizure of pirated tapes ever—over 89,000 copies." *Id.* at 2. *See also* Peter M. Nichols, *Home Video*, N.Y. TIMES, May 16, 1991, at C22 [hereinafter Nichols].

Piracy refers to manufacturing, distributing and selling counterfeit videos. . . . "The less sophisticated days of copying in back rooms of little stores is on the decline Now we're seeing the factory operation working out of apartment complexes or commercial buildings where you have anywhere from 50 to 5,000 VCR's wired together."

Id. (quoting Mr. William Nix, Senior Vice President, Anti-Piracy Operations, Motion Picture Association of America).

³⁴ U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, COPYRIGHT AND HOME COPYING: TECHNOLOGY CHALLENGES IN THE LAW, OTA-CIT-422, 3 (1989) [hereinafter OTA STUDY]

'Since enactment of the Copyright Act of 1976, over 400 bills have been introduced in Congress to change the copyright law; many of these attempted to deal with a growing range of copyright issues related to technology. For example, computer software, semi-conductor chips, privately owned satellite dishes, online databases, and audio- and video-cassette recorders, have all prompted a variety of proposals to deal with what copyright proprietors perceive as not only piracy of their intellectual property but an undermining of their economic viability.

Id.

The copyright statute continually lags behind technological development, as legislators are repeatedly forced to analyze the implications of such advancements on the effectiveness of copyright policy, and are then subsequently required to draft responsive legislation. Professor Goldstein capsulized this history:

The Act's original subject matter, charts and books, was gradually expanded as new economic interests and technologies pressed for recognition. Prints were added in the Act of 1802, musical compositions in the Act of 1831, photographs and negatives in the Act of 1865, paintings, drawings, chromos, and statuary in the Act of 1870, and motion pictures in the Act of

to continually address the increased ease and superior quality reproduction that copy-technology affords its users.³⁵ This factor can be sub-divided into 1) home-taping and 2) video piracy. Current technology offers users of home-taping equipment an effective and inexpensive means to produce high quality video copies. Similarly, video pirates employ high technology reproduction systems which can turn out thousands of unauthorized copies of legitimate motion picture titles.³⁶

The second factor embraces the problem of exporting American art and culture to foreign states that have failed to adequately protect U.S. intellectual property rights.³⁷

A. *The Technology-Copyright Tension: Home-Taping & Video Piracy*

Copy-technology has long been in conflict with general copyright policy.³⁸ Though some argue that such technology is

1912, the last expansion of coverage until sound recordings were added in 1971.

P. GOLDSTEIN, COPYRIGHT, PATENTS, TRADEMARK AND RELATED STATE DOCTRINES 652 (2d ed. 1981).

³⁵ See OTA STUDY, *supra* note 34, at 7-8.

³⁶ See *supra* note 33.

³⁷ OTA STUDY, *supra* note 34, at 84.

Concurrent with the rapid technological developments in the audio recording and reproduction industry, there has been a growing concern regarding the international protection of American intellectual property. . . .

At the present time there exists no uniform international or universal copyright concept that would ensure the protection of an author's works on a global [level].

Id. See also *infra* note 56 for identification of foreign states which have failed to protect U.S. intellectual property rights.

³⁸ On April 24, 1989, at the final advisory panel meeting for the 1986 Office of Technology report, *Intellectual Property Rights in an Age of Electronics and Information*, "some panel members reemphasized the challenges that new technologies present for the current copyright system, which they considered to be nearing obsolescence, but dauntingly complex to overhaul." OTA STUDY, *supra* note 34, at 38 n.10. Throughout its existence, copyright law has had to constantly address changes in technology. In *White-Smith Music Publishing Co. v. Apollo Co.*, 209 U.S. 1 (1908), the Supreme Court grappled with the question of whether a piano roll was a copy of the musical composition embodied within it. The Court held that a perforated piano roll was not a copy and therefore was not an infringement of the underlying musical composition. *Id.* at 18. In another context, the advent of photocopying machines has generated considerable debate concerning educational and library photocopying. See H.R. REP. NO. 1476, 94th Cong., 2d Sess., at 71-74 (1976), reprinted in 1976 U.S.C.C.A.N. 5659, 5684-88. Although the Copyright Act does not expressly include computer programs as copyrightable subject matter pursuant to section 102(a), 17 U.S.C. § 102(a)(1988 & Supp. II 1990), the category "literary works" has been construed to encompass computer programs. A House Report concerning the matter provided that "[t]he term 'literary works' . . . also includes computer data bases, and computer programs to the extent that they incorporate authorship in the programmer's expression of original ideas, as distinguished from the ideas themselves." H.R. REP. NO. 1476, 94th Cong., 2d Sess., at 54 (1976), reprinted in 1976 U.S.C.C.A.N. 5659, 5667-68. Accordingly, in 1980, section 101 was amended to include a definition of computer programs, and now defines a computer program as "a set of statements or instructions to be used directly or indirectly in a

ultimately advantageous to copyright proprietors,³⁹ the main threat high-technology hardware⁴⁰ poses⁴¹ is its ability to inex-

computer in order to bring about a certain result." Act of Dec. 12, 1980, Pub. L. No. 96-517, § 10(a), 94 Stat. 3028 (1980).

In response to the ease with which VCRs can reproduce a quantity of copies of source cassettes with minimal quality loss, a number of bills have been introduced to ward off home, noncommercial VCR recording. See S. 1758, 97th Cong., 1st Sess. (1981); H.R. 4783, 4794, 4808 & 5250, 97th Cong., 1st Sess. (1981); H.R. 5488 & 5705, 97th Cong., 2d Sess. (1982). Subsequent bills suggested imposing a royalty on the proceeds derived from the sale of VCRs and blank videocassettes. See S. 31 & 175, 98th Cong., 1st Sess. (1983).

Congress and copyright proprietors alike, have been plagued by the challenge of technologically superior reproduction mechanisms such as Digital Audio Tape ("DAT"). DAT is capable of digitally reproducing source material, thereby allowing exact copies of equivalent quality. In response, Congress proposed the Digital Audio Recorder Act of 1987. S. 506/H.R. 1384, 100th Cong., 1st Sess. (1987). The Bill provided:

No person shall manufacture, assemble or offer for sale, resale, lease, or distribution in commerce (1) any digital audio recording device which does not contain a copy code scanner; or (2) any device, product or service, the primary purpose or effect of which is to bypass, remove, or deactivate a copy-code scanner

. *Id.* § 3.

After Congress failed to enact the Digital Audio Recorder Act of 1987, S. 506/H.R. 1384, 100th Cong., 1st Sess. (1987), two subsequent attempts at DAT legislation have since surfaced. See The Digital Audio Tape Recorder Act of 1990, H.R. 4096, 101st Cong., 2d Sess. (1990) and the recently enacted Audio Home Recording Act of 1991, Pub. L. No. 102-563 (to be codified at 17 U.S.C. §§ 1001-1032). The lineage of bills indicates the considerable challenge that faces Congress in its attempt to legislate copyright policy that will respond adequately to technology's rapid advance.

³⁹ Discussing the positive promotional affects home-copying technology has on video retail and rental markets, Gary J. Shapiro, Chairman of the Home Recording Rights Coalition ("HRRRC"), stated, "for several years now everyone—especially the motion picture industry—has seen that the VCR revolution has hugely enhanced the value of motion picture production. It is no understatement to say that the VCR was the best thing to happen to the motion picture industry since talkies." *Anti-Piracy Act Hearings*, *supra* note 11 (submission of Gary J. Shapiro, Chairman, Home Recording Rights Coalition, at 6) (emphasis omitted).

⁴⁰ Advanced technology has introduced hardware capable of digital representation of original source material. One example is DAT. "Rotary-head digital audio tape . . . is a format with consumer-entertainment and computer data-storage applications. For consumer entertainment, the DAT format permits high-quality digital recording/playback of CD-quality music." OTA Study, *supra* note 34, at 42 (1989). Other digital formats include Digital Video Interactive. "Digital video interactive (DVI) offers about an hour of digital full-screen, full motion video, or else various combinations of full-motion video, . . . digital sound and text DVI uses computer data-compaction technology to compress digital video data, thus increasing the amount of information that can be recorded." *Id.* at 48. Another new home recording technology features recordable and recordable/erasable compact discs. Thermo-optical recordable, known as "THOR" (Tandy High-Intensity Optical Recording), "is said to be compatible with current CD audio technology, so that the discs could be played in a conventional CD player (and vice versa). Moreover, a 'blank' THOR CD can be recorded over and over again, using a low-level recording laser" *Id.* at 48-49.

⁴¹ Jason S. Berman, spokesperson for the Recording Industry Association of America ("RIAA") asks rhetorically: "Why is DAT such a threat? Because it eliminates any distinction between originals and copies. Because with DAT every copy becomes a new original" *Digital Audio Tape Recorders: Hearing on H.R. 1384 Before the Subcomm. on Commerce, Consumer Protection and Competitiveness of the House Comm. on Energy and Commerce*, 100th Cong., 1st Sess. 44 (1987)(statement of Jason S. Berman, President, Recording

pensively and easily reproduce "[m]ultigenerational digital copies . . . with no loss of quality."⁴² This reality tends to substantiate the often contested claim⁴³ that home-taping constitutes a serious threat to the interests of copyright owners.

It is estimated that consumers copy approximately seventy-five million prerecorded videocassettes each year.⁴⁴ Twenty-six million households maintain aggregate libraries of 257 million copies of prerecorded video titles.⁴⁵ Though there have been attempts to pass legislation aimed at resolving the home-copying issue,⁴⁶ such unauthorized and uncompensated use continues unabated because detection is difficult.

Large-scale video piracy operations also exploit technology for their own benefit. Generally, video piracy "refers to manufacturing, distributing and selling counterfeit videos."⁴⁷ The Motion Picture Association of America, Inc. ("MPAA") reported that a "total of 160,620 pirated videocassettes, worth an estimated \$10.5 million," were seized in the United States in the first six months of 1991.⁴⁸ During the first six months of 1992, the MPAA reported an estimated "97,695 pirated video tapes were removed nationally . . . representing \$6.4 million at the retail level."⁴⁹ In discussing the magnitude of particular piracy operations, William Nix, MPAA Senior Vice-President for Anti-Piracy Operations, reported that "we're seeing . . . factory operation[s] working out of apartment complexes or commercial buildings where . . . 50 to 5,000 VCR's [are] wired together."⁵⁰

Industry Association of America). The RIAA is an organization that represents the interests of the American recording industry. The 1986 Office of Technology Assessment report, *Intellectual Property Rights in an Age of Electronics and Information*, concludes that "new information-dissemination and reproduction technologies pose a number of legal challenges. One, the 'problem of private use,' stems from growing home access to copyrighted electronic information, coupled with inexpensive copying and transmission." OTA STUDY, *supra* note 34, at 169 n.2.

⁴² OTA STUDY, *supra* note 34, at 37 (footnote omitted).

⁴³ See *infra* notes 271-280 and accompanying text for a discussion of the HRRC's claim that consumers have a right to home-copy.

⁴⁴ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 8) (quoting figures from *Video Copying and Copy Protection in America: A National Survey of VCR Owners*, June 1990, a survey and analysis commissioned by Macrovision and compiled by Schulman, Ronca & Bucuvalas Inc.).

⁴⁵ *Id.*

⁴⁶ See *supra* note 38 for a discussion of DAT and its problematic effect on home-taping.

⁴⁷ Nichols, *supra* note 33, at C22.

⁴⁸ *MPAA Anti-Piracy Squad Reports Seizing Double Number of Pirated Videotapes During First Six Months of 1991*, MPAA News Release, (Motion Picture Association of America, Inc., Washington D.C.), July 15, 1991, at 1.

⁴⁹ Shari Hutson, *Pirated Film Tapes A Thriving Street-Corner Business*, CHI. TRIB., Aug. 10, 1992, at C2.

⁵⁰ Nichols, *supra* note 33, at C22.

Unauthorized home-taping and video piracy, with technology as their common denominator, present difficult copyright enforcement tasks. Because home-taping takes place behind closed doors, allegedly for home use, home-tapers are protected by both "the practical difficulty of enforcement . . . [and] the legal difficulty of invading the privacy of the home."⁵¹ They may also be protected by the doctrine of fair use.⁵² Likewise, video pirates are elusive and difficult to detect. They employ technology in a manner which allows for the quick reproduction of thousands of unauthorized copies and are generally able to escape without their activities being discovered.⁵³

B. *Global Markets: Growing Disrespect for Intellectual Property Rights*

Another aspect of the problem concerns global copyright protection. The export of American motion pictures, and of intellectual property generally, is crucial to the economic well-being of the United States. Exported American motion pictures and television programs provide the U.S. with over \$3.5 billion in surplus trade.⁵⁴ Representative Howard L. Berman (D-Cal.) has

⁵¹ Melville B. Nimmer, *Copyright Liability for Audio Home Recording: Dispelling the Betamax Myth*, 68 VA. L. REV. 1505, 1525 (1982).

Opponents of the application of the Copyright Act to audio home recording commonly voice two concerns. First, some argue that a rule of law establishing audio home recording as copyright infringement would be entirely unenforceable because there is no way to police activities in the privacy of the home. The second frequently voiced objection is that enforcement of copyright liability against audio home recording would require an intolerable invasion of privacy.

Id. See also OTA STUDY, *supra* note 34, at 169 n.2.

⁵² The doctrine of fair use is a limitation on the exclusive rights granted to a copyright owner, and allows for use of the copyrighted material for certain purposes and in certain amounts without rendering the user a copyright infringer. LATMAN, GORMAN & GINSBURG, *COPYRIGHT FOR THE NINETIES* 578-80 (1989). See *infra* notes 283-290 and accompanying text for a more detailed discussion of home-taping and the doctrine of fair use.

⁵³ See *infra* text accompanying note 124 for a discussion of the professional skills of video pirates, which enable them to easily escape detection.

⁵⁴ Jack Valenti, *The American Movie: The USA's Most Wanted Export-and Most Envied* 2 (Mar. 10, 1992) (unpublished conference paper submitted for use in the American Enterprise Institute conference entitled, *The New Global Popular Culture: Is It American? Is It Good for America? Is It Good for the World?*) (on file with the *Cardozo Arts & Entertainment Law Journal*). Valenti, discussing the global popularity of American motion pictures, wrote:

[T]here is one American product which is supreme on every continent in the world. Though it is not protected by patent nor has a secret formula buried somewhere in Malibu, its popularity grows. What other American product, creative or manufactured, except for Boeing passenger aircraft, captures more than 40% of the Japanese marketplace?

Id. See also Todd Gitlin, *Who Are the World* 1-2 (Mar. 10, 1992) (unpublished conference paper submitted for use in the American Enterprise Institute conference entitled, *The New Global Popular Culture: Is It American? Is It Good for America? Is It Good for the*

noted that “[i]ncreasingly, as other nations have matched and surpassed our capacity for manufacturing in many sectors, our Nation’s competitive advantage has evolved toward the export and trade of copyrighted films and television . . . [and] computer software Films and videos are among the few U. S. exports with a consistent and growing surplus.”⁵⁵

Unfortunately, the economic strength of American intellectual property exports is being eroded by a growing disrespect for intellectual property interests by foreign trade partners. Current assessments identify numerous countries that have “fail[ed] egregiously to protect U.S. intellectual property [rights].”⁵⁶

The United States has responded at the international level through bilateral and multilateral agreements⁵⁷ that envision a system of copyright protection without geographic boundaries. These responses include ratification of the Berne Convention for the Protection of Literary and Artistic Works (“Berne Convention”)⁵⁸ and the Universal Copyright Convention (“UCC”).⁵⁹ The Berne Convention was formed in 1886 by ten nations to recognize copyright protection across national boundaries; it has since grown to include seventy-seven member nations, including

World?) (paper on file with the *Cardozo Arts & Entertainment Law Journal*). Writing of the immense global reach of American popular culture, Todd Gitlin of the University of California at Berkeley asserts:

[T]here will be no dispute about two facts: in dollar value, military material is America’s number one export, and entertainment ranks second. . . . Little time need be taken establishing the dimensions of the global reach of American popular culture. The statistics are plain enough—soon, more income will come to Hollywood from foreign sales than from domestic.

Id.

⁵⁵ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of Representative Howard L. Berman (D-Cal.), at 9).

⁵⁶ *Id.* at 10. In April 1990, U.S. Trade Ambassador Carla Hills identified “India, the People’s Republic of China and Thailand as countries that [have] fail[ed] egregiously to protect U.S. intellectual property” *Id.* See also *Piracy Wars: Skirmishes, Setbacks and Some Progress; Intellectual Copyright Violations*, VIDEO MARKETING NEWS, May 4, 1992, at 1 (discussing the inadequate copyright protection of video-based works in such countries as The People’s Republic of China, India, Thailand, Taiwan, Poland and the Philippines); Ernest Plock, *International Piracy of Motion Pictures*, BUSINESS AMERICA, Sept. 25, 1989, at 7 (“While piracy is a widespread practice internationally, it was found to be particularly troublesome in . . . Saudi Arabia (losses of \$ 75 million), Turkey (\$ 45 million), and Egypt (\$ 37 million). A separate survey by the International Intellectual Property Alliance discovered . . . piracy in South Korea. . . . the Philippines and Indonesia”).

⁵⁷ See ROBERT BENKO, PROTECTING INTELLECTUAL PROPERTY RIGHTS (1987).

⁵⁸ Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, revised Paris, July 24, 1971, 25 U.S.T. 1341, T.I.A.S. No. 7868, 828 U.N.T.S. 221.

U.S. adherence to the Berne Convention is governed by the Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, 102 Stat. 2853 (codified as amended at 17 U.S.C. §§ 101, 104, 116, 301, 401-02, 404-08, 801 (1988)).

⁵⁹ Universal Copyright Convention, Sept. 6, 1952, 6 U.S.T. 2731, T.I.A.S. No. 3324, 735 U.N.T.S. 368, revised July 24, 1971, 25 U.S.T. 1341, T.I.A.S. No. 7868.

the United States.⁶⁰ The Convention requires that each member nation provide "national treatment"⁶¹ to foreign authors and meet certain "minimum standards" for protection.⁶²

In 1952, the UCC was created to provide an alternative multilateral agreement to the Berne Convention. The United States was one of the twelve founding member nations to ratify the UCC in 1955; presently, eighty nations have ratified the treaty.⁶³ The UCC makes fewer requirements of member nations and is more vague and indefinite than the Berne Convention concerning the nature of rights protected.⁶⁴

It is difficult for such broad multinational agreements to have nearly the effect U.S. copyright proprietors desire for adequate global protection.⁶⁵ There are many problems common to multilateral agreements, including insufficient numbers of signatories; lack of enforcement powers or bodies; lack of a dispute resolution mechanism; and failure to keep pace with technological change.⁶⁶

Another problem affecting U.S. copyright owners is that, absent an agreement with other states, United States copyright law has by "undisputed axiom . . . no extraterritorial application."⁶⁷ An example of the aforementioned problem occurs when one un-

⁶⁰ M. NIMMER & D. NIMMER, *NIMMER ON COPYRIGHT* § 17.01[B], at 17-5 to 17-6 (1988).

⁶¹ The principles of national treatment require that authors enjoy the same protection for their works in foreign countries as such countries grant to their own authors. *Id.* § 17.01[B], at 17-7 to 17-8.

⁶² *Id.*

⁶³ *Id.* § 17.01[B], at 7-10.

⁶⁴ Member nations must provide "adequate and effective" protection for the rights of authors and other proprietors of copyright in the works originating in other member nations. Universal Copyright Convention, Sept. 6, 1952, 6 U.S.T. 2731, T.I.A.S. No. 3324, 735 U.N.T.S. 386, revised July 24, 1971, Paris Text, art. I, 25 U.S.T. 1341, T.I.A.S. No. 7868. Contrarily, the Berne Convention provides specific minimum requirements with which member nations must comply, concerning recognition of authors' economic and moral interests. See generally Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, revised Paris, July 24, 1971, arts. 6, 6bis, 11-14, 25, U.S.T. 1341, T.I.A.S. No. 7868, 828 U.N.T.S. 221.

⁶⁵ BENKO, *supra* note 57, at 26-46.

⁶⁶ *Id.* at 26. See also Peter Jaszi, *A Garland of Reflections on Three International Copyright Topics*, 8 CARDOZO ARTS & ENT. L.J. 47, 63 (1989).

Th[e] phenomenon of "piracy" cannot be combatted through primary reliance on existing multilateral copyright agreements, to which many "pirate nations" do not even subscribe and which do not have enforcement mechanisms. For example, if it is discovered that nationals of another Berne country are engaged in duplicating works originating in the United States, the only potentially effective remedies are those which may be available in that country's own courts. If those courts fail to respond, the United States has no real remedy available that it would not have if it were aggrieved by the acts of nationals of a non-Berne country.

Id.

⁶⁷ NIMMER & NIMMER, *supra* note 60, § 12.04[A], at 12-59.

lawfully authorizes use of a U.S. copyrighted work in a foreign country. "[T]he act of authorizing in [the U.S.] a reproduction in [the foreign country] does not derogate the copyright owner's exclusive rights to reproduce the work in the United States, and hence is not violative of the Copyright Act; its impact must be gauged wholly under [the] copyright law" of the foreign country.⁶⁸ However, if the foreign country in question "has no copyright statute, such an activity evidently would be perfectly permissible therein."⁶⁹

Overall, the problem of enforcing U.S. copyrights abroad is immense. Considering the enormous economic interest in the export of American art and culture and the difficulty in dealing in a foreign jurisdiction with uncertain laws and expensive enforcement proceedings, there is ample cause for concern.⁷⁰

A solution is required that is capable of adequately countering the increase of unauthorized reproductions of video-based works which have resulted from technological advances and the difficulty of enforcing U.S. intellectual property rights abroad.

III. SELF-HELP: A PRACTICAL SOLUTION

A. *The Positive and Negative Aspects of Self-Help Policy*

1. The Positive Aspects

Self-help solutions to infringing conduct are a practical means of preventing the unauthorized use of copyrighted materials. The use of anti-copy system technology⁷¹ affords the motion picture industry direct control of their copyright interest. By encoding each manufactured videocassette with an electrical signal that inhibits the reproduction process, film studios have devised a scheme which enables each copyright interest to protect itself. Studios that employ a truly effective anti-copy system need not rely on either the legislative or judicial system for redress of their infringed rights.⁷² As Congressman Berman observed, "[t]he benefits of such anti-copy systems are obvious. They enable motion picture companies to protect their copyrights without resorting to enforcement efforts destined to be ineffective or

⁶⁸ *Id.* at 12-60 to 12-61.

⁶⁹ *Id.* at 12-63; *see also id.* at 12-62.

⁷⁰ *See supra* text accompanying note 55 for a discussion of the U.S. interest in exporting American art and culture. *See also infra* notes 125-126 for a discussion of the problems in instituting infringement proceedings against a foreign infringer.

⁷¹ *See supra* note 26 for the definition of "anti-copy system" as used in this Note.

⁷² *See infra* note 74 for a discussion of the actual efficiency of the motion picture industry's self-help policy and the industry's reliance on the legislature and judiciary.

draconian."⁷³

Theoretically, self-help solutions provide efficiency in a system searching for optimal answers. Each holder of rights (e.g., a motion picture studio) is responsible for the protection of those rights and any enforcement policy necessary to effectuate that end. Anti-copy mechanisms can be affixed to any work a copyright proprietor deems worthy of the cost of protection. As a result, the judicial and/or legislative systems are not burdened by the cost of enforcing individual rights, leaving them free to address other matters. The notion of self-responsibility for the protection and enforcement of one's rights promotes system-wide efficiency in this manner.⁷⁴ This point becomes more evident when considering attempts to prevent the putatively infringing conduct of an individual black-box user.⁷⁵

In a practical sense, it is difficult and ineffective for a copyright proprietor to police each individual copyright infringement of a video-based work. Unfortunately, the aggregate result of such conduct represents the problem in its entirety and amounts to an enormous and detrimental upheaval of rights. Thus, the cost of seeking redress for each individual infringement far outweighs the benefit gained. The enforcement effort at the individual level is costly, has minimal deterrent effect and provides the copyright owner with negligible compensation. Hence, anti-copy mechanisms present themselves as a solution which operates at the core of the problem. Because the anti-copy signal is encoded directly to the medium it purports to protect (unlike federal copyright law or the judicial system), it has the potential to be

⁷³ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of Representative Howard L. Berman (D-Cal.), at 3).

⁷⁴ The motion picture industry's self-help policy is not as effective as the industry would like it to be. See *infra* notes 128-133 and accompanying text for a discussion of the ability of black-boxes to circumvent anti-copy signals with relative ease. Moreover, the very fact that the industry has asserted strong support for the Motion Picture Anti-Piracy Act, S.1096/H.R. 2367, 102d Cong., 1st Sess. (1991)—which would define an infringer as anyone who manufactures devices whose primary purpose is to circumvent anti-copy systems—is evidence that the industry's self-help policy is itself in need of help (in this case legislative). See generally *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of Timothy A. Boggs, Vice President, Time Warner Inc. and testimony of John Ryan, Chairman, Macrovision). The statement in this piece concerning self-help and non-reliance on the legislature or judiciary assumes that self-help strategies are actually efficient and self-supporting. However, until this assumption becomes a reality, the motion picture industry will be forced to rely on governmental bodies to assist in implementing their self-help policy. It is possible that legislative support may give the industry incentive to allocate monies to develop more effective systems.

⁷⁵ Whether unauthorized reproduction of a video-based work for home viewing (home-taping) constitutes copyright infringement is an issue which will be discussed in Section VI. See *infra* notes 271-283 and accompanying text. However, for illustrative purposes, in this section assume that home-taping constitutes infringement.

effective wherever and whenever the opportunity to infringe exists.

2. The Negative Aspects

Anti-copy signals present an interesting problem where use of a copyrighted work is not considered an infringement. For example, the Copyright Act imposes limitations⁷⁶ on the exclusive rights granted to a copyright holder by way of the fair use doctrine.⁷⁷ The fair use doctrine essentially excuses unauthorized uses of a copyrighted work when the use in some way advances the public benefit without substantially impairing the economic value of the copyright.⁷⁸ In *Rosemont Enters. v. Random House, Inc.*,⁷⁹ the court linked the fair use doctrine to the public benefit in promoting the "Progress of Science and useful Arts."⁸⁰ The court announced that:

[t]he fundamental justification for the [fair use] privilege lies in the constitutional purpose in granting copyright protection in the first instance, to wit, "To Promote the Progress of Science and the Useful Arts." . . . To serve that purpose, "courts in passing upon particular claims of infringement must occasionally subordinate the copyright holder's interest in a maximum financial return to the greater public interest in the development of art, science and industry."⁸¹

⁷⁶ Section 106 of the Copyright Act provides in relevant part, that "[s]ubject to sections 107 through 120, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following." 17 U.S.C. § 106 (1988 & Supp. II 1990)(emphasis added). See *supra* note 10 for the text of section 106 of the Copyright Act.

⁷⁷ The fair use doctrine is codified at 17 U.S.C. § 107 and provides:

Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include-

- (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 copyright work as whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.

17 U.S.C. § 107 (1988 & Supp. II 1990).

⁷⁸ See LATMAN, GORMAN & GINSBURG, COPYRIGHT FOR THE NINETIES 578-80 (1989).

⁷⁹ 366 F.2d 303 (2d Cir. 1966), *cert. denied*, 385 U.S. 1009 (1967) (the court excused authors of an unauthorized Howard Hughes biography for the copying of portions of magazine articles about Hughes in which Hughes owned the copyright).

⁸⁰ U.S. CONST. art. I, § 8, cl. 8.

⁸¹ *Rosemont Enters. v. Random House, Inc.*, 366 F.2d at 307 (quoting the U.S.

The problem which arises from incorporating anti-copy signals into videocassettes is that they are incapable of distinguishing between infringing and noninfringing reproductions. As a result, the anti-copy signal may work contrary to the constitutional objective of promoting the "Progress of Science and useful Arts"⁸² by hindering the advancement of the "'greater public interest in the development of art, science and industry.'"⁸³ In contrast, the limited monopoly granted to copyright owners is based on the theory that the provision of a "special reward"⁸⁴ will "motivate the creative activity of authors and inventors."⁸⁵

Possible approaches to the problem could involve developing systems that would allow home-tapers to reproduce a single archival copy⁸⁶ from the original source material or would otherwise implement a serial copy management scheme.⁸⁷ A serial copy management approach would allow for unlimited reproduction of the source material, but would nonetheless prevent all reproductions made from second generation copies. With either approach, reproduction is limited and controlled rather than absolutely prevented, providing for a less inhibited copyright policy. By permitting the reproduction of an archival copy, the owner of that copy⁸⁸ can utilize the work in a noninfringing manner (e.g., fair use, exempt use, or use of a work after the copyright in the work has expired). However, there is nothing preventing the owner of an archival copy from utilizing that copy in an infringing manner. Optimally, a device which could detect the nature of a use and prevent or permit that use accordingly, would best serve copyright policy.

CONST. art. I, § 8, cl. 8. and *Berlin v. E.C. Publications Inc.*, 329 F.2d 541, 544 (2d Cir. 1964)).

⁸² U.S. CONST. art. I, § 8, cl. 8.

⁸³ *Rosemont Enters. v. Random House, Inc.*, 366 F.2d at 307 (quoting *Berlin v. E.C. Publications Inc.*, 329 F.2d 541, 544 (2d Cir. 1964)).

⁸⁴ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984) (asserting that the monopoly privileges authorized by Congress are neither unlimited nor primarily designed to provide special private benefit, but rather are a limited grant intended to motivate authors and inventors for the public's benefit).

⁸⁵ *Id.*

⁸⁶ The Copyright Act expressly exempts reproductive uses of computer programs when such uses are for archival purposes. 17 U.S.C. § 117 provides:

[I]t is not an infringement for the owner of a copy of a computer program to make or authorize the making of another copy or adaptation of that computer program provided . . . that such new copy or adaptation is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.

17 U.S.C. § 117 (1988).

⁸⁷ See *infra* note 104 for an explanation of the Serial Copy Management System.

⁸⁸ If a serial copy management scheme is employed, more than one copy will be available to the owner of the original source copy.

Another context in which to assess the compatibility of anti-copy systems with general copyright policy, concerns remuneration of copyright proprietors for use of their work. The exclusive rights granted to copyright owners⁸⁹ are not granted simply to benefit the owner. Instead, this grant enables a copyright owner to command remuneration for use of the work in the hope that such remuneration will provide an incentive to create further works for the public's benefit.⁹⁰ For example, subject to limitation,⁹¹ a copyright owner is granted the exclusive right "to reproduce the copyrighted work in copies."⁹² The video market employs this grant by providing a mechanism whereby all who wish to use (i.e., view) the work⁹³ must purchase or rent it. Part of the purchase price constitutes remuneration for the work which, theoretically, will encourage the author to create and disseminate other works to the public. Anti-copy signals facilitate copyright policy⁹⁴ insofar as they prevent unauthorized reproductions of a work, forcing the potential user of the work to purchase or rent that work.

However, alternative means are available to facilitate copyright objectives other than the strict prophylactic measures offered by anti-copy systems. For example, a debit card system has been suggested for use with sound recording devices to prevent unauthorized copying.⁹⁵ The debit card could work similarly with VCRs to allow unlimited copying and provide remuneration to copyright owners for each copy made. A user would purchase a debit card and insert it into the recorder for the duration of the copying (as the machine would fail to record otherwise). The recorder's card reading mechanism would deduct the appropriate fee for the particular track copied. The card should be capable of reading the identification code embodied in the source tape and

⁸⁹ See *supra* note 10 for language of section 106 of the Copyright Act promulgating the grant of exclusive rights to copyright owners.

⁹⁰ See *supra* notes 3-10 and accompanying text for a discussion of basic copyright policy.

⁹¹ 17 U.S.C. §§ 107-120 (1988).

⁹² *Id.* § 106(1).

⁹³ Except those who fall into one of the categories of noninfringing use alluded to earlier (i.e., fair use, exempt use or use of a work after copyright in the work has expired). See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works.

⁹⁴ Anti-copy signals do so to the extent that the system is effective in preventing reproduction and the use of the work does not fall into one of the categories of noninfringing use (i.e., fair use, exempt use or use of a work after copyright in the work has expired). See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works.

⁹⁵ See OTA STUDY, *supra* note 34, at 59.

therefore, allow copyright owners to be remunerated accordingly.⁹⁶ Noncopyrighted works should be able to be copied without use of the card. This system is practical mainly because it is accurate in reflecting which copyright owners are to be remunerated for particular uses.

Another remunerative process would involve implementing a levy on blank video media. This levy system would classify blank videotape into two tiers—one which would carry the levy for tapes that would be used to copy copyrighted material and a second, which would not carry the levy for tapes that would be used solely for nonreproductive uses. Ideally, it would be impossible to reproduce material on videotape in the second tier. The levy would remunerate copyright owners for the reproductive uses of their works⁹⁷ but, the system would not accurately reflect which works were copied, and thus would be unable to identify which copyright owners are entitled to remuneration.⁹⁸ Furthermore, the system is problematic because it does not allow a non-infringing use without remuneration, and therefore, is contrary to general copyright policy.

Since none of the aforementioned solutions seem to fare better than the next, copyright proprietors should ultimately be left to choose whichever method, if any, they believe will most effectively work for them. To the extent a method is truly effective, it will properly remunerate proprietors for use of their work. From this it logically follows that the method would be effective in providing owners with incentive to further create and disseminate works for the public's benefit.

B. *The Advent of the Anti-Copy Era*

The motion picture industry has collectively resorted to the use of anti-copy signals to protect its copyright interests against the unauthorized reproduction of prerecorded videocassettes and satellite pay-per-view transmissions.⁹⁹ In 1989, Jack Valenti,

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ Copyright holders could be remunerated in a manner similar to that in which performing rights societies, such as the American Society of Composers, Authors and Publishers ("ASCAP") and Broadcast Music, Inc. ("BMI") carry out the process. These societies collect and appropriate performing rights royalties on behalf of copyright owners affiliated with each group. This system, however, "creates difficulties in the apportioning and distributing of the collected royalties." LATMAN, GORMAN & GINSBURG, COPYRIGHT FOR THE NINETIES 573-74 (1989).

⁹⁹ Macrovision is a leading manufacturer of anti-copy systems. "Most of the major motion pictures released in cassette format in 1990 were protected by Macrovision." *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision,

President of the MPAA, urged the electronics and motion picture industries to agree on a technological means of copy-protection¹⁰⁰ for motion pictures. According to Valenti, "In the long term best interests of both industries and the paying public, prerecorded videocassettes as well as movies delivered via pay cable, pay-per-view, and satellite premium services must be made copyproof."¹⁰¹

Copy-protection gained meaningful notoriety as a possible solution to preventing digital reproduction of audio works with the introduction of Digital Audio Tape ("DAT").¹⁰² In 1989, a group of recording industry representatives and consumer electronic manufacturers from Japan, Europe and the United States convened to discuss a technological means for preventing or limiting DAT reproduction of compact disks and other digital sources. In July of the same year, the parties signed a Memorandum of Agreement in which they agreed to seek legislation, worldwide, that would mandate a new DAT protection format known as Serial Copy Management System ("SCMS").¹⁰³

at 2). Macrovision manufactures the ACP-100 (Anti-Copy Process). This process was introduced in 1985 and was designed "to prevent unauthorized recording or copying of video programs." *Id.* The ACP-180T is a second generation processor introduced in March, 1990 and has now replaced all earlier versions. Macrovision also manufactures the ACP-180P, an anti-copy process to copy-protect programs that originate from satellite delivered networks or stand-alone cable systems. Macrovision, Corporate Profile Pamphlet (transcript on file with the *Cardozo Arts and Entertainment Law Journal*). Another major anti-copy system manufacturer is Eidak Corporation. *See generally Anti-Piracy Act Hearings, supra* note 11 (testimony of Richard S. Leghorn, President, Eidak Corporation). *See also id.* (statement of Ralph Oman, Register of Copyrights and Assistant Librarian for Copyright Services, at 10). "Anticopying systems are a technological solution intended as self-help by copyright owners to prevent reproduction of their works." *Id.*

¹⁰⁰ The terms "anti-copy" and "copy-protect" are used interchangeably throughout this note to represent technological means of preventing unauthorized copying of copyrighted works.

¹⁰¹ OTA STUDY, *supra* note 34, at 60 n.63 (1989). Pay cable, pay-per-view, and satellite premium services are all broadcast transmission mediums by which programming signals are transmitted directly to purchasers.

¹⁰² DAT is a digital reproduction medium which copies a signal in numerical code. Essentially, as the analog sound signal is received by the DAT recorder, the recorder takes miniature "snapshots" of the sound and marks each with a code. The sound is not stored as an arrangement of particles on magnetic tape, as with analog cassettes, but instead as an arrangement of ones and zeros (known as binary code), each representing a particular portion of the sound. On playback, the recorder assembles the "sound snapshots," ordering them by their code identifications. They then pass through a digital-analog converter which allows for the translation of the digital representation of the sound to actual audible sound. The process is similar for digital video representation mediums.

DAT allows for "[m]ultigenerational digital copies (of digital recordings) . . . [to] be made with no loss of quality or clarity—copies are 'clonable.' With analog audiotaping . . . the quality of successive generations degrades fairly rapidly. With digital-to-digital copying, however, the quality of successive generations can be indistinguishable from 'originals.'" *Id.* at 46, 47.

¹⁰³ *Id.* at 28-29.

"SCMS would permit direct, digital-to-digital copying of digital recordings and broadcasts, but not digital-to-digital copies of these copies."¹⁰⁴ The system would thereby limit digital reproduction to copying directly from the original source tape. Several legislative attempts have been made to resolve problems concerning the mass digital reproduction of copyrighted works. The Digital Audio Recorder Act of 1987¹⁰⁵ would have applied to any device capable of making digital recordings.¹⁰⁶ This Bill would have prohibited the dissemination of digital audio recording devices that did not contain a copy-code scanner.¹⁰⁷ When the "copy-code scanner"¹⁰⁸ detects a "notch" in the frequency encoded in the incoming audio signal, the recording mechanism is deactivated, inhibiting further reproduction of the source signal. Accordingly, any person who would have been aggrieved by a violation of this legislative prohibition would have had an express cause of action against violators.¹⁰⁹ After the National Bureau of Standards found that the copy-code system could not operate without degrading the quality of sound embodied on

¹⁰⁴ *Id.* at 56 (footnote omitted).

SCMS controls "serial" digital copying on DAT recorders—copying second, third, and successive generations of DAT tapes from a first-generation DAT copy. . . . SCMS will allow any original prerecorded work . . . to be copied indefinitely onto different blank DAT tapes. However, SCMS will limit the number of digital-to-digital copies that can be made from the copies . . .

Id. at 28.

¹⁰⁵ S. 506/H.R. 1384, 100th Cong. 1st Sess. (1987).

¹⁰⁶ The Bill defined "digital audio recording device" as "any machine or device, now known or hereafter developed, which can be used for making audio recordings in a digital format. The term 'digital audio recording device' includes any machine or device which incorporates a digital audio recording device as part thereof." S. 506/H.R. 1384, 100th Cong., 1st § 2(3) (1987).

¹⁰⁷ *Id.* § 3(a). The Bill provided:

No person shall manufacture, assemble, or offer for sale, resale, lease, or distribution in commerce (1) any digital audio recording device which does not contain a copy-code scanner; or (2) any device, product, or service, the primary purpose or effect of which is to bypass, remove, or deactivate a copy-code scanner.

Id.

¹⁰⁸ A "copy-code scanner" is defined in the Bill as:

[A]n electronic circuit or comparable system of circuitry (A) which is built into the recording mechanism of an audio recording device; (B) which, if removed, bypassed, or deactivated, would render inoperative the recording capability of the audio recording device; (C) which continually detects, within the audio frequency range of [3,500] to [4,100] hertz, a notch in an encoded phonorecord; and (D) which, upon detecting a notch, prevents the audio recording device from recording the sounds embodied in the encoded phonorecord by causing the recording mechanism of the device to stop recording for at least [25] seconds.

Id. § 2(2).

¹⁰⁹ Civil penalties included injunction, *id.* § 4(a)(1), actual damages and profits, *id.* § 4(b)(1), statutory damages, *id.* § 4(b)(2), impounding, *id.* § 4(c), destruction, and modification, *id.* § 4(d).

digital tape, the Bill failed.¹¹⁰ Subsequent attempts to enact DAT legislation include the Digital Audio Tape Recorder Act of 1990¹¹¹ and the Audio Home Recording Act of 1991, which was enacted in 1992.¹¹²

The motion picture industry has also taken measures to ensure the security of their intellectual property interests. Macrovision, for example, manufactures the leading video copy-protection technology. Their anti-copy system is applied to approximately 40% of all prerecorded videocassettes produced in the United States.¹¹³ This technology currently saves the home video industry an estimated \$168 million per year.¹¹⁴ The protection process adds a series of electronic pulses to the vertical blanking interval when a videocassette is manufactured. The added pulses do not affect the visible picture during playback. Yet, if an attempt is made to copy a videocassette treated with a copy-protect signal, the recording VCR is confused by the invisible pulses and perceives the video signal as being significantly stronger than it actually is. To compensate for the false strength of the incoming signal, the recording VCR automatically reduces its recording level. The lowered recording level produces a copy of extremely poor quality. Consequently, the copy retains little or none of its intended entertainment value.¹¹⁵ Other formats such as cable, satellite and microwave can be protected with similar copy-protection systems.

Use of copy-protection technology has become an integral part of the strategy used by the motion picture industry to combat unauthorized copying and piracy. "Over 350 million cas-

¹¹⁰ See *Digital Audio Tape Recorder Act of 1990: Hearings on S. 2358 Before the Subcomm. on Communications of the Senate Comm. on Commerce, Science and Transportation*, 101st Cong., 2d Sess. (1990) (statement of Ralph Oman, Register of Copyrights and Assistant Librarian for Copyright Services, at 6-8). The National Bureau of Standards found that the copy-code system degraded audio quality and was easily defeated.

¹¹¹ H.R. 4096, 101st Cong., 2d Sess. (1990). The companion Bill in the Senate was S. 2538, 101st Cong., 2d Sess. (1990). This Bill died in Subcommittee because of its failure to address royalty compensation issues. See *Digital Audio Tape Recorder Act of 1990: Hearings on S. 2358 Before the Subcomm. on Communications of the Senate Comm. on Commerce, Science and Transportation*, 101st Cong., 2d Sess. (1990).

¹¹² Pub. L. No. 102-563 (to be codified at 17 U.S.C. §§ 1001-1032). The Audio Home Recording Act of 1991 was signed into law on October 28th, 1992. 9 Int'l Trade Rep. (BNA) No. 44, at 1888 (Nov. 4, 1992).

For an analysis of DAT and DAT-related legislation, see Gary S. Lutzker, Note, *DAT's All Folks: Cahn v. Sony and the Audio Home Recording Act of 1991—Merrie Melodies or Looney Tunes?*, 11 CARDOZO ARTS & ENT. L.J. 145 (1992).

¹¹³ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 10).

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 5.

ettes have been copyprotected since 1985,"¹¹⁶ evidencing the industry's reliance upon anti-copy technologies as a basis for its self-help policy.

*C. Application to Specific Enforcement Problems: Technology & the
Expanse of Global Markets*

Self-help protection strategies are particularly important with regard to the challenges that currently face American copyright interests. Anti-copy mechanisms offer a potentially effective solution to the detection and enforcement problems that home-copying, piracy, and foreign infringement present.

Home video-taping is an unauthorized use which is cause for alarm. Home-tapers copy an estimated 75 million prerecorded videocassettes each year.¹¹⁷ With prerecorded videocassettes priced at an average of \$28.05 each,¹¹⁸ the estimated yearly loss due to the pervasive use of illicit copies totals \$2,103,750,000.¹¹⁹

Home-taping poses a serious threat to effective enforcement tactics because of the private domain in which the copying is accomplished.¹²⁰ Moreover, many proponents of home-copying argue that it is exempt from copyright liability¹²¹ despite the staggering number of home-copiers who reproduce copyrighted video works.¹²²

In another context, large-scale video pirates pose a significant enforcement problem because of the covert and criminal manner in which they operate. Although industry bodies are taking measures to counter large scale video piracy,¹²³ their efforts

¹¹⁶ *Id.* at 3.

¹¹⁷ *Id.* at 8 (quoting figures from *Video Copying and Copy Protection in America: A National Survey of VCR Owners*, June 1990, a survey and analysis commissioned by Macrovision and compiled by Schulman, Ronca & Bucuvalas Inc.).

¹¹⁸ *Video Copying and Copy Protection in America: A National Survey of VCR Owners*, June 1990, at 7 (a survey and analysis commissioned by Macrovision and compiled by Schulman, Ronca & Bucuvalas Inc.).

¹¹⁹ This figure is derived by multiplying the average price of a videocassette (\$28.05) by the estimated number of videocassettes copied at home per year (75 million). The figure represents loss of sales resulting from consumers who home-tape video titles instead of purchasing them.

¹²⁰ See *supra* note 51 and accompanying text for a discussion of the difficulty of policing potentially infringing activities in the privacy of the home and the probability that such policing constitutes an invasion of privacy.

¹²¹ See *infra* notes 271-280 and accompanying text for a discussion of home-taping and the doctrine of fair use.

¹²² *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 8) (quoting figures from *Video Copying and Copy Protection in America: A National Survey of VCR Owners*, June 1990, a survey and analysis commissioned by Macrovision and compiled by Schulman, Ronca & Bucuvalas Inc.) (home-tapers copy an estimated 75 million prerecorded videocassettes each year)).

¹²³ Currently, the MPAA has 2,700 video piracy investigations under way in the

have been futile. Pirates are usually professionally skilled "fly by night[s] . . . [who] know[] that they can make a quick profit, and once they go out of business, the [unauthorized copy] they sold remain[s] in consumers' or video dealers' hands."¹²⁴

Finally, the difficulty in attempting to enforce copyrights in foreign jurisdictions presents a daunting obstacle for those with an interest in the export of U.S. intellectual property. For instance, foreign states may not be receptive to the idea of protecting U.S. intellectual property rights.¹²⁵ Additionally, foreign governments may institute rules and judicial practices unfamiliar to U.S. litigators. Furthermore, American copyright proprietors may have difficulty obtaining jurisdiction over foreign infringers.¹²⁶

The motion picture industry's self-help policy is a viable solution to enforcement difficulties because the protection mechanism is physically integrated into the video tape medium. The anti-copy system is active wherever a work may be, whether in the home or in a foreign jurisdiction. Further, such self-help strategies assume the cost burden of protection, which otherwise would inure to an already overwhelmed court system. Since the copyright owners are responsible for the protection of their rights, such protection can be measured against the value owners place upon it. Whether a work is protected is simply a matter of whether it is valuable enough to its owner, so that the cost of protecting the work will not outweigh the benefit of such protection. The ultimate decision is left to the copyright owner.

United States. Similarly, the Satellite Broadcast Communications Association ("SBCA") anti-piracy task force has 65 U.S. field investigators currently carrying out 1,000 investigations. Home Box Office ("HBO") contracts with a nationwide network of former law enforcement personnel who investigate the commercial theft of HBO programming. Brenda Moss, *Pirate Busters*, SECURITY MAG., Sept. 1991.

¹²⁴ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony John Ryan, Chairman, Macrovision, at 13).

¹²⁵ See *supra* note 56 for identification of foreign states that have failed to adequately protect U.S. intellectual property rights.

¹²⁶ See INTERNATIONAL TRADE COMMISSION, PUB. NO. 1479, THE EFFECTS OF FOREIGN PRODUCT COUNTERFEITING ON U.S. INDUSTRY 21 (1984).

A foreign corporation producing a product which infringes . . . [U.S. intellectual property rights], and exporting that product to the United States can avoid service of process by mail simply by refusing to accept delivery. Use of other acceptable means of service by the courts can be both expensive and time-consuming Thus, unlike situations involving suits for . . . infringement against domestic infringers, the difficulty and expense in achieving adequate service of process and in enforcing a judgment against foreign parties means that such foreign parties may, as a practical matter, be immune from suits based upon . . . infringement brought in U.S. district court.

Id.

Moreover, because the anti-copy system's means of protection relies on a technological mechanism rather than a legal one, it can more easily be modified to counter the challenge of any technological advance that creates potentially infringing devices.

Unfortunately, continued technological advancement is as much a hinderance to the effectiveness of anti-copy systems as it is a help. Advanced technologies that facilitate unauthorized reproduction will ultimately frustrate the viability of a successful self-help dynamic. The development of the black-box is an example of the threat facing the motion picture industry's self-help strategy.¹²⁷

IV. THE "BLACK-BOX": A CRITICAL CHALLENGE TO THE VIABILITY OF SELF-HELP ENFORCEMENT STRATEGIES

"[E]very technological innovation designed to stop unauthorized copying is met with a device to circumvent the anti-piracy tool. And the . . . problems . . . can be expected to grow with every technological breakthrough. . . . '[B]lack boxes' . . . [are] just one example of the technological challenges we face."¹²⁸

The propagation of the black-box presents a critical challenge to the proficiency of anti-copy systems and their ability to facilitate the motion picture industry's self-help strategy.¹²⁹ When connected between source and copying VCRs, black-box devices defeat anti-copy signals. The result of black-box usage, therefore, is the successful reproduction of a source video which the defeated signal would have otherwise prevented.

A "cottage industry"¹³⁰ dedicated to the manufacture of black-boxes materialized within months of the introduction of the Macrovision anti-copy system. Black-boxes have also been created to neutralize anti-copy encryption of such off-air programming as cable and satellite pay-per-view transmissions.¹³¹ The frustration inherent in the speed and accuracy with which technology advances is exemplified by Judge Ferguson's statement during the *Sony* trial. He stated,

[A]s sure as you and I are sitting in this courtroom today,

¹²⁷ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of Timothy A. Boggs, Vice President, Time Warner Inc., at 3).

¹²⁸ *Id.* at 30.

¹²⁹ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 10).

¹³⁰ *Id.* (testimony of Representative Howard L. Berman (D-Cal.), at 3).

¹³¹ *Id.* (testimony of John Ryan, Chairman, Macrovision, at 11).

some bright young entrepreneur, unconnected with Sony, is going to come up with a device to unjam the jam . . . [a]nd then we have a device to jam the unjamming of the jam, and we all end up like jelly.¹³²

Equally frustrating is the manner in which black-box manufacturers tend to sell the device. Black-boxes range in price from \$29.99 to \$99.00, and are imported and sold mainly through mail order. Advertisements for these devices are usually found in the rear of video and electronic magazines.¹³³ By eliminating standard channels of distribution through established consumer electronics stores, the manufacturers make themselves difficult to track. Black-boxes pose an unmistakable threat to an anti-copy system's ability to protect copyrighted works. They illustrate the vulnerability and inefficiency of technology-based protection, as well as the motion picture industry's need to develop more effective anti-copy methods. The ability of the movie industry to prevent further sale of black-boxes will be a factor in determining the success of anti-copy systems as a basis for the industry's self-help strategy.

Proprietors of video-based works may also appeal to the copyright doctrine of contributory infringement as a means of combatting the manufacture of black-boxes.¹³⁴ Further analysis

¹³² Lardner, *Annals of Law—The Betamax Case—I*, NEW YORKER, Apr. 6, 1987, at 45, 62-63.

¹³³ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 11) (exhibiting print advertisements for: MSI-KIT and JMAK-4 Black Box, stating "MACROVISION . . . NOW YOU SEE IT, NOW YOU DON'T . . . Remove copy-protection from video cassettes" AUDIO ELECTRONICS, June, 1989; for the Digital Video Stabilizer, stating "ELIMINATES ALL VIDEO COPYGUARDS . . . WARNING The Digital Video Stabilizer: RXII is intended for private home use only. It is not intended to copy rental movies or copyrighted video tapes that may constitute copyright infringement." VIDEO MAG., Jan. 1990; for the Video-2010, stating "The Video-2010 will spot and completely eliminate Macrovision and all current copy protection and jamming." VIDEO REVIEW, July, 1991).

¹³⁴ *Anti-Piracy Act Hearings*, *supra* note 11, at 13 (testimony of John Ryan, Chairman, Macrovision). Other means of redress include patent litigation.

In order to preserve the patent litigation avenue of redress for themselves, manufacturers of anti-copy systems obtain patents on all known ways to defeat their anti-copy systems. As a result, these manufacturers may enjoin further manufacture of black-boxes in a successful patent infringement suit. However, John Ryan, Chairman of Macrovision, testifying before the Senate Subcommittee on Technology and The Subcommittee on Patents, Copyrights and Trademarks, stated:

[T]he patent infringement litigation route remains time-consuming, and it has been frighteningly costly. Macrovision has now spent millions of dollars to run the bad guys out of town—an enormous sum of money for a small company to spend. While we have prevailed in every case, it has often been a thankless task: when one company agrees to leave the market, another promptly springs up to replace it.

Id.

of the doctrine, which follows, is necessary to ascertain its strengths and weaknesses in such a claim for infringement.

V. THIRD-PARTY LIABILITY

The Copyright Act of 1976 does not expressly provide for liability based upon the infringing conduct of another.¹³⁵ The doctrine of vicarious liability, however, would apply to one who, though not directly engaged in infringing activity, could nevertheless be held liable based on their relation with a direct infringer. Contributory infringement, an outgrowth of vicarious liability theory, instead imposes liability based upon the relation of a party's conduct to the direct infringement. Despite the lack of express third-party liability language in the Copyright Act, such theories are inarguably part of the framework of modern copyright law.¹³⁶ The Supreme Court in *Sony Corp. of Am. v. Universal City Studios, Inc.*¹³⁷ explained:

The absence of such express language in the copyright statute does not preclude the imposition of liability for copyright infringements on certain parties who have not themselves engaged in the infringing activity. For vicarious liability is imposed in virtually all areas of the law, and the concept of contributory infringement is merely a species of the broader problem of identifying the circumstances in which it is just to hold one individual accountable for actions of another.¹³⁸

Third-party liability theory in copyright law is based in section 106 of the Copyright Act.¹³⁹ Section 106 provides in relevant part, that "the owner of copyright under this title has the

¹³⁵ NIMMER & NIMMER, *supra* note 60, § 12.04[A], at 12-40; *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 435 (1984). Note, however, that such a contributory infringement provision was later enacted in the Semiconductor Chip Protection Act of 1984, Pub. L. No. 98-620, 98 Stat. 3335 (1988). The Act is implemented in Chapter 9 of the Copyright Act which provides in relevant part: "The owner of a mask work provided protection under this chapter has the exclusive rights to do and to authorize any of the following: . . . (3) to induce or knowingly to cause another person to do any of the acts described in paragraphs (1) and (2)." These acts are "(1) to reproduce the mask work . . . [or] (2) to import or distribute a semiconductor chip product in which the mask work is embodied." 17 U.S.C. § 905 (1988). However, the provision is limited only to *sui generis* protection of "a mask work fixed in a semiconductor chip product" 17 U.S.C. § 902(a)(1) (1988).

¹³⁶ NIMMER & NIMMER, *supra* note 60, § 12.04[A], at 12-40 (discussing the erroneous conclusion that "secondary liability is not a part of United States copyright law. . . . [as] a long series of cases under both the 1909 Act and the current Act imposes liability, under appropriate circumstances, for acts of infringement committed by others.").

¹³⁷ 464 U.S. 417 (1984).

¹³⁸ *Id.* at 435 (citation omitted).

¹³⁹ 17 U.S.C. § 106 (1988 & Supp. II 1990).

exclusive rights to do *and to authorize* any"¹⁴⁰ of five enumerated uses of the copyrighted work.¹⁴¹ The accompanying House Report explains that the "[u]se of the phrase 'to authorize' is intended to avoid any questions as to the liability of contributory infringers."¹⁴² The language implies that one may be held liable for authorizing reproduction of a work by providing a copy of that work for reproduction, as well as for actually reproducing the work. Analogously, one who provides a means for reproduction by furnishing a device which facilitates the reproduction process could be held liable for authorizing that reproduction. As a result, because the right to authorize is a right granted exclusively to the copyright owner, any other party who authorizes reproduction "violates . . . the exclusive rights of the copyright owner as provided by section[] 106 . . . [and] is an infringer of the copyright."¹⁴³

Additionally, courts have utilized statutory provisions from the parallel field of patent law¹⁴⁴ which, unlike the copyright code, explicitly defines an infringer as "[w]hoever actively induces infringement"¹⁴⁵ or who otherwise falls within the definition of "contributory infringer."¹⁴⁶

The issues raised by the manufacture and sale of black-box devices relate soundly to principles of contributory infringement. However, it is necessary to explore both the doctrines of vicarious liability as well as contributory infringement, since the boundaries defining both overlap and are frequently confused by the courts.¹⁴⁷

¹⁴⁰ *Id.* (emphasis added).

¹⁴¹ See *supra* note 10 for the full text of § 106 of the Copyright Act.

¹⁴² H.R. REP. NO. 1476, 94th Cong., 2d Sess. 61 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5674. As an example, the report provides that "a person who lawfully acquires an authorized copy of a motion picture would be an infringer if he or she engages in the business of renting it to others for purposes of unauthorized public performance." *Id.*

¹⁴³ 17 U.S.C. § 501(a) (1988 & Supp. II 1990).

¹⁴⁴ *Sony*, 464 U.S. 417, 435, 439 n.19.

¹⁴⁵ 35 U.S.C. § 271(b)(1988).

¹⁴⁶ 35 U.S.C. § 271(c)(1988).

¹⁴⁷ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. at 435 n.17. "As the District Court correctly observed, . . . 'the lines between direct infringement, contributory infringement and vicarious liability are not clearly drawn . . .'" *Id.* (quoting *Universal City Studios, Inc. v. Sony Corp. of Am.*, 480 F. Supp. 429, 457-58 (C.D. Cal. 1979), *rev'd*, 659 F.2d 963 (9th Cir. 1981), *rev'd*, 464 U.S. 417 (1984)).

The District Court for the Southern District of New York stated:

Indeed, both the leading case on this subject and perhaps the preeminent scholar in this field seem to blur the distinction. See *Gershwin*, 443 F.2d at 1162-63 (seemingly interchanging at times the terms "vicarious" and "contributory" infringer); and M. NIMMER & D. NIMMER, *NIMMER ON COPYRIGHT*, § 12.04[A], at p.12-35 (1988) (interpreting the Copyright Act as "intend[ing] to establish the vicarious liability [of] a contributory infringer").

A. *Vicarious Liability*

Vicarious liability, a product of the tort theory *respondeat superior*,¹⁴⁸ exists “[w]hen the right and ability to supervise [a direct infringer] coalesce with an obvious and direct financial interest in the exploitation of copyrighted materials.”¹⁴⁹ A longstanding tenet of case law is that “the ability to supervise or control” and “a direct financial benefit” form the cornerstones of the vicarious liability principle.¹⁵⁰ Moreover, a third party may be held liable whether or not there was knowledge of direct infringement,¹⁵¹ and whether the direct infringer is an actual employee of the alleged contributory infringer (as opposed to an independent contractor). In discussing the celebrated “dance-hall” cases,¹⁵² in which dance-hall proprietors were held liable for the infringing performances of retained orchestras, the Second Circuit stated

Demetriades v. Kaufmann, 690 F. Supp 289, 292 n.5 (S.D.N.Y. 1988).

¹⁴⁸ See generally W. PROSSER, *LAW OF TORTS* § 69 (4th ed. 1971) (discussing vicarious liability).

¹⁴⁹ *Shapiro, Bernstein & Co. v. H. L. Green Co.*, 316 F.2d 304, 307 (2d Cir. 1963).

¹⁵⁰ See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 437 n.18 (1984); *De Acosta v. Brown*, 146 F.2d 408 (2d Cir. 1944), *cert. denied*, *Brown v. De Acosta*, 325 U.S. 862 (1945); *Davis v. E.I. DuPont de Nemours & Co.*, 240 F. Supp. 612 (S.D.N.Y. 1965); *Rohauer v. Killiam Show, Inc.*, 379 F. Supp. 723 (S.D.N.Y. 1974), *rev'd on other grounds*, 551 F.2d 484 (2d Cir. 1977); *Columbia Pictures Industries, Inc. v. Redd Horne*, 749 F.2d 154, 161 (3d Cir. 1984); *Sygma Photo News, Inc. v. High Society Magazine, Inc.*, 778 F.2d 89, 92 (2d Cir. 1985) (finding a corporation vicariously liable, due primarily to its exercise of control over the shell corporation which engaged in the direct infringement); *Shapiro, Bernstein & Co. v. H. L. Green Co.*, 316 F.2d 304, 307 (2d Cir. 1963).

¹⁵¹ *Bourne v. Fousce*, 238 F. Supp. 745 (E.D.S.C. 1965); *Chappel & Co. v. Frankel*, 285 F. Supp. 798, 801 (S.D.N.Y. 1968) (holding a corporate officer liable although he was unaware that the activities under his direction were unlicensed and infringing); *Morser v. Bengor Prods. Co.*, 283 F. Supp. 926, 928 (S.D.N.Y. 1968) (holding an officer of a corporation liable for infringing sales which were made without his authorization); *Rexnord, Inc. v. Modern Handling Sys., Inc.*, 379 F. Supp. 1190 (D. Del. 1974); *Italian Book Corp. v. Palms Sheepshead Country Club, Inc.*, 186 U.S.P.Q. 326 (E.D.N.Y. 1975); *Columbia Broadcasting Sys., Inc. v. Scorpio Music Distributors*, 569 F. Supp. 47 (E.D. Pa. 1983); *Boz Scaggs Music v. KND Corp.*, 491 F. Supp. 908, 913-14 (D. Conn. 1980) (ruling that a corporate officer may be held liable even in absence of knowledge of infringement); *Shapiro, Bernstein & Co. v. H. L. Green Co.*, 316 F.2d 304, 307 (2d Cir. 1963) (holding store owner liable for the infringing activity of his licensee concessionaire, “even in the absence of actual knowledge that the copyright monopoly is being impaired.”); *Mallven Music v. 2001 VIP of Lexington, Inc.*, 230 U.S.P.Q. 543 (E.D. Ky. 1986) (holding president of a nightclub liable for the infringing music featured, even though he was not involved in the month-to-month, much less the day-to-day management and responsibility of the venue).

¹⁵² *Buck v. Jewell-LaSalle Realty Co.*, 283 U.S. 191, 198-199 (1931); *Dreamland Ball Room, Inc. v. Shapiro, Bernstein & Co.*, 36 F.2d 354 (7th Cir. 1929); *M. Witmark & Sons v. Tremont Social & Athletic Club*, 188 F. Supp. 787 (D. Mass. 1960); *Remick Music Corp. v. Interstate Hotel Co.*, 58 F. Supp. 523 (D. Neb. 1944), *aff'd*, 157 F.2d 744 (8th Cir. 1946), *cert. denied*, 329 U.S. 809 (1947); *Buck v. Pettijohn*, 34 F. Supp. 968 (E.D. Tenn. 1940); *Buck v. Crescent Gardens Operating Co.*, 28 F. Supp. 576 (D. Mass. 1939); *Buck v. Russo*, 25 F. Supp. 317 (D. Mass. 1938); *Irving Berlin, Inc. v. Daigle*, 26 F.2d 149 (E.D. La. 1928), *rev'd on other grounds*, 31 F.2d 832 (5th Cir. 1929).

that the dance-hall proprietor "is liable whether the bandleader is considered, as a technical matter, an employee or an independent contractor, and whether or not the proprietor has knowledge of the compositions to be played."¹⁵³ Similar lines of demarcation have been drawn by the courts with regard to lessor-lessee relationships. As a result, the "dance-hall" cases are often contrasted and compared with cases concerning lessor-lessee relations.¹⁵⁴ Thus, a lessor is distinguished from an employer, and is not liable merely by virtue of his status. For instance, a lessor would not be held liable for unauthorized performances in the lessor's theater simply due to his status as a lessor.¹⁵⁵ Nor is the landlord of premises where infringing works are sold branded an infringer simply because of his relationship with the lessee-infringer.¹⁵⁶ However, insofar as a landlord has the ability to supervise or control the tenant's activities and further retains an interest in the financial status of the tenant (possibly by securing rental payments on the basis of a percentage of the tenant's unlawful sale proceeds),¹⁵⁷ liability would likely be imposed.¹⁵⁸ Essentially, the "ability to control" and "financial interest" factors are the mainstays of this doctrine. Though vicarious liability exceeds the traditional scope of master-servant theory, it still remains as the basic conceptual force underlying the doctrine. The theory seeks to impose liability on the party who can best avoid risk at the least cost (ability to supervise and control)—funneling the burden of loss to those who will benefit most from the success of an operation (obvious and direct financial interest). The court in *Shapiro, Bernstein & Co. v. H.L. Green Co.*¹⁵⁹ concluded that:

[I]mposition of *vicarious* liability in the case before us cannot be deemed unduly harsh or unfair. Green has the power to police carefully the conduct of its concessionaire . . . our

¹⁵³ *Shapiro, Bernstein & Co. v. H.L. Green Co.*, 316 F.2d 304, 307 (2d Cir. 1963).

¹⁵⁴ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 437 n.18 (1984). "The so-called 'dance-hall cases' . . . are often contrasted with the so-called landlord-tenant cases, in which landlords who leased premises to a direct infringer for a fixed rental and did not participate directly in any infringing activity were found not to be liable . . ." (citations omitted). *Id.*

¹⁵⁵ See *Robert Stigwood Group, Ltd. v. Hurwitz*, 462 F.2d 910 (2d Cir. 1972); *Fromont v. Aeolian Co.*, 254 F. 592 (S.D.N.Y. 1918); *Heywood v. Jericho Co.*, 85 N.Y.S.2d 464 (Sup. Ct. 1948).

¹⁵⁶ See *Sony*, 464 U.S. at 437 n.18; *Deutsch v. Arnold*, 98 F.2d 686 (2d Cir. 1938); *Vernon Music Corp. v. First Development Corp.*, 1984 Copyright L. Dec. (CCH) ¶ 25,686 (D. Mass. 1984).

¹⁵⁷ NIMMER & NIMMER, *supra* note 60, § 12.04[A], at 12-42.

¹⁵⁸ See *Shapiro, Bernstein & Co. v. H.L. Green Co.*, 316 F.2d 304, 308 (2d Cir. 1963).

¹⁵⁹ 316 F.2d 304 (2d Cir.1963).

judgment will simply encourage it to do so, thus placing responsibility where it can and should be effectively exercised.¹⁶⁰

B. *Contributory Infringement: An Outgrowth of Vicarious Liability Theory*

While vicarious liability concerns the relationship between the direct and secondary infringers, contributory infringement focuses on the conduct and state of mind of the secondary infringer. The doctrine concerns the contributory infringers relations, as they regard furtherance of, or contribution to, infringing conduct. A party "who, with knowledge of the infringing activity, induces, causes, or materially contributes to the infringing conduct of another, may be held liable as a 'contributory' infringer."¹⁶¹

Contributory infringement principles are an important weapon in the motion picture industry's fight against black-box manufacturers. The doctrine allows copyright proprietors to hold black-box manufacturers liable for the infringing activity of the device's individual users. The grant of injunctive relief, in an infringement action, would allow the motion picture industry to prevent unauthorized uses made possible by utilization of black-box devices. By successfully employing the contributory infringement theory, copyright owners are less burdened by the arduous task of trying to enforce their rights at the individual level, and are thereby able to enforce such rights more effectively.

Contributory infringement is based on the tort principle of *enterprise liability*.¹⁶² In applying the theory to copyright matters, the court in *Screen Gems-Columbia Music, Inc. v. Mark-Fi Records, Inc.*¹⁶³ noted that "the basic common law doctrine that one who knowingly participates in or furthers a tortious act is jointly and severally liable with the prime tortfeasor is applicable in suits

¹⁶⁰ *Id.* at 308. In *H.L. Green*, the plaintiff brought an action against a record concessionaire and store owner for copyright infringement. The court held the store owner could be liable for the infringing actions of the concessionaire because the store owner retained the ultimate right of supervision over the concessionaire and reserved a proportionate share of the concessionaire's sales. *Id.* at 305-307.

¹⁶¹ *Gershwin Publishing Corp. v. Columbia Artist Management, Inc.*, 443 F.2d 1159, 1162 (2d Cir. 1971).

¹⁶² Enterprise Liability is defined as the imposition "of liability upon each member in industry who manufactures or produces product which causes injury or harm to a consumer and apportions liability of each member of industry by reference to that member's share of market for product." BLACK'S LAW DICTIONARY 531 (6th ed. 1990). See also NIMMER & NIMMER, *supra* note 60, § 12.04[A], at 12-45 to 12-46.

¹⁶³ 256 F. Supp. 399 (S.D.N.Y. 1966).

arising under the Copyright Act.”¹⁶⁴ Thus, “just as benefit and control are the signposts of vicarious liability, so are knowledge and participation the touchstones of contributory infringement.”¹⁶⁵

Contributory infringement theory can itself be classified into two strata: 1) personal conduct which contributes and thereby furthers the infringement and 2) contribution of a “machine or good” which provides some means to infringe.¹⁶⁶ Unlike vicarious liability theory, where the causal link between secondary and primary infringers is supported by characteristics of the parties’ relationship, the first strand of the contributory infringement concerns the question of whether the secondary infringer’s actions are substantially related to the primary infringer’s conduct.¹⁶⁷ The most obvious case would involve a secondary infringer acting in concert with a direct infringer.¹⁶⁸

The second strand of contributory infringement—contribution of a “machine or good” which provides some means to infringe—is most relevant to the discussion of imposition of liability on manufacturers of black-box devices. The fact that the infringing activity is performed neither with the supervision or control of the party furnishing the facilitating devices, nor for such party’s benefit (financial or otherwise), though a possible defense against vicarious liability,¹⁶⁹ does not necessarily immunize such party from liability for contributory infringement. Accordingly, operators of sound recording facilities have been held liable for copyright infringement for lending copyrighted tapes to customers for purposes of unauthorized duplication. Even though actual duplication was carried on by the operator’s cus-

¹⁶⁴ *Id.* at 403 (footnote omitted); *See also* *Kalem Co. v. Harper Bros.*, 222 U.S. 55, 63 (1911)(ruling that because defendant had knowledge that its product was to be used to assist in infringing activity, defendant “[was] liable on principles recognized in every part of the law”).

¹⁶⁵ *Demetriades v. Kaufmann*, 690 F. Supp. 289, 293 (S.D.N.Y. 1988).

¹⁶⁶ *NIMMER & NIMMER*, *supra* note 60, § 12.04[A], at 12-46.

¹⁶⁷ *Demetriades*, 690 F. Supp. at 289. In *Demetriades*, the developer brought an action against a realty firm, real estate agent, vendors, and purchasers alleging the realty firm and real estate agent were aware that the sale of a lot was dependent on purchasers agreeing to have vendors build the home using the developer’s copyrighted architecture plans. The claim for contributory infringement was denied because of the real estate broker’s lack of “substantial involvement” in the infringement. *Id.* at 294 (emphasis in the original).

¹⁶⁸ *NIMMER & NIMMER*, *supra* note 60, § 12.04[A], at 12-46 to 12-47 n.34 (“One who receives and exploits infringing material from the original infringer, with notice of the infringing nature of the material, may be held to be acting in concert with the original infringer.”). *See also* *Computer Searching Serv. Corp. v. Ryan*, 439 F.2d 6 (2d Cir. 1971).

¹⁶⁹ *See supra* notes 148-160 and accompanying text for a discussion of the elements of vicarious liability.

tomers, the operator can be found to have contributorily infringed a party's copyrighted work.¹⁷⁰

Contributory infringement theory plays an important role in overcoming the difficulties of enforcing rights in the face of numerous individual infringers. By providing a means of redress against manufacturers of a device whose primary purpose is to promote infringement, the contributory infringement theory enables copyright holders to protect the rights in their works more effectively. By cutting off what may be characterized as a life-line to infringing behavior,¹⁷¹ the doctrine of contributory infringement provides copyright holders with a vehicle to protect their works against numerous infringements.

1. Application of Tort Theory

Intellectual property is treated by federal law as an intangible property interest.¹⁷² Accordingly, direct infringement¹⁷³ of such property rights constitutes the tort of trespass upon that property interest.¹⁷⁴ At common law, redress for infringement

¹⁷⁰ See *Electra Records Co. v. Gem Elec. Distribs.*, 360 F. Supp. 821 (E.D.N.Y. 1973); *RCA Records v. All-Fast Systems*, 594 F. Supp. 335 (S.D.N.Y. 1984) (holding duplication facility operators liable for copyright infringement for furnishing to the public sound recording facilities for the purpose of making unauthorized duplications, even where copyrighted tapes to be duplicated were furnished by customers); *Columbia Pictures Industries v. Aveco, Inc.*, 800 F.2d 59 (3d Cir. 1986) (holding video shop that rents screening booth to customers liable for authorizing public performance, even though customers were responsible for furnishing the videocassette of the copyrighted work).

¹⁷¹ Note, that such behavior may not *in fact* be deemed infringing behavior, but rather noninfringing behavior because it is a fair or exempt use. With respect to noninfringing uses, if anti-copy signals are capable of permitting the reproduction of a archival copy, then that copy could be utilized in reproducing the work as part of a fair or exempt use. See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works.

¹⁷² The Patent Act of 1952 defines a patent as having attributes of property. "Subject to the provisions of this title, patent shall have the attributes of personal property." 35 U.S.C. § 261 (1988). Though not expressly defining a copyright interest as property, the Copyright Act speaks throughout of "[t]he ownership of a copyright," 17 U.S.C. § 201(d)(1) (1988), and with respect to the transfer of ownership, it provides such ownership interest "may be bequeathed by will or pass as personal property by applicable laws of intestate succession." *Id.* The Trademark Act of 1946 (Lanham Act), does not expressly define a trademark as property, however by registering pursuant to the Act, the code's language provides that "[a] certificate of registration of a mark . . . shall be prima facie evidence of . . . the registrant's ownership of the mark." 15 U.S.C. § 1057(b) (1988).

¹⁷³ "Anyone who violates any of the exclusive rights of the copyright owner as provided by sections 106 through 118 or of the author as provided in section 106A(a), or who imports copies or phonorecords into the United States in violation of section 602, is an infringer of the copyright or right of the author, as the case may be." 17 U.S.C. § 501(a) (1988 & Supp. II 1990).

¹⁷⁴ See *Sony Corp. of Am. v. Universal City Studios*, 464 U.S. 417, 433 (1984) (quoting 17 U.S.C. § 501(a)) ("[A]nyone who trespasses into his exclusive domain by using or authorizing the use of the copyrighted work in one of the five ways set forth in the statute, 'is an infringer of the copyright.'"); *Thomas-Houston Elec. Co. v. Ohio Brass*

was available primarily in the form of injunctive relief.¹⁷⁵

Contributory infringement exists as a corollary to direct infringement. The doctrine affords copyright owners protection against infringers whose actions are neither significant enough to constitute direct infringement, nor so tenuous or tangential as to relieve them of liability for their impairment of a copyright interest. At the core of the doctrine is the requirement that there be a causal relationship between the contributory infringer and the primary infringer or infringement. One who has "knowledge of the infringing activity, [and] induces, causes, or materially contributes"¹⁷⁶ to it, is deemed to have the requisite causal relationship.

The imposition of liability for acts of contributory infringement can be predicated upon two underlying tort theories. The first theory suggests imposing liability on one who engages in concerted conduct¹⁷⁷ that results in the direct infringement of a protected work. The second theory suggests imposing liability on one who induces another¹⁷⁸ to commit activities that constitute direct infringement. However, providing a means to facilitate infringement—particularly by providing a device that is incapable of substantial noninfringing uses¹⁷⁹—may implicate yet a third theory of liability. This theory would impose liability on one who engages in implied concerted conduct,¹⁸⁰ which results in the direct infringement of a protected work. Accordingly, a reasonable argument may be advanced that although black-box manufacturers are not in actual agreement with the direct infringer (i.e., the user of the device), such an agreement may be

Co., 80 F. 712, 721 (6th Cir. 1897)("[I]nfringement . . . is a tort analogous to trespass or trespass on the case."). See also *Turton v. United States*, 212 F.2d 354, 355 (1954). "An action for damages by reason of infringement of a patent is one sounding in tort. . . . We are of the opinion that an action for damages by reason of infringement of a copyright is likewise one sounding in tort." *Id.*

¹⁷⁵ The availability of injunctive relief is now codified in the three major federal intellectual property statutes which expressly provide for injunctive relief from infringement of the rights provided therein. See section 502 of the Copyright Act (1988), section 283 of the Patent Act of 1952, 35 U.S.C. § 283 (1988), and section 1116 of the Trademark Act of 1946 (Lanham Act), 15 U.S.C. § 1116 (1988).

¹⁷⁶ *Gershwin Publishing Corp. v. Columbia Artists Management, Inc.*, 443 F.2d 1159, 1162 (2d Cir. 1971). See generally RESTATEMENT (SECOND) OF TORTS (1979).

¹⁷⁷ See *infra* notes 189-195 and accompanying text for an explanation of the concerted conduct theory of liability.

¹⁷⁸ See *infra* notes 183, 188, and accompanying text for an explanation of the induced theory of liability.

¹⁷⁹ See *Sony Corp. of Am. v. Universal City Studios*, 464 U.S. 417, 442 (1984) (holding sale of video reproduction equipment that is capable of substantial noninfringing uses does not constitute contributory infringement).

¹⁸⁰ See *infra* notes 198-202 and accompanying text for an explanation of the implied concerted conduct theory of liability.

implied by virtue of the manufacturer's "knowledge of the [device's] infringing . . . [functions]."¹⁸¹ This cognizance, coupled with the actual sale of the device, could arguably be said to "induce[], cause[], or materially contribute[] to the infringing conduct."¹⁸²

The induced conduct theory of liability, which suggests holding one who induces another to directly infringe a protected work liable for those actions, is not applicable to a case against black-box manufacturers. Section 877 of the *Restatement (Second) of Torts*,¹⁸³ suggests that one should only be held liable if that party "orders or induces the conduct, if he knows or should know of circumstances that would make the conduct tortious if it were his own."¹⁸⁴ The Supreme Court in *Sony Corp. v. Universal City Studios, Inc.*¹⁸⁵ similarly declined to apply an induced conduct theory of liability in their endeavor to determine whether the sale of VCRs¹⁸⁶ to the general public, for use in reproduction of copyrighted works (namely broadcast television programs), constituted contributory infringement by the equipment's manufacturers.¹⁸⁷ The Court deferred to the findings of the district court and stated that " 'no employee of Sony, . . . had either direct involvement with the allegedly infringing activity or direct contact with purchasers of Betamax who recorded copyrighted works' [Furthermore] 'there was no evidence that any of the copies made by . . . the . . . witnesses in this suit were influenced or encouraged by [Sony's] advertisements.' "¹⁸⁸

The concerted conduct theory, while somewhat more applicable than the induced conduct theory, is still not fully appropriate for resolving the black-box problem. Section 876 of the *Restatement (Second) of Torts*¹⁸⁹ suggests imposing liability upon a contributory infringer "for harm resulting to a third person from

¹⁸¹ *Gershwin*, 443 F.2d 1159, 1162.

¹⁸² *Id.* See also RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 875, which provides generally: "Each of two or more persons whose tortious conduct is a legal cause of a single and indivisible harm to the injured party is subject to liability to the injured party for the entire harm." *Id.*

¹⁸³ RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 877.

¹⁸⁴ *Id.* § 877(a).

¹⁸⁵ 464 U.S. 417 (1984).

¹⁸⁶ The opinion refers to video cassette recorders as video tape recorders ("VTRs"). *Id.* at 420. Reference to duplication devices in this note will be by use of the name "VCR", an acronym for "video cassette recorder." The devices are identical.

¹⁸⁷ *Id.*

¹⁸⁸ *Id.* at 438 (quoting the United States District Court for the Central District of California in *Universal City Studios, Inc. v. Sony Corp. of Am.*, 480 F. Supp. 429, 460 (C.D. Cal. 1979), *rev'd*, 659 F.2d 963 (9th Cir. 1981), *rev'd*, 464 U.S. 417 (1984)).

¹⁸⁹ RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 876.

the tortious conduct of another”¹⁹⁰ when a contributing party “does a tortious act in concert with the other or pursuant to a common design with him.”¹⁹¹ The comment to section 876 explains that “[p]arties are acting in concert when they act in accordance with an agreement to cooperate in a particular line of conduct or to accomplish a particular result.”¹⁹² This theory is not well-suited to an action against black-box manufacturers because the manufacturers are not in actual agreement with users of their device to carry out infringing activity. In *Sony*,¹⁹³ the Court found no evidence that VCR manufacturers had any “direct involvement with the allegedly infringing activity or direct contact with purchasers of Betamax”¹⁹⁴ recorders. Thus, this finding thwarts any reasonable assertion that VCR sales by Sony were made in “concert with . . . or pursuant to a common design”¹⁹⁵ with the VCR users to infringe copyrighted works. The VCR users, much like black-box users, “may use th[e] equipment to make unauthorized copies.”¹⁹⁶ Manufacturers do not actually know whether purchasers of their device are using it to infringe protected works. Given that manufacturers only have constructive knowledge as to how users employ their devices, a theory based on the prerequisite that there exist an “actual” agreement to carry out an “actual” activity (i.e., to infringe) is problematic.

Subsection 876(b),¹⁹⁷ however, may provide a workable theory in which to hold manufacturers of black-boxes liable for their contribution to infringing behavior. Subsection 876(b) suggests holding a contributory infringer liable if such party “knows that the other’s conduct constitutes a breach of duty and gives substantial assistance or encouragement to the other so to conduct himself.”¹⁹⁸ This derivation of concerted conduct is, in a sense, implied concerted conduct. The agreement to participate in the infringing activity may be inferred from the relationship, since the contributory infringer (black-box manufacturer) could “know[] that the other’s conduct constitutes”¹⁹⁹ infringe-

¹⁹⁰ *Id.*

¹⁹¹ *Id.* § 876(a).

¹⁹² *Id.* § 876 cmt. a.

¹⁹³ 464 U.S. 417 (1984).

¹⁹⁴ *Id.* at 438 (quoting the United States District Court for the Central District of California in *Universal City Studios, Inc. v. Sony Corp. of Am.*, 480 F. Supp. 429, 460 (C.D. Cal. 1979), *rev’d*, 659 F.2d 963 (9th Cir. 1981), *rev’d*, 464 U.S. 417 (1984)).

¹⁹⁵ RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 876(a).

¹⁹⁶ *Sony*, 464 U.S. at 439 (emphasis added).

¹⁹⁷ RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 876(b).

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

ment,²⁰⁰ and nonetheless “gives substantial assistance or encouragement to the other,”²⁰¹ by providing a means to infringe. The theory, as applied to black-box manufacturers, would suggest holding liable those manufacturers who know that the user’s conduct constitutes infringement in using the black-box to reproduce a videocassette without its owner’s authorization. Despite such knowledge, black-box manufacturers “give[] substantial assistance or encouragement”²⁰² to the furtherance of the infringement by continuing to sell the unit to the public. In its application of this theory to the sale of VCRs, the *Sony* Court explained that “[i]f . . . liability is to be imposed on . . . [Sony] in this case, it must rest on the fact that they have sold equipment with constructive knowledge of the fact that their customers *may* use that equipment to make unauthorized copies of copyrighted material[s].”²⁰³

2. Making the Connection: A Doctrinal Weakness

One of the most problematic characteristics of contributory infringement doctrine is that it is ineffectual unless there is meaningful proof of a causal connection between primary and contributory infringers. The problem becomes evident in attempting to show that manufacturers have constructive knowledge of the manner in which their product is ultimately being employed.

The Copyright Act does not provide an express standard for holding third parties liable for the infringement of others. Therefore, it is difficult to discern what constitutes “substantial assistance [to] or encouragement”²⁰⁴ of infringing conduct. Without clearly delineated standards for defining such behavior, black-box manufacturers will likely argue that their device’s ability to circumvent copy-protection is only remotely associated with the actual unauthorized reproduction of videocassettes. Consequently, they should not be held responsible for the independent infringing behavior of others.

The question of to what degree of knowledge a black-box

²⁰⁰ See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works and the problems anti-copy systems face in blindly inhibiting the reproduction of copyrighted works regardless of whether the use is infringing or not. Assume, for argument’s sake, that the conduct does not fall into a fair or exempt use category as discussed in *supra* notes 76-88 and accompanying text.

²⁰¹ RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 876(b).

²⁰² *Id.*

²⁰³ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 439 (1984) (emphasis added).

²⁰⁴ RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 876(b).

manufacturer should be held (i.e., actual or constructive knowledge of their device's infringing use) illustrates the debate surrounding the causal aspect of the doctrine.²⁰⁵ Section 877 of the *Restatement (Second) of Torts*²⁰⁶ suggests employing a negligence standard that would subject black-box manufacturers to liability if they "know[] or *should know*"²⁰⁷ that their product is likely to be used to infringe copyrighted video-based works. This approach places the duty on black-box manufacturers to exercise reasonable care by knowing the nature of their unit and its effect in contributing to direct infringement.

This standard differs from the requirements of the Patent Act of 1952²⁰⁸ in imposing liability on contributory infringers. As construed by the Supreme Court in *Sony*,²⁰⁹ the Patent Act holds liable as a contributory infringer, anyone who "sells a component of a patented machine . . . or a material or apparatus for use in practicing a patented process, . . . *knowing* the same to be especially made or especially adapted for use in an infringement of such patent."²¹⁰ This standard is less demanding of black-box manufacturers than the *Restatement* standard. The patent standard asks that the alleged contributory infringer have actual knowledge, thus alleviating that party's duty to know.

The *Sony* Court's application of patent law to a copyright case evinces the uncertainty caused by the absence of explicit contributory infringement language in the Copyright Act. The Court, in applying patent law, reasoned that the patent code contained an express statutory definition of the "concept of contributory infringement"²¹¹ and that there was a "historic kinship between patent law and copyright law."²¹²

From the plaintiff's perspective, the causal component is the weakest characteristic of the contributory infringement doctrine. In this respect, liability is not based simply on the direct infringe-

²⁰⁵ Though the Supreme Court in *Sony*, 464 U.S. at 439, has endorsed the constructive knowledge standard in cases of contributory infringement, *see infra* notes 221-223 and accompanying text, some commentators criticize this approach and suggest implementation of the actual knowledge standard instead. *See infra* note 228 and accompanying text for an example of a contrary position.

²⁰⁶ RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 877.

²⁰⁷ *Id.* § 877(a) (emphasis added).

²⁰⁸ 35 U.S.C. §§ 101-376 (1988).

²⁰⁹ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 440 (1984).

²¹⁰ 35 U.S.C. § 271(c) (1988) (emphasis added).

²¹¹ 464 U.S. at 440.

²¹² *Id.* at 439. *But see* A. Samuel Oddi, *Contributory Copyright Infringement: The Tort and Technological Tensions*, 64 NOTRE DAME L. REV. 47, 54 (1989) (asserting that "[t]he majority presented less-than-overwhelming evidence in support of this 'historic kinship' " said to be existent between patent and copyright law).

ment, but also on the strength of the causal connection formed between contributory and primary infringers. The success of an action against black-box manufacturers is contingent upon showing a causal connection bridging the sale of the device to its use in infringing a video-based work. If a connection cannot be shown, or is otherwise weak, the causal link will be incomplete and will fail to implicate the alleged contributory infringer in the infringement. This problematic feature of the doctrine would diminish the strength of a case instituted by owners of video-based works against black-box manufacturers. For this reason, it is necessary to examine portions of the patent code, which, unlike the copyright code, explicitly provides for the principle of contributory infringement.

3. Application of Patent Theory

The Patent Act²¹³ holds liable as a contributory infringer:

Whoever sells a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.²¹⁴

The *Sony* Court's adherence to patent principles of liability involves use of the code's "staple article of commerce doctrine."²¹⁵ This doctrine denies protection to patent holders against staple articles of commerce, which may have some infringing aspects, but are otherwise commercially capable of substantial noninfringing uses.

The staple article doctrine is compatible with the implied concerted conduct theory.²¹⁶ The doctrinal compatibility lies in the parties' implied agreement to infringe a protected work. For example, an implied agreement to infringe is created when the contributing tortfeasor "knows that the other's conduct constitutes a breach of duty."²¹⁷ The knowledge of tortious conduct

²¹³ The Patent Act of 1952, Pub. L. No. 593, 66 Stat. 792 (codified as amended at 35 U.S.C. §§ 101-376 (1988)).

²¹⁴ 35 U.S.C. § 271(c) (1988).

²¹⁵ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 442 (1984).

²¹⁶ See *supra* notes 198-202 and accompanying text for an explanation of the implied concerted conduct theory of liability.

²¹⁷ RESTATEMENT (SECOND) OF TORTS, *supra* note 176, § 876(b).

that a black-box manufacturer attains would arguably be due to the fact that its product is "not a staple article [n]or [a] commodity of commerce suitable for substantial noninfringing use."²¹⁸ If a device lacks any substantial noninfringing uses, it can have only infringing uses. Consequently, the manufacturer's constructive knowledge of infringing use could imply an agreement to contribute to the infringement through the sale of such devices.

Although this Note, in accordance with judicial authority, advocates that manufacturers should be held to a constructive knowledge standard, the question of which standard to apply (i.e., actual or constructive) remains a point of contention.²¹⁹ A finding of liability based on a constructive knowledge standard (i.e., a "foreseeability of infringement" standard) is broader than the standard provided in the Patent Act.²²⁰ The Act requires actual knowledge of the infringing conduct to which manufacturers contribute. In an infringement claim against black-box manufacturers, a standard of constructive knowledge would facilitate the effective enforcement of copyright interests. Black-box manufacturers will never genuinely have actual knowledge of how their devices will be used. The application of an actual knowledge standard would hinder copyright holders in their potential claims against black-box manufacturers. Justice Stevens stated in *Sony* that "liability . . . must rest on the fact that [Sony] ha[s] sold equipment with constructive knowledge . . . that their customers may use that equipment to make unauthorized copies."²²¹ Similarly, the minority²²² adopted a negligence standard, which causally connected the manufacturer of the alleged infringing device to infringement via their constructive knowledge of the device's infringing uses. Justice Blackmun, writing for the minority, stated that "[o]ff-the-air recording is not only a foreseeable use for the Betamax, but indeed is its intended use. . . . I agree . . . Sony has . . . materially contributed to the infringing conduct of Betamax owners."²²³

However, inquiry into the knowledge a manufacturer has (or should reasonably have) concerning their product's functions is

²¹⁸ 35 U.S.C. § 271(c) (1988).

²¹⁹ See *infra* note 228 and accompanying text for an example of a contrary position.

²²⁰ 35 U.S.C. §§ 101-376 (1988).

²²¹ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 439 (1984). See also *Screen Gems-Columbia Music, Inc. v. Mark-Fi Records Inc.*, 256 F. Supp. 399 (S.D.N.Y. 1966).

²²² Justice Blackmun wrote the dissent, in which Justice Marshall, Justice Powell, and Justice Rehnquist joined. *Sony*, 464 U.S. at 457.

²²³ 464 U.S. 417, 490 (Blackmun, J., dissenting) (footnote omitted).

an imprecise science, supported only empirically.²²⁴ Statistics reveal how demographic segments could *possibly* put their device to use.²²⁵ Nonetheless, as the number of black-box users who infringe protected works increases, an assertion that manufacturers of an infringing device know or should know that such a device is not of the substantial noninfringing type, becomes more fitting. The problem arises, according to Professor Nimmer, where one "furnishes a copyrighted work to another [and] also makes available facilities whereby an infringing copy of the work may be made, and such person know[s] or *reasonably should know* that the other person intends to make an infringing copyright use of such facilities[]." ²²⁶ In supporting a constructive knowledge standard, Nimmer states that such a person is "not necessarily immunize[d] . . . from liability as a contributory infringer."²²⁷ Critics of this position argue that "[t]o find liability based on constructive knowledge would place the seller under a general duty with respect to all copyright owners whose works are subject to copying by the equipment in question. The breach of that duty would presumably be enforceable by any copyright owner within the subject class."²²⁸ Yet, placing on manufacturers the burden of knowing their device's substantial infringing uses re-balances the scale left skewed by technology. For example, black-boxes have been found coupled together in " 'factory [style] operation[s] . . .

²²⁴ See, e.g., *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 8) (discussing figures from *Video Copying and Copy Protection in America: A National Survey of VCR Owners*, June 1990, a survey and analysis commissioned by Macrovision and compiled by Schulman, Ronca & Bucuvalas Inc.).

²²⁵ For instance, it is estimated that consumers copy "at least 75 million" prerecorded videocassettes each year, enabling "26 million households" to maintain aggregate libraries of "267 million illegal copies" of prerecorded cassettes. *Id.* Yet, some consumers may use their device in a noninfringing manner (i.e., fair or exempt use).

²²⁶ NIMMER & NIMMER, *supra* note 60, § 12.04[A], at 12-48 (emphasis added).

²²⁷ *Id.* at 12-49.

²²⁸ Oddi, *supra* note 213, at 72 n.177. Oddi, discussing the case of Columbia Broadcasting Sys. v. Scorpio Music Distrib., *infra*, asserts:

Professor Nimmer states, "Absence of knowledge that the activity constitutes copyright infringement does not absolve the contributory infringer from liability, although it may affect the remedies available." . . . However, it is submitted that this conclusion goes well beyond the facts and holding in the case, where defendant alleged that it was not an infringer under 17 U.S.C. § 602(a) because it was not the importer and the court found that it was "undisputed that Scorpio ordered the records with full knowledge of the importation problem." . . . Moreover, the court in *Scorpio* cites the Ninth Circuit decision, *Universal City Studios v. Sony Corp. of Am.*, . . . for the proposition that "actual knowledge" is not required.

Id. at 72 n.177 (quoting NIMMER & NIMMER, *supra* note 60, § 12.04[A] and *Columbia Broadcasting Sys. v. Scorpio Music Distrib.*, 569 F. Supp. 47, 48 (E.D. Pa. 1983) (citations omitted)).

[with] 5,000 VCRs'."229 A set-up of this magnitude would, at the push of a button, instantaneously produce 5,000 unauthorized copies of copyrighted works. Shifting the burden of knowledge regarding the likelihood of a device's infringing capacity to its manufacturer would be a powerful weapon for the motion picture industry in its continuing battle to control unauthorized copying.

C. *The Self-Help Strategy: Balancing the Technology-Copyright Tension*

Placing the "burden of knowing" on black-box manufacturers promotes efficiency in accordance with the principles of least-cost-avoider doctrine. Shifting responsibility to those in a system—in this case society—who can best police, control, and solve a problem at the least cost to that system, creates efficiency throughout such a system. Imposing the burden of knowing a device's potential for infringement on the manufacturer addresses the problem at its root. As a result, the system will be cleared of multiple, inefficient and expensive actions against many individual infringers.

In *Sony*, the Court used the "staple article of commerce doctrine"²³⁰ in an attempt to balance the tension between copyright protection on the one hand and the proliferation of potentially infringing technology on the other. The Court stated, "[i]t seems extraordinary to suggest that the Copyright Act confers upon all copyright owners collectively . . . the exclusive right to distribute VTR's simply because they may be used to infringe copyrights."²³¹ The Court employed the doctrine to distinguish between those manufacturers who should and those who should not be held as contributory infringers. Under this theory, those manufacturers whose device is found to have substantial *noninfringing* uses would not be held as contributory infringers. Consequently, those whose device is found to have *solely* substantial infringing uses could be held liable as contributory infringers.

The technology-copyright conflict originates from Article I, Section 8, Clause 8 of the United States Constitution—the patent-copyright clause—which empowers Congress to promote both the "Progress of Science and useful Arts."²³² Contributory

²²⁹ Nichols, *supra* note 33, at C22. (quoting Mr. William Nix, Senior Vice President, Anti-Piracy Operations, Motion Picture Association of America).

²³⁰ *Sony Corp. of Am. v. Universal City Studios, Inc.* 464 U.S. 417, 442 (1984).

²³¹ *Id.* at 441 n.21.

²³² U.S. CONST. art. I, § 8, cl. 8. *See supra* note 4. It is interesting to note that the word

infringement principles tend to increase the tension by providing for relief beyond the immediate boundary of the actual direct infringement. The doctrine provides copyright owners with a tool to protect themselves against those who, though not directly infringing, have in some way significantly contributed to an infringement of their rights. If, however, a successful judgment against a black-box manufacturer includes a grant of injunctive relief, the incentive to create that particular technology is diminished in order to increase the incentive for the creation of certain copyrighted works. The diminution of incentive to technology manufacturers hinders the progress of technology, and is thus antithetical to a portion of the constitutional mandate. The Court in *Sony* noted that the “‘sale of an article which though adapted to an infringing use is also adapted to other and lawful uses, is not enough to make the seller a contributory infringer. Such a rule would block the wheels of commerce.’”²³³ The Court held:

The staple article of commerce doctrine must strike a balance between a copyright holder's legitimate demand for effective—not merely symbolic—protection of the statutory monopoly, and the rights of others freely to engage in substantially unrelated areas of commerce. Accordingly, the sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is . . . capable of substantial noninfringing uses.²³⁴

The staple article of commerce doctrine is an effective means of distinguishing between justly holding a technology manufacturer liable for contributory infringement, and unjustly imposing liability when doing so would inhibit technological innovation. The production of a staple article capable of substantial noninfringing uses would not burden the dissemination and protection of works of authorship because for the most part they would be used in a noninfringing manner. An attempt to enjoin the production of such articles under principles of contributory infringement would hinder free competition in technology markets. It would thereby diminish the incentive to produce other substan-

“Science” refers to copyrights. “Science” at the time of the Constitution’s framing meant “knowledge”, whereas “useful Arts” referred to patents. See 1 E. LIPSCOMB, WALKER ON PATENTS § 2:1 (3d ed. 1984).

²³³ *Sony*, 464 U.S. at 441 (quoting *Henry v. A.B. Dick Co.*, 224 U.S. 1, 48 (1912) *overruled on other grounds by*, *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502 (1917)).

²³⁴ *Id.* at 442.

tially noninfringing devices. This is contrary to the overall constitutional objective because technological dissemination is hindered without greater dissemination of copyrighted works. In other words, since noninfringing devices are not responsible for suppressing the incentive to create copyrighted works, diminishing the incentive for their creation will not increase the incentive for the creation of copyrighted works. Therefore, in the aggregate, neither "Science" nor the "useful Arts" are further progressed or promoted pursuant to the copyright-patent clause of the Constitution.²³⁵

Conversely, if a device is capable of only substantially infringing functions, it should be subject to the restrictions of copyright law. Accordingly, the sale of such a device arguably violates a copyright owner's rights,²³⁶ and such rights would be enforceable by an action for contributory infringement. If copyright protection is denied, the constitutional balance is upset insofar as it would invite individuals to market a device whose primary function is merely to infringe copyrighted works while dampening the incentive for the creation of such works.

It is difficult to sanction a staple article defense in the case of black-box production. While VCRs may be used simply to view copyrighted works in the privacy of one's home, black-boxes perform primarily one function; the neutralization of anti-copy signals to facilitate unauthorized reproduction of copyrighted works. Representative Howard L. Berman (D-Cal.) argues:

While it is one thing to apply . . . [the substantially noninfringing] standard with respect to equipment which has substantial non-infringing uses, such as Xerox machines or VCRs, it is quite another to allow black box manufacturers the same defense. The primary purpose of this product is, clearly and simply, to facilitate illegal copying by neutralizing the anticopy protection to which the copyright owner has resorted. But those who manufacture and market the boxes claim that they have all sorts of other positive benefits, such as enhancing the image. These claims are smoke screens for the true purpose of the boxes.²³⁷

²³⁵ U.S. CONST. art. I, § 8, cl. 8.

²³⁶ See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works and the problems anti-copy systems face in blindly inhibiting the reproduction of copyrighted works regardless of whether the use is infringing or not. Assume, for argument's sake, that the conduct does not fall into a fair or exempt use category as discussed in *supra* notes 76-88 and accompanying text, and thus use of a device such as a black-box could not be used to facilitate any noninfringing uses.

²³⁷ *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of Representative Howard L.

Ideally, an order whereby both patented technologies and copyrighted works of authorship are enabled to freely coexist in the marketplace, would offer an environment for each to find their own levels of optimal output. Market forces would dictate these levels, and in return provide a symbiotic balance where each medium's levels would also provide maximum incentive for the progress of the other. Self-help principles move toward such a market-based remedy.

Effective anti-copy systems assure a niche for copyrighted works, protecting against unauthorized use while not diminishing the incentive for technological innovation. In contrast, an award of injunctive relief would allow copyright holders to offensively enjoin further dissemination of patented technology. Such remedies ultimately contravene the constitutional objective of copyright. If a device is capable of substantial noninfringing uses, employment of an anti-copy system would simply ensure a defensive guard against those infringing uses for which such an article could be employed. If the device was capable of substantial infringing uses, the anti-copy system would still serve only a defensive purpose. However, insofar as the anti-copy system counters infringing uses, and the device is capable of only substantially infringing functions, there will not be much productive use left for the device.²³⁸ Consequently, without substantial practical use, demand for such a product will decrease, ultimately resulting in the demise of the product's success and marketability. In this manner, effective anti-copy signals indirectly affect the incentive for technological innovation through market forces.

For example, the motion picture industry's use of the Macrovision system allows for the protection of works embodied on videocassette (i.e., motion pictures). The system would nullify a VCR's potentially infringing functions; namely, unauthorized reproduction. The VCR, however, would still be capable of carrying out its noninfringing uses, such as providing the user with a means of viewing the videocassette.

In this manner, such self-help strategies provide a solution

Berman, (D-Cal.), at 7-8); *Cf.* *Vault Corp. v. Quaid Software Ltd.*, 847 F.2d 255 (5th Cir. 1988)(holding manufacturer of a device for defeating a computer anti-copy system was not a contributory infringer because uses for the device were found to include substantial noninfringing uses, such as making functional archival copies, which is authorized by section 117(2) of the Copyright Act).

²³⁸ See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works and the problems anti-copy systems face in blindly inhibiting the reproduction of copyrighted works regardless of whether the use is infringing or not.

to technologically facilitated infringement which is amenable to both the technology and copyright factions. When coupled with the staple article doctrine and the contributory infringement doctrine, the motion picture industry has the means to effectively protect against the unmistakable threat that black-box devices pose. In turn, the motion picture industry will have continued incentive to produce motion picture works for the benefit of the public.²³⁹

VI. THE MOTION PICTURE ANTI-PIRACY ACT OF 1991: SUPPORT FOR SELF-HELP SOLUTIONS

Without express guidance from the Copyright Act it will be difficult for the motion picture industry to form any definite theory with regard to the doctrine of contributory infringement. Statutory clarification would forestall unnecessary lawsuits by solidifying the ground upon which litigants may be forced to stand. As the law now stands, courts are wary of granting relief in actions based on claims of contributory infringement. The Court in *Sony* explains " '[t]he direction of Art. 1 is that *Congress* shall have the power to promote the progress of science and the useful arts. When, as here, the Constitution is permissive, the sign of how far Congress has chosen to go can come only from Congress.' "²⁴⁰ Legislation is needed that will expressly provide a standard for holding contributory infringers, particularly manufacturers of infringing devices, liable for the infringement of copyrighted works. An explicit standard would eliminate doctrinal uncertainties and judicial reluctance inherent in the application of contributory infringement principles.

On May 16, 1991, Representative Howard L. Berman (D-Cal.) introduced²⁴¹ the Motion Picture Anti-Piracy Act of 1991 ("MPAPA").²⁴² The Bill holds directly liable those who are otherwise only liable through the use of contributory infringe-

²³⁹ If the motion picture industry can protect against the threat that black-boxes pose, they can effectively protect against unauthorized infringing uses of their works. As they are granted an exclusive right to reproduce their video work pursuant to 17 U.S.C. § 106(1), subject to limitation, all others who wish to view the work must purchase or rent it. The purchase price constitutes remuneration for the work, which theoretically will work to encourage the author to create and disseminate other works to the public. Insofar as anti-copy signals prevent unauthorized reproductions of a work, forcing the potential user of the work to purchase or rent that work, they forward the public benefit by providing a means for remuneration and an incentive for the author to continue creating.

²⁴⁰ *Sony*, 464 U.S. at 456 (quoting *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972)).

²⁴¹ 137 CONG. REC. 79 (Extension of Remarks. No. 1807).

²⁴² S. 1096/H.R. 2367, 102d Cong., 1st Sess. (1991).

ment principles.²⁴³

The Bill supplements a copyright owner's right to reproduce his work with express recognition of a right *to protect* the copyright interest in that work. Section 2(a) of the Bill would amend Chapter 1 of the Copyright Act²⁴⁴ entitled "Subject Matter and Scope of Copyright Owners," by adding a new section entitled, "Scope of Exclusive Rights: Right to Protect Audiovisual Works."²⁴⁵ The new section provides: "The exclusive right to reproduce a copyrighted audiovisual work under section 106 includes the right to protect such audiovisual work from unauthorized copying through the use of a process, treatment, or mechanism that prevents or inhibits copying."²⁴⁶ Additionally, the Bill would amend section 501 of the Copyright Act²⁴⁷ by defining an infringer of copyright in any copy-protected audiovisual work as one who

imports, manufactures, sells, or distributes any equipment or device, or any component or circuitry incorporated into any equipment or device, the primary purpose or effect of which is to avoid, bypass, deactivate, or otherwise circumvent the process, treatment, mechanism, or system used by the owner of a copyright to prevent or inhibit copying.²⁴⁸

By extending the exclusive rights of an owner of an audiovisual work to include the right to protect such a work, as well as defining as an infringer one who procures devices which deactivate such copy-protection, the Bill *expressly* grants copyright holders in motion pictures or audiovisual works all the remedies against black-box manufacturers that Chapter 5 of the Copyright Act provides.²⁴⁹ The Bill also provides criminal penalties pursuant to the Electronic Communication Privacy Act ("ECPA").²⁵⁰ The ECPA prohibits the manufacture, distribution, possession and advertising of wire or oral communication intercepting de-

²⁴³ 137 CONG. REC. 79 (Extension of Remarks. No. 1807); See also *supra* notes 176-182 for a discussion of the problematic features of the doctrine of contributory infringement.

²⁴⁴ 17 U.S.C. §§ 101-120 (1988 & Supp. II 1990).

²⁴⁵ S. 1096/H.R. 2367, 102d Cong., 1st Sess. § 2(a) (1991).

²⁴⁶ *Id.*

²⁴⁷ 17 U.S.C. § 501 (1988 & Supp. II 1990).

²⁴⁸ S. 1096/H.R. 2367, 102d Cong., 1st Sess. § 3 (1991).

²⁴⁹ Chapter 5 of 17 U.S.C. provides the following remedies for copyright infringement: section 502 provides for injunction, section 503 provides for impounding and disposition of the infringing articles, section 504 provides for actual damages, profits and statutory damages, section 505 provides costs and attorney's fees, and section 506 provides for criminal penalties. 17 U.S.C. §§ 502-506 (1988 & Supp. II 1990).

²⁵⁰ 18 U.S.C. § 2512 (1988).

vices. Section 2512 of ECPA²⁵¹ would be amended by the MPAPA to prohibit conduct whereby one "sends through the mail, . . . or carries in interstate or foreign commerce, . . . manufactures, assembles, sells, . . . possesses with the intent of deriving commercial benefit,"²⁵² or otherwise advertises any device "knowing or having reason to know that the primary purpose or effect of such . . . device"²⁵³ is to deactivate a copy-protection mechanism.²⁵⁴

Although the Bill would be the first to amend U.S. copyright law to expressly and definitively extend the copyright holder's scope of rights to include protection against contributory infringement, the proposal is not unique. The recently enacted Audio Home Recording Act of 1991,²⁵⁵ for example, prohibits importation and manufacture of digital audio recording devices which do not use the SCMS copy-protection system.²⁵⁶ The Act provides:

No person shall import, manufacture, or distribute any device, or offer or perform any service, the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent any program or circuit which implements, in whole or in part, the Serial Copy Management System in a digital audio recording device or a digital audio interface device.²⁵⁷

Similarly, the United Kingdom regulates copy-protection systems under their own copyright law provisions. Section 296 of the Copyright, Designs and Patents Act of 1988 gives a copyright owner or any licensee the right to impound or seize devices whose purpose is to deactivate copy-protection safeguards in order to foster the production of infringing copies.²⁵⁸ Furthermore, Ralph Oman, the United States Register of Copyrights, testified before the Senate Subcommittee on Patents, Copyrights and Trademarks that a "draft of a model copyright law now being

²⁵¹ *Id.* § 2512(1).

²⁵² S.1096/H.R. 2367, 102d Cong., 1st Sess. § 5 (1991).

²⁵³ *Id.*

²⁵⁴ The Bill also provides for civil actions to recover for criminal violations. *Id.* § 6.

²⁵⁵ Pub. L. No. 102-563 (to be codified at 17 U.S.C. §§ 1001-1032).

²⁵⁶ Serial Copy Management System is defined in the Audio Home Recording Act, as a "system for regulating serial copying by digital audio recording devices." *Id.* § 1001(12). See also OTA STUDY, *supra* note 34, at 56. "SCMS would permit direct, digital-to-digital copying of digital recordings and broadcasts, but not digital-to-digital copies of these copies." *Id.* "This type of system would allow an unlimited number of copies to be made from the original prerecorded material, but would not allow copies to be made from copies." *Id.* at 59.

²⁵⁷ Pub. L. No. 102-563 (to be codified at 17 U.S.C. § 1021(b)).

²⁵⁸ Copyright, Designs and Patents Act, 1988, ch. 2, part VII, § 296 (U.K.).

studied in the World Intellectual Property Organization proposes protection of such 'self-help' measures. U.S. legislation preventing the deactivation of copyguard systems will have a beneficial effect on the international copyright community."²⁵⁹

The Bill could be improved by cross-referencing section two with a provision which then defines "process, treatment, or mechanism."²⁶⁰ This section would amend section 106 of the Copyright Act²⁶¹ to include the right to protect such works from unauthorized copying through "the use of a process, treatment, or mechanism that prevents or inhibits copying."²⁶² Borrowing language from section 117 of the Copyright Act, the terms "process, treatment or mechanism"²⁶³ should be defined as any process, treatment, or mechanism that prevents or inhibits only infringing copying and allows for a single copy provided "that such new copy . . . is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful."²⁶⁴ Accordingly, a copyright owner must allow users of the work to use the work in a noninfringing manner (i.e., fair or exempt use)²⁶⁵ in order to be protected by the Bill from those who manufacture devices whose primary purpose is to circumvent the process, treatment, mechanism, or system used to protect the copyright.

The difficulty in enacting the Bill with the suggested amendments is that it asks the anti-copy system manufacturers to provide a device which, in essence, must be able to detect noninfringing from infringing behavior. Unfortunately, technology of this kind may not currently exist. Nonetheless, the proposed amendments would safeguard fair and exempt use as a means to disseminate works in the instance that copyright policy does not require that there be remuneration for the use of such

²⁵⁹ *Anti-Piracy Act Hearings*, *supra* note 11 (statement of Ralph Oman, Register of Copyrights and Assistant Librarian for Copyright Services, at 8).

²⁶⁰ S. 1096/H.R. 2367, 102d Cong., 1st Sess. § 2 (1991).

²⁶¹ 17 U.S.C. § 106 (1988 & Supp. II 1990).

²⁶² S. 1096/H.R. 2367, 102d Cong., 1st Sess. § 2 (1991).

²⁶³ *Id.*

²⁶⁴ 17 U.S.C. § 117 (1988). See also *supra* notes 86-88 and accompanying text for a discussion of anti-copy signals and the allowance of an archival copy or several copies made via SCMS for fair or exempt uses. An alternative to the archival copy approach is an anti-copy system that implements SCMS, allowing for multiple copies made from the original source copy, but preventing any copies sought to be made from those second generation copies.

²⁶⁵ See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works.

works.²⁶⁶ Moreover, the Bill's protection against devices which circumvent anti-copy signals is predicated on the use of anti-copy signals that protect against infringing reproduction only while allowing archival copies. Therefore, the Bill may provide the motion picture industry with an incentive to research and develop anti-copy systems that are more compatible with general copyright policy. Consequently, the industry would bear the cost burden of their own protection concerns, as well as the processes necessary to refine such schemes to conform them to the public's interest in dissemination of intellectual works.

The Bill should also be amended to incorporate the staple article of commerce doctrine. That doctrine could be utilized to provide a means of distinguishing between those devices whose introduction will further innovative endeavor and those which are capable of only substantial infringing uses.²⁶⁷ Thus, the Bill should define an infringer of an audiovisual work as one who

imports, manufactures, sells, or distributes any equipment or device, or any component or circuitry incorporated into any equipment or device, the primary purpose or effect of which is to avoid, bypass, deactivate, or otherwise circumvent the process, treatment, mechanism, or system used by the owner of a copyright to prevent or inhibit copying²⁶⁸

provided that said "equipment or device, or any component or circuitry incorporated into any equipment or device"²⁶⁹ is "not a staple article or commodity of commerce suitable for substantial noninfringing use."²⁷⁰

A. *A Coalition for Home-Recording Rights: Opponents of Enactment*

Although there are many who support enactment of the Motion Picture Anti-Piracy Act of 1991, there are a number of opponents who believe the Bill's enactment would infringe their "right" to reproduce video-based works for home use.²⁷¹

The Home Recordings Rights Coalition ("HRRC") is an organization that was formed in October of 1981²⁷² following the

²⁶⁶ See *supra* notes 76-94 and accompanying text for a discussion of the relation of anti-copy signals to copyright policy.

²⁶⁷ See *supra* notes 230-236 and accompanying text for a discussion of the staple article of commerce doctrine.

²⁶⁸ S. 1096/H.R. 2367, 102d Cong., 1st Sess. § 3 (1991).

²⁶⁹ *Id.*

²⁷⁰ 35 U.S.C. § 271(c) (1988).

²⁷¹ *Anti-Piracy Act Hearings*, *supra* note 11 (submission of Gary J. Shapiro, Chairman, Home Recording Rights Coalition).

²⁷² *Id.* at 1.

appellate court's decision in *Sony*.²⁷³ The HRRC argues that enacting the proposed legislation would "fatally undermine[] the reliability of the Supreme Court's fair use finding [in *Sony*] that consumers *do* engage in unauthorized copying *without* violating the Copyright Code."²⁷⁴ The Supreme Court, in *Sony*,²⁷⁵ held that the sale of VCRs did not constitute contributory infringement. The holding was based on a finding that some copyright holders had authorized time-shifting,²⁷⁶ and that time-shifting of the programs by home tapers was a legitimate, fair use of the work.²⁷⁷ The Court found VCRs to be capable of "substantial noninfringing uses."²⁷⁸

If misconstrued, the *Sony* holding could be potentially devastating to a copyright holder's interest. The HRRC's position manifests the potential for misconstruction. The HRRC claims that "[b]y explicitly stating that copyright owners would have a *right to prevent unauthorized copying*"²⁷⁹ through use of a copy-protection system, the Motion Picture Anti-Piracy Act would eliminate what the HRRC regards as the right to engage in unauthorized "consumer home videotaping."²⁸⁰

However, relying on the facts at bar in *Sony*, the Court predicated its entire analysis on the finding that "the sale of copying equipment, like the sale of other articles of commerce, [does] not constitute contributory infringement if the product [is] widely used for legitimate, unobjectionable purposes."²⁸¹ That finding is somewhat less applicable to the manufacture and sale of anti-copy deactivation devices such as the black-box. Unlike VCRs, it is slightly more difficult to conceive of how a black-box could have a legitimate, unobjectionable use,²⁸² although the argument

²⁷³ *Universal City Studios, Inc. v. Sony Corp. of Am.*, 659 F.2d 963 (9th Cir. 1981), *rev'd*, 464 U.S. 417 (1984).

²⁷⁴ *Anti-Piracy Act Hearings*, *supra* note 11 (submission of Gary J. Shapiro, Chairman, Home Recording Rights Coalition, at 5).

²⁷⁵ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417 (1984).

²⁷⁶ Time shifting is the "practice of recording a program to view it once at a later time, and thereafter erasing it. Time-shifting enables viewers to see programs they otherwise would miss because they are not at home." *Sony*, 464 U.S. at 423.

²⁷⁷ *Id.* at 454-55. The exclusive rights granted to copyright owners, are "[s]ubject to sections 107 through 120." 17 U.S.C. § 106 (1988 & Supp. II 1990). See *supra* note 77 and accompanying text for a discussion of the fair use doctrine.

²⁷⁸ 464 U.S. at 456.

²⁷⁹ *Anti-Piracy Act Hearings*, *supra* note 11 (submission of Gary J. Shapiro, Chairman, Home Recording Rights Coalition, at 5) (emphasis omitted).

²⁸⁰ *Id.*

²⁸¹ *Sony*, 464 U.S. at 442.

²⁸² See *Anti-Piracy Act Hearings*, *supra* note 11 (testimony of John Ryan, Chairman, Macrovision, at 11-12).

[Black-box] ad[s] carry[] the stern statement that "STI does not condone piracy! These devices are sold only to 'clean-up' the video signal and correct

is not wholly without merit.²⁸³ The HRRC also asserts that the Bill would prohibit both the use of blank videocassettes to tape programming or prerecorded videocassettes, even when copyright owners would authorize such use. This argument is not persuasive because copyright holders who wish to authorize reproduction of their works need not include an anti-copy signal on their source-video tape. As a result, one could easily copy the underlying work.

A strict reading of *Sony* indicates that the Court's fair use finding was based on the fact that the works at issue were free televised broadcasts. Concerning televised works, the Court explained that "time-shifting merely enables a viewer to see such a work which he had been invited to witness in its entirety free of charge."²⁸⁴ However, a similar analysis is not applicable to buying or renting a pre-recorded video. Video movies are not exhibited free of charge; they must be rented or purchased. By simply copying a work which otherwise could only be obtained through purchase, the "potential market for or value of the copyrighted work"²⁸⁵ could be harmed.

Moreover, the home-taping debate is complicated by a long-standing dispute regarding whether home-taping is actually within reach of the copyright laws. Proponents of home-taping rely upon a House Report on the Sound Recording Amendment of 1971²⁸⁶ as the basis for their claim. The House Report states:

In approving the creation of a limited copyright in sound recordings it is the intention of the Committee that this limited copyright not grant any broader rights than are accorded to other copyright proprietors under the existing title 17. Specifically, it is not the intention of the Committee to restrain the home recording, from broadcasts or from tapes or records, of recorded performances, where the home recording is for pri-

the playback problems associated with copy protected tapes." The flaw in this reasoning, of course, is that the "playback problems associated with copy protected tapes" are really playback problems with copies.

Id.

²⁸³ Black-box devices could conceivably be said to have a legitimate, unobjectionable use in circumventing anti-copy signals by allowing for the reproduction of archival copies from which a fair or exempt use can be derived. An anti-copy signal which is capable of permitting an archival copy for fair and exempt uses while preventing infringing uses, could alleviate this problem. See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works.

²⁸⁴ *Sony*, 464 U.S. at 449.

²⁸⁵ 17 U.S.C. § 107(4) (1988 & Supp. II 1990).

²⁸⁶ Pub. L. No. 92-140, 85 Stat. 391 (1971) (codified in scattered sections at 17 U.S.C. §§ 101, 102(a)(7), 106(1), 106(3)(4), 114, 116, 402, 501-504 (1988)).

vate use and with no purpose of reproducing or otherwise capitalizing commercially on it. This practice is common and unrestrained²⁸⁷

It would be imprudent, however, to rely solely on the language of this report. Professor Nimmer states that "the Senate never joined in the statement that the *Betamax* court quoted from the House report. The language of the Amendment itself makes no reference to any form of home recording exemption, nor was any such exemption suggested during the Senate's consideration of the measure."²⁸⁸ Furthermore, even if the report is determinative in creating a home-taping right, the 1971 Amendment was limited to the creation of a right in sound recordings only. Consequently, any home-taping exemption from copyright liability would apply only to the sound recording, and not the copyright in the underlying composition.²⁸⁹ Thus, one who has made a tape copy of a phonograph record would still be liable for the unauthorized use of the underlying composition, though exempted from liability for reproducing the sound recording. A passage from the House Report on the 1976 Copyright Act states:

it is not intended to give [taping] any special status under the fair use provision or to sanction any reproduction beyond the normal and reasonable limits of fair use. . . . [and in addition] there is no disposition to freeze the [fair use] doctrine in the statute, especially during a period of rapid technological change.²⁹⁰

The MPAPA is critical to the motion picture industry's implementation of a successful self-help strategy. The Act becomes increasingly more important as advances in technology continue to provide consumers with enhanced infringement opportunities. By providing copyright owners with a mechanism for redress

²⁸⁷ H.R. REP. NO. 487, 92d Cong., 1st Sess. 7 (1971), reprinted in 1971 U.S.C.C.A.N. 1566, 1572.

²⁸⁸ Melville B. Nimmer, *Copyright Liability For Audio Home Recording: Dispelling The Betamax Myth*, 68 VA. L. REV. 1505, 1510 (1982).

²⁸⁹ Copyright protection subsists separately in both "musical works, including any accompanying words" and "sound recordings" (the performance of the musical composition). 17 U.S.C. §§ 102(a)(2) & (7) (1988).

²⁹⁰ H.R. REP. NO. 1476, 94th Cong., 2d Sess. 66 (1976), reprinted in 1976 U.S.C.C.A.N. 5659, 5679-80. Nonetheless, a home-copy of a copyrighted video title may still fall within the confines of the fair use doctrine pursuant to 17 U.S.C. § 107, even though it does not contain a presumptive exception for home-taping. If the particular home-taping is a fair use then it would not be considered an infringement of the copyright. See *supra* notes 76-88 and accompanying text for a discussion of the implications of anti-copy signals on fair and exempt use of copyrighted works.

against manufacturers of devices that circumvent anti-copy systems, the Bill may advance the industry's self-help dynamic by providing incentive to develop more effective anti-copy signals. The Bill, however, does not adequately address either the implications of anti-copy signals on noninfringing uses of copyrighted works or the classification problem concerning devices considered staple articles of commerce and must confront these issues accordingly.²⁹¹

VII. CONCLUSION

The motion picture industry has undertaken the task of collectively enforcing the rights granted to it by copyright laws. The industry's use of electronic anti-copy signals to protect their lucrative video-copyright interests against ever-increasing abuse marks a turn towards self-help enforcement solutions. Anti-copy technology gives film studios the ability to protect their statutory grant in an age where technology is rendering such rights more difficult to secure. Self-help strategies provide an efficient means of protection insofar as the cost of protection is placed on those whose interest is greatest—copyright owners. Copyright owners will pay a price for protection commensurate with the value they attribute to a given work. As a result, copyright enforcement and its associated costs are determined by operation of market efficiency and cost management. Such a system presents an attractive alternative to relegating the task to the already burdened court system. However, since anti-copy signals are not effective in advancing copyright objectives in cases where unauthorized reproduction is noninfringing, they should not be implemented in such a context. The signals themselves are also fairly susceptible to circumvention by other technology-based devices. The ability to maintain the effectiveness of self-help strategies rests on adequately addressing these problems.

The black-box is an example of a technology-based device designed to circumvent the ability of anti-copy signals to prevent unauthorized copying. Although it is possible to seek redress against black-box manufacturers through principles of the contributory infringement doctrine, the doctrine is problematic because it requires the contributory infringement to be causally

²⁹¹ The MPAPA was not enacted at the close of the first session of the 102nd Congress. However, the issues addressed by the MPAPA are "not moot" and there is sure to be further discussion concerning the Act in subsequent sessions of Congress. Telephone Interview with Bari Schwartz, Legislative Director, Office of Representative Howard L. Berman (D-Cal.) (Jan. 15, 1993).

related to the direct infringement or infringer. Also, because the doctrine is not expressly provided for in the Copyright Act, it is difficult to discern and employ successfully.

Enacting the MPAPA would help better define the elements of the doctrine of contributory infringement. If enacted, the Act may ensure the viability of the motion picture industry's promising self-help dynamic by possibly providing the industry with the incentive to research and develop more effective anti-copy signals.

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