Digital Audio Tape Technology: A Formidable Challenge to the American Copyright System

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INTRODUCTION

The Japanese electronics industry is planning to introduce a major new home sound recording system into the American market. The technological advancement is the digital audio tape (DAT) system. The system provides on tape the same digital quality sound found only on compact discs (CDs). The appeal of the DAT system stems from the fact that it is the first device offering the capability of recording digitally at home. Unlike analog tape technology, reproduction of music


1. See Harrell, Japanese Audio, STEREO REV., July 1987, at 48 (explaining that DAT is the first major audio product to originate in Japan). DAT is the latest advancement in digital audio technology. Id.; see also Birchall, Digital Audio Tape, STEREO REV., Mar. 1987, at 57 (discussing the development of DAT); Dworetzky, A New Tape to Record Your Favorite Numbers, DISCOVER, May 1987, at 14 (explaining DAT technology). The DAT system combines the technologies of compact discs (CDs), videocassette recorders (VCRs), and computers. Id. DAT utilizes the same type of rotating drum, containing twin recording/playback heads, employed in VCRs. Id. The rotating drum spins rapidly to place large quantities of information on a four millimeter wide tape. Id. The rapid spin of the drum slows tape speed, thereby reducing wear on the tape. Id.

DAT machines employ a processing chip to convert sound into binary digits to produce the sound quality found on CDs. Id. The process slices the sound into small periods of time. Id. Each of these periods is converted "into binary digits that represent volume, or amplitude, and pitch, or frequency." Id. The periods are then encoded onto the tape. Id. The playback mode of the system converts each period into sound, and combines the sound periods to recreate music. Id.


3. Supra note 2; see Harrell, supra note 1, at 48 (explaining that the major appeal of DAT is its recording capability).
from a DAT cassette does not suffer any loss of fidelity. Furthermore, DAT can generate unlimited copies that possess the same digital quality sound as the original.

The proposed introduction of DAT into the American market has provoked considerable debate. The recording industry fears that DAT will harm the prosperous CD market. In addition, the digital recording function of DAT is considered a threat to the economic interests of the record industry and recording artists. As a result, the American Music Industry (AMI) has commenced a campaign to stop, or at least delay,

4. See Dworetzky, supra note 1, at 14 (comparing DAT to conventional analog tape format). Current tape recorders place electromagnetic signals of light and sound waves onto a tape. Id. Damage to a tape under the analog format results in sound distortions. Id. The DAT system, however, interprets distortions as binary digits. Id. The patterns of the digits are screened by microchip. Id. This error correction system interpolates between true digit patterns to recreate destroyed digits. Id. Finally, DAT technology can mute distortions. Id.

5. Supra notes 1-4; see The Sound of Money, supra note 2, at 72 (explaining that subsequent copies sound the same as the first copy because DAT converts sound into binary digits).

6. See Green, The High Cost of DAT, DIGITAL AUDIO, June 1987, at 136 (stating that DAT is a highly controversial technology in the audio field).

7. Kristof, supra note 2, at D9; see The Sound of Money, supra note 2, at 73 (noting that DAT is viewed as a competing technology); J. LARDNER, FAST FORWARD 9-16 (1987) (arguing that there is always a struggle between those introducing new technology and those attempting to preserve and exploit existing technology); Buell, Peterson, Fukushima & Port, Record Executives Are on Pins and Needles, BUS. WEEK, Feb. 16, 1987, at 112 [hereinafter Record Executives] (stating that Philips Corporation, a leading CD manufacturer, wants more time to profit from the CD market); see also Buell, supra note 2, at 67 (observing that the Japanese electronics industry contends that CD and DAT systems are complementary, not competitive).

8. See Wilkinson, supra note 2, at 69 (stating that record companies argue that DATs will deprive them of legitimate profits and deny artists of rightful royalties). The debate spurred Congress to consider a bill that could temporarily postpone the importation of DAT recorders unless they contained a scanning device designed to prevent copying. Id. President Reagan, in his 1987 State of the Union Message, said he would endorse a bill restricting DAT technology in order to minimize home taping. Id., citing 52 CONG. REC. S1187-1199 (daily ed. Jan. 27, 1987).

Those who support restricted use of DATs argue that DAT is the most dangerous threat to the record industry. Record Executives, supra note 7, at 112. A representative of the industry notes that unrestricted use could ruin and eventually eliminate the record industry. Id. In the end, the public suffers because the industry will have less money to provide incentives to new artists. Wilkinson, supra note 2, at 70.

Consumer-rights groups and the electronics industry reject the objections of the record companies. Id. These groups contend that the record companies fear new technology. Id. According to the proponents of unrestricted use, the fear is unjustified because the record companies adjusted to cassette tapes and even profited from prerecorded cassettes. Id.

See J. LARDNER, supra note 7, at 9-32, 305-20 (noting that movie studios feared the introduction of the videotape recorder). The studios argued that the recording system would cause losses in profits. Id. The video recorder, however, produces large profits for the studios from sales and rentals of prerecorded movies on videocassette. Id.
the importation of DAT technology. The AMI believes that the DAT is merely a copying device that serves no purpose other than home taping. The AMI contends that DAT will facilitate unauthorized copying by consumers and commercial pirates and lead to reduced revenues, lost royalties, and deprive the record industry of money to develop new artists. The AMI also opposes the importation of DAT technology because the Japanese electronics industry rejected an appeal by the international record industry to support legislation that requires the installation of a copyright protection chip in DAT recorders.


10. The Sound of Money, supra note 2, at 72. Record companies state that consumers will use DATs for the sole purpose of copying records, tapes, and CDs. Id. See also supra notes 2-5 and accompanying text (describing the recording function of DAT).

11. See supra note 8 (noting reasons for record industry concern over the introduction of DAT technology); see also Woodmansee, The Genius and the Copyright, 17 EIGHTEENTH-CENTURY STUD. 425, 439 (1984) (noting that piracy caused financial difficulties for publishers in the eighteenth century). Publishers used profits from popular books to compensate for the publication of works that were not likely to sell. Id. Because of the increase in piracy, publishers became hesitant to publish works that would not produce substantial profits. Id. As a result, the public was denied access to a wider variety of works. Id.

12. See The Sound of Money, supra note 2, at 72-73. The record industry endorses the use in DAT machines of an anti-taping technology called “copycode.” Id. at 72. Under copycode technology, manufacturers record CDs with frequencies missing at fixed intervals. Id. Manufacturers insert in DAT machines microchips that can pick up the absent intervals. Id. The microchips register the drops in frequency and cause the DAT machines to temporarily turn off. Id. Consequently, the finished recording would contain gaps. Id.

The Japanese electronics industry rejected the proposition of the record companies. Record Executives, supra note 7, at 112. Instead, the Japanese have developed the system of “copy-guard” protection. Id. Under copy-guard protection, DAT machines lack input jacks that enable them to link directly with CD players. Id. Sound must pass through a conventional analog amplifier to copy a CD. Id. Therefore, the reproduction of CDs under this system is not perfect. Id. The record industry, however, is not satis-
Rapid advances in recording technology, such as DAT, pose formidable challenges to the American copyright system. The resulting stress on the system gives rise to fundamental questions concerning American copyright jurisprudence. Much of the debate centers on whether ad-

fied with the Japanese proposal. Id.; see Hearings on H.R. 1384, supra note 9, at 5. Section 3 of H.R. 1384 provides in pertinent part:

(a) 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: Provided, that any patent, technical know-how, or proprietary rights necessary for manufacturing a copy-code scanner have been available by means of a royalty-free license.

(b) No person shall bypass, remove, or deactivate a copy-code scanner. Id. at 5-6. Section 2(2) of H.R. 1384 defines a copy-code scanner as follows:

A "copy-code scanner" is an 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 three thousand five hundred to four thousand one hundred 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 twenty-five seconds.

Id. at 4; see also Hearings on S. 506, supra note 9, at 8-13 (reviewing the same issues as H.R. 1384).

13. See Note, Toward a Unified Theory of Copyright Infringement for an Advanced Technological Era, 96 HARV. L. REV. 450, 450-53 (1982) [hereinafter Note, Toward a Unified Theory] (emphasizing that new methods for reproducing and distributing copyrighted works are often introduced into the United States). Innovative scientific devices for reproducing and transmitting written and graphic materials facilitate accessibility to copyrightable works. Id. at 451. These developments foster the unregulated distribution of copyrighted works because copying is now easy, inexpensive, and anonymous. Id. The innovations consequently erode the ability of copyright to balance the public need to access intellectual works against the creators' need for financial re-

ward. Id. at 453-54; see also OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS, INTELLECTUAL PROPERTY RIGHTS IN AN AGE OF ELECTRONICS AND INFORMATION 97-123 (1986) [hereinafter IPR] (stating that recent technology, which makes the copy, transfer, and manipulation of information and intellectual property cheaper, faster, and more private, undermines the ability to control the distribution of copyrighted works). Owners of copyrights, therefore, may realize less return for their creative efforts and financial investments. Id. at 97. Furthermore, owners encounter difficulty detecting, proving, and stopping infringements. Id. Their incentive to create new works conse-

quently may decrease. Id.

14. See IPR, supra note 13, at 19 (stating that the evolution of intellectual prop-

erty rights embodied a balance of social, political, and economic interests). Traditional enforcement mechanisms are proving inadequate. Id. at 98. As technologies change, the copyright system and its boundaries become ambiguous. Id.; see also Note, Toward a Unified Theory, supra note 13, at 451 (discussing the rigid nature of the traditional copyright system). Despite its technologically nurtured evolution, the copyright system fails to acknowledge new groups of creators. Id. This inherent inability to expand cre-

ates a strain in the ability of the copyright law to respond to new technologies. Id.

See generally 5 N. HENRY, COPYRIGHT, CONGRESS AND TECHNOLOGY: THE PUBLIC RECORD iv-xii (1980) (discussing the effect of technology on prior revisions of the
vances in technology are reconcilable with the reasonable needs of the artistic and literary efforts of the creative community.15

The ideological foundation of the American copyright system attempts to balance social, political, economic, and technological interests.16 The framework of the system, which is incorporated in article 1, section 8 of the United States Constitution, gives Congress authority to enact copyright laws that protect the works of an author.17 The purpose of copyright protection is first to encourage the creation and distribution of information and knowledge to the public, and second to promote science and the useful arts.18 To achieve this goal, Congress periodically modifies copyright law in response to a variety of technological advancements.19

Although originally designed to resolve problems associated only with printed publications,20 the United States constitutional framework...
proved flexible enough to accommodate a variety of new technologies. Technological advances in personal computers, videotape recorders, and audio tape recorders, however, test the limits of this flexibility. Moreover, these advances foster a gradual deterioration in the relationship between the goals of copyright law in promoting social change, and the influence of the copyright system in an information age.

As the new technologies of the fifteenth century shaped the present American copyright system, DAT promises to alter significantly how Congress views the copyright law, the mechanisms employed to protect copyrighted works, and the value society places on copyright protection.

Because the traditional copyright system cannot effectively ac-

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2. IPR, supra note 13, at 19; see Note, Toward a Unified Theory, supra note 13, at 450-53 (noting the gradual growth of copyright to accommodate new media of expression). See generally Leete, Betamax and Sound Recordings: Is Copyright in Trouble?, 23 AM. BUS. L.J. 551, 558-72 (1986) (discussing that the last confrontation between publishers and a new technology concerned the videotape recorder). Movie production companies unsuccessfully argued that home videotaping of television programs constituted copyright infringement. Id. at 559.

3. Id. at 100-01. The increased use of audio and videotape recorders brought about more unauthorized copying of copyrighted materials. Id. at 100. New machines that reproduce works in private, at low cost, and with little effort effectively disable copyright owners to control the copying of their work. Id.


5. See Note, Toward a Unified Theory, supra note 13, at 450-53 (noting the effect of technology on the American copyright system).

6. See IPR, supra note 13, at 31 (discussing the goals of intellectual property in a changing information environment).

7. See supra note 20 and accompanying text (describing how the printing press fostered the creation of the copyright system).

8. IPR, supra note 13, at 20. Governments grant intellectual property rights to
commodate this new technology, lawmakers must modify the current protection. In this way, American copyright jurisprudence will adopt the needed flexibility to accommodate the impact of advances in a technological era.

This Comment examines the doctrinal tensions in American copyright law in light of rapid advances in recording technology. The Comment also discusses the inherent inability of the United States Congress to expand copyright protection in response to new technologies like DAT, and compares the United States system to the protection accorded under the Japanese system. Part I addresses the influence of technology on American copyright law. Part II examines the Japanese copyright system and its ability to deal successfully with technological innovations in recording. Finally, the Comment concludes that the United States Congress should adopt legislation that provides broader copyright protection through the recognition of both a proprietary right and a personal right in a creation.

I. THE INFLUENCE OF TECHNOLOGY ON AMERICAN COPYRIGHT LAW

All intellectual property systems seek to establish policies that effect the use and flow of information in society. These policies attempt to achieve a suitable balance between the needs of creators, producers, and distributors of creative works and the needs of the public. Consistent with this objective, Congress originally formulated the American copyright system to deal with the new social and economic changes generated from the invention of the printing press.

The effect of the invention of the printing press in fifteenth century
Europe on copyright law reveals the reciprocal correlation between the maturing of copyright law and the development of technology. This technological revolution in communications led to the development of an Anglo-Saxon system of copyright privileges to accommodate the newly-established publishing trade. The Anglo-Saxon copyright system primarily concerned itself with the protection of the right of reproduction. The privileges provided protection of printed material against unauthorized reproduction to insure economic benefits for investing in the works of authors. The dominance of printing technology caused the scope of this protection to remain basically unchanged until the second half of the nineteenth century.

The Anglo-Saxon idea of copyright later became the foundation of the copyright system in the United States. The American copyright system thus is based on the Anglo-Saxon ideological rationale that copyright is an exclusive proprietary right, as distinct from a personal right, granted to the author to protect the author's economic interest in a work against any unauthorized reproduction.

34. See Ringer, supra note 16, at 480-81 (stating that copyright laws governing a society must expand to accommodate new technology).
35. S. STEWART, supra note 33, at 11. A royal decree in 1556 established the Stationers' Company in England. COPYRIGHT FOR THE EIGHTIES, supra note 18, at 1. Under this decree, the members (stationers) had to register all published works with the Stationers' Company. Id. Registration established the stationers' sole right to print and publish the works for themselves, their heirs, and their assigns forever. Id.
36. See S. STEWART, supra note 33, at 7-8 (stating that copyright originated as a right to prevent reproduction).
37. Id.; see Patterson, supra note 18, at 840 (explaining that the stationers were primarily concerned with the establishment of a monopoly of printing and publishing).
38. See IPR, supra note 13, at 99 (noting the difficulty of concealing infringements in the nineteenth and early twentieth centuries because the amount of capital and labor required for reproduction remained high). The technologies of the mid-twentieth century, however, made it much cheaper and easier to copy materials. Id. As a result, enforcement became more difficult to achieve because more people began to copy. Id.
39. S. STEWART, supra note 33, at 24 (stating that the traditional Anglo-Saxon idea of granting publishers with a monopoly control in printing and publishing was transplanted to the United States).
40. Id. at 7-8; see infra notes 174-187 and accompanying text (explaining the differences between the Anglo-Saxon and European copyright systems). See DaSilva, Droit Moral and the Amoral Copyright: A Comparison of Artists' Rights in France and the United States, 28 BULL. COPYRIGHT SOC'Y U.S. AM. 1, 3 (1980) (defining the author's proprietary and moral/personal right in a work). The author's proprietary right is essentially a pecuniary and exploitative interest in a work. Id. These economic interests are protected through the recognition of an author's exclusive right to control the reproduction and public performance of a work. Francon & Ginsburg, Author's Rights in France: The Moral Right of the Creator of a Commissioning Work to Compel the Commissioning Party to Complete the Work, 9 COLUM. J. ART & L. 381, 381 (1985).

The concept of moral right originated in France. DaSilva, supra, at 5. The right is a nonpecuniary interest that protects the integrity of works and the personality of the
need to protect authors' control of their original written expressions led directly to the inclusion of article 1, section 8, clause 8 in the United States Constitution. This section delegates to Congress the power to grant authors a limited monopoly in their works.\textsuperscript{41}

A. Development of Copyright in the United States

The scope of the American copyright system has expanded over time from encompassing solely printed works, under the Copyright Act of 1790 (1790 Act),\textsuperscript{42} to including, under the Copyright Act of 1976 (1976 Act),\textsuperscript{43} all original works fixed in a tangible medium of expression. The first change in the American copyright law did not occur until the granting of copyright protection to photographs and negatives in 1865.\textsuperscript{44} Since then, Congress has remained reluctant to accommodate copyright to new technology,\textsuperscript{45} and the growth process of the American copyright system has proceeded at a surprisingly slow rate.\textsuperscript{46}

\begin{itemize}
\item \textsuperscript{41} See S. STEWART, supra note 33, at 25; see U.S. Const. art. I, § 8, cl. 1, cl. 8 (describing the power of Congress to grant exclusive rights to authors and inventors to protect their respective works and discoveries).
\item \textsuperscript{42} See Copyright Act of 1790, ch. 15, § 1, 1 Stat. 124 (current version at 17 U.S.C. § 102(a)(5) (1982)) (stating that the authors of maps, charts, and books have the sole right of publication).
\item \textsuperscript{44} Patterson, supra note 18, at 835-39; see Act of Mar. 3, 1865, ch. 126, § 1, 13 Stat. 540, 540 (current version at 17 U.S.C. § 102(1)(5) (1982)) (expanding protection to photographs and negatives).
\item \textsuperscript{45} See Patterson, supra note 18, at 835 (noting that the first Supreme Court case on copyright, Wheaton v. Peters, 33 U.S. (8 Pet.) 591 (1834), exhibited this skepticism).
\item \textsuperscript{46} Id.
\end{itemize}
1. **Gradual Expansion of Protection**

In the Copyright Act of 1909 (1909 Act), Congress expanded the subject matter of copyright protection. For the first time, Congress granted protection to "all the writings of an author." The expansion was necessary to protect the publishers' economic interests in newly developed media of expression. Despite the expansion of the subject matter of protected works, there was no sense of a need to revise the rights accorded to the author.

The acknowledgement that all the writings of the author require protection changed the concept of copyright. The function of copyright was no longer viewed primarily as a concept of trade regulation. Instead, copyright became perceived as an exclusive proprietary concept. The expansion, however, did not extend copyright protection to profit derived from all creative works. For example, the creative efforts of record companies and performers, in the production of sound recordings, are not adequately compensated under American law. The fiction that copyright is exclusively an author's right prevented this and other logical progressions in the development of the American copy-

48. Id. § 4, 35 Stat. 1075, 1076 (current version at 17 U.S.C. § 102(a) (1982)).
50. Id.; see COPYRIGHT FOR THE EIGHTIES, supra note 18, at 7-8 (explaining the reasons for the 1909 revision of American copyright law). The revision was deemed necessary in response to the developments in aural and visual recording. Id. at 8. These developments were in the areas of the motion picture, radio, television, and phonograph. Id. Furthermore, changes in business methods and practices fostered the need to improve the copyright system. Id.
52. See Patterson, supra note 18, 838-41 (explaining the origins of Anglo-Saxon copyright law). Originally, copyright functioned as a trade regulation device. Id. at 839-41. The primary motivation was to develop an instrument of censorship and press control. Id. at 840.
53. Id.
54. See id. at 838-39 (explaining that copyright no longer merely provided the author of a work with control of the work for profit, but also expanded to provide the author with complete control over the work itself).
55. See id. at 839 (noting that the debate of the past continues and results in much confusion concerning the scope of current copyright protection).
56. See infra notes 81-97 and accompanying text (describing the limited rights accorded to the creators of sound recordings). Record companies and performers do not receive royalties when a sound recording is played over a radio or in a jukebox. Id. Only the owner of copyright in the musical composition receives royalties for the public performance of a sound recording. Id.
Consequently, the notion that copyright exists to protect the author's personal right wrongfully served as a rationalization for enlarging the proprietary rights of the copyright owner. This rationalization proved more beneficial to the monopolist than the author.

The United States Congress relied on the Statute of Anne as a model for its copyright law. The American copyright system is thus based on the fiction that copyright is exclusively an author's right. This fiction results in much confusion as to the scope of the present copyright system. Moreover, it produces a copyright system that is very rigid and unable to grant adequate compensation for the exploitation of a broader array of works.

3. Inability to Expand Compensation: The United States and Neighboring Rights

Most nations recognize the concept of neighboring rights. Neighboring rights provide the performers with the right to receive royalties

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76. Id. at 844; see Abrams, The Historic Foundation of American Copyright Law: Exploding the Myth of Common Law Copyright, 29 WAYNE L. REV. 1119, 1120-87 (1983) (examining the historical foundation of American copyright law). The dominant concern of copyright jurisprudence is the public interest in creation and accessibility of intellectual works. Id. at 1187. This concern is paramount to the interests of authors. Id.; see Woodmansee, supra note 11, at 425-48 (examining the emergence of the concept of author). The author is viewed as the individual responsible and hence deserving credit for creating a unique work. Id. at 426. This definition of author is a modern phenomenon. Id. In the Renaissance, the author represented a craftsman who utilized works of the past in order to produce works for the present. Id. Accordingly, writings were considered in the public domain and authors were granted no rights in their works. Id. at 434. Occasionally, the author was deemed an inspired craftsman when he or she produced a truly unique work. Id. at 427. In the eighteenth century, the author became regarded solely as an individual who created a new or original work. Id. at 445. The works of an author thus became the exclusive property of the author. Id. The formulation of the concept of copyright, in the eighteenth century, however, was not in recognition of the rights of authors, but the protection of printers.” Id. at 437. Printers required legal protection from the increase in the unauthorized reprinting of books. Id.

77. Patterson, supra note 18, at 845.
78. Id.
79. Id. at 839-43.
80. See id. at 844 (noting that revisions of the copyright law are necessary because new technology has outstripped copyright as an author's right).
from radio and television broadcasts of their sound recordings. Such rights are not recognized in the United States. American law gives royalty rights only to the owner of the copyrights. Non-owning performers are thus precluded from sharing in broadcast revenues.

The failure of the United States Congress to adopt neighboring rights prevents its participation in the International Convention for the Protection of Performers, Production of Phonograms and Broadcasting Organizations (Rome Convention). The absence of the United States

82. Comment, *Domestic Barriers,* supra note 81, at 83-84.
83. See Copyrights, 17 U.S.C. § 114 (1982) (noting the scope of exclusive rights in sound recordings); D’Onofrio, *In Support of Performance Rights in Sound Recordings,* 29 UCLA L. REV. 168, 168-69 (1981) (explaining that the reason behind the inability of the United States to expand protection to works not inherently original is primarily historical, but is also in part a result of strong opposition from the broadcasting industry). Performers and record companies face serious financial difficulties as a result of home taping. *Id.* at 182-83. Record companies and performers must receive broadcast royalties to curtail the decline in record sales. *Id.;* see Diamond, *Sound Recordings and Phonorecords: History and Current Law,* 13 INTELL. L. REV. 415, 432-37 (1979) (stating that only unauthorized duplication, as distinguished from imitation, can infringe a sound recording copyright); Greenberg, *The Plight Of The American Musician: A Study Of Comparative Copyright Law And Proposed Performers’ Protection Act,* 6 LOY. ENT. L.J. 31, 32-36 (1986) (noting that the 1976 Copyright Act specifically limits the scope of exclusive rights given to sound recordings and non-dramatic musical works); see also Urwin, *Paying the Piper: Performance Rights in Musical Recordings, Communications and the Law,* Winter 1983, at 3, 4-5, 55-57 (noting the lack of protection for sound recordings and recommending that a bill creating a performance right only in creative performances would have an easier time becoming law); Note, *Copyright: Performance Rights for Sound Recordings Under the General Copyright Revision Act—The Continuing Debate,* 31 OKLA. L. REV. 402, 402-11 (1978) (stating that record manufacturers support the expansion of the 1976 Act to include performance rights for sound recordings). The broadcasting industry leads the opposition to such an expansion. *Id.* at 403. Broadcasters contend that the additional expense of royalty payments to record manufacturers is too great a burden. *Id.* at 404. Manufacturers contend that the broadcasters can pay and that the present system is unjust. *Id.*; Comment, *Sound Recording Copyright Law—Its Application To The Performance Of Records And Tapes,* 11 CUMB. L. REV. 447, 450-52 (1980) (noting that the record manufacturer is not provided with the same broad protection as that provided for the author of a copyrighted song).
85. Comment, *Domestic Barriers,* supra note 81, at 83.
86. International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, Oct. 26, 1961, 496 U.N.T.S. 43, reprinted in 3 COPYRIGHT LAWS AND TREATIES OF THE WORLD (UNESCO & WIPO Supp. 1978). The performer is given minimum rights of performance. *Id.* art. 7(1). The performer is protected against unauthorized broadcasts of his or her performances. *Id.* art. 7(1)(a). In addition, the performer is protected from unauthorized fixation of his or her performances, thereby preventing the taping of his or her works from a live performance and subsequent sale without permission. *Id.* art. 7(1)(c); see Comment, *Domestic Barriers,* supra note 81, at 83-84 (stating that because the United States does not recognize the concept of neighboring rights, it is precluded from participating in the Rome Convention).
right system.\(^57\)

2. **Exclusively an Author's Right**

In Great Britain, prior to Parliament's granting any rights to authors, the Stationers' Company, a London company of the book trade, had a monopoly on the printing and publishing of books.\(^58\) Only members of the Stationers' Company (stationers) could acquire the exclusive right to publish a work.\(^69\) Once granted, the right to publish existed in perpetuity.\(^60\)

Eventually, Parliament refused to continue the stationers' monopoly.\(^61\) In an effort to maintain their monopoly, the stationers supported the enactment of a copyright statute to protect authors rather than themselves.\(^62\) This resulted in the English Copyright Act of 1710, the Statute of Anne.\(^63\) As a result of the statute, an author had the ability, for the first time, to secure a statutory copyright.\(^64\)

With the advent of the Statute of Anne, the stationers lost the perpetuity of the exclusive right to publish a work. In an attempt to regain the right indirectly, the stationers argued that the author possessed, in addition to a statutory copyright, a common law copyright in

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\(^{57}\) See Patterson, *supra* note 18, at 839 (stating that the fiction that copyright is exclusively an author's right compounds the problems of balancing the interests of the copyright owner with those of the users of the copyrighted work). The fiction, however, defies the history of copyright. *COPYRIGHT FOR THE EIGHTIES, supra* note 18, at 1-8. As history demonstrates, publishers originally developed copyright for their benefit, and the author did not become encompassed within its scope until a later date. *Id.*

\(^{58}\) See *COPYRIGHT FOR THE EIGHTIES, supra* note 18, at 1-8 (stating that the Anglo-Saxon copyright system originated as a product of the monopoly granted to the Stationers' Company on printing and publishing).

\(^{59}\) *Id.*

\(^{60}\) *Id.*

\(^{61}\) See *id.* at 1 (noting Parliament eventually objected to the growing strength of the monopoly of the booksellers).

\(^{62}\) See *id.* at 3 (explaining that the stationers argued the necessity of a copyright law in order to protect authors' rights). The stationers used this argument, however, to in fact regain more protection for themselves. *Id.*

\(^{63}\) Statute of Anne, 1710, 8 Anne, ch. 19, *reprinted in COPYRIGHT FOR THE EIGHTIES, supra* note 18, at 2-3; see B. Ringer, Bowker Memorial Lecture (Oct. 24, 1974) reprinted in *The Demonology of Copyright*, PUBLISHER'S WEEK, Nov. 18, 1974, at 26-27 (describing the Statute of Anne). Ringer states that the enactment of the Statute of Anne designated the end of autocracy in English copyright and established two democratic principles. *Id.* The first principle was the recognition of the author as the ultimate beneficiary and fountainhead of protection. *Id.* The second principle was an assurance of legal protection against unauthorized use for limited time. *Id.* This assurance came without any elements of prior restraint of censorship by the government or its agents. *Id.*

\(^{64}\) See Statute of Anne, 1710, 8 Anne, ch. 19, *reprinted in COPYRIGHT FOR THE EIGHTIES, supra* note 18, at 2-3 (granting the right to secure copyright to the author and his or her assignee or assigns).
perpetuity upon creation. The purpose was to regain the stationers’ copyright in the guise of a common law copyright.

In 1768, the court of the King’s Bench ruled in Millar v. Taylor that an author had a common law copyright existing in perpetuity. The court, in addition, held that such a right was assignable to the booksellers. In Donaldson v. Beckett, however, the House of Lords overruled the Millar holding. The Lords ruled that an author does possess a common law copyright, but that the right only exists until publication.

In Millar, the court essentially recognized the personal rights of an author. The court drew a distinction between an author’s common law copyright and statutory copyright. The Donaldson holding, which limited an author’s common law copyright to prepublication, prompted the subordination of an author’s personal right and the accentuation of an author’s proprietary right.

The failure to provide equal recognition of both the personal and the proprietary rights of an author generated confusion. The confusion led to the recognition that an author possesses a special kind of interest in a work that is beyond the economic interest associated with prop-

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65. Patterson, supra note 18, at 842-43.
66. Id. at 842.
68. Id. at 258-62.
69. Id.
71. Id. 846-49.
72. See Patterson, supra note 18, at 842-44 (explaining that the court of the King's Bench recognized an author’s common law copyright as existing separately from his or her statutory copyright). In addition, the House of Lords held that the recognition of an author’s common law copyright exists in perpetuity, and thereby exhibited a belief that an author possesses a personal right in his or her work. Id. at 844; see also L. Patterson, Copyright in Historical Perspective 64-77 (1968) (noting that evidence exists to indicate that the stationers recognized the creative rights of an author). While the stationer’s copyright generally was a publisher’s right, the statutory copyright became an author’s right. Id. This right came to embrace all the rights of an author in connection with his or her published work. Id.; see S. Stewart, supra note 33, at 6-7 (explaining the concept of personal rights). Personal rights are based on the idea that the work of an author represents the personality of the author. Id. at 6. Consequently, the author has a natural right to control the use of the work. Id.; see also infra notes 174-187 and accompanying text (noting the recognition of personal rights under the European and Japanese copyright systems).
73. Patterson, supra note 18, at 842-45.
74. See id. at 842-44 (stating that the stationer’s copyright for publishers became recognized as an author’s copyright).
75. See id. at 842-45 (emphasizing that the inconsistent decisions of the House of Lords explain the confused state of copyright). As a consequence, copyright fails to provide equal protection of both proprietary and personal rights. Id.
from the Convention deprives American artists of potential income from both domestic and international airplay.\textsuperscript{87} Under the present scheme, a majority of performers receive nothing from the broadcasts of their performances to the public.\textsuperscript{88}

**a. Neighboring Rights and Sound Recordings**

The 1976 Act extends copyright protection to sound recordings.\textsuperscript{89} The Act grants the owner of a sound recording, usually a record company, the exclusive right to copy the sound recording, to prepare derivative works through, for example, remixing and rearranging techniques, and to distribute copies to the public.\textsuperscript{90} The Act denies the exclusive right to public performance, but grants the right to public performance to other subjects of copyright protection.\textsuperscript{91} Therefore, under the current system, the songwriter or composer who is also the copyright owner of the work receives compensation for public performances, while record companies and performers who are not copyright owners are paid nothing for their creative efforts.\textsuperscript{92}

Under the present American system, the record companies derive income only from sales, and performers usually do not receive royalties from the sales of their recorded performances.\textsuperscript{93} The only groups presently benefiting from the copyright system are composers and broadcasters.\textsuperscript{94} The composers receive broadcast royalties through contracts and the broadcasters profit from advertising revenues.\textsuperscript{95}

In an age of advances in recording technology, the present copyright

\textsuperscript{87} Comment, *Domestic Barriers*, supra note 81, at 84; see *Performance Rights Amendment of 1977: Hearings Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the House Comm. on the Judiciary*, 95th Cong., 2d Sess. 180 (1978) (noting that American performers could have received over $13 million in annual foreign income in 1976 in addition to an equal amount in revenue from American airplay).

\textsuperscript{88} Comment, *Domestic Barriers*, supra note 81, at 84.


\textsuperscript{91} Id. § 114(a); see id. § 106(4) (listing works protected under the right to public performance).

\textsuperscript{92} See Comment, *Domestic Barriers*, supra note 81, at 98 (explaining that the law does not deem creations produced by record companies and performers original works and therefore does not give them exclusive copyright protection).

\textsuperscript{93} Id. at 98-100.

\textsuperscript{94} See id. at 100 (stating that composers receive royalties for airplay while broadcasters exploit the efforts of performers and record companies because broadcasters are not required to pay royalties).

\textsuperscript{95} Id.
law denies record companies and performers their rights to royalties for performances of their records and tapes. To correct this injustice, the American copyright system should accommodate the proprietary rights of both the manufacturer and the performer in public performances through the adoption of neighboring rights. The absence of the broad range of protection accorded under neighboring rights results in the nonrecognition of performance rights in sound recordings for performers and record companies. Consequently, the American copyright system fails to provide adequate compensation to record companies and performers in response to the constant innovations and technological advancements in sound recordings.

4. Inability to Cope with Recording Technology

An increasingly popular technology is tape recording. Tape recording technology was introduced to the public almost thirty years ago. Because the equipment was expensive, bulky, and difficult to operate, the record industry was not concerned about its possible impact on their profits. With the advent of the tape cassette, however, the potential for copying sound recordings increased dramatically. The recording format, for the first time, enabled the user to conveniently and inexpensively reproduce sound recordings in an individual’s home.

96. See id. at 98-100 (noting that the realization that airplay does not make profits has led performers to increase their demands when negotiating a recording contract). Contractors pass these increases on to the consumer, which in turn causes increases in record prices. Id.

97. See id. at 98-108 (explaining that performers and record companies should receive some economic rights for their efforts). The present system is a commercial exploitation of both record companies and performers. D’Onofrio, supra note 83, at 168-70. Congress attempted to resolve the problem by proposing to introduce performance rights in sound recordings into American copyright law. Id. at 190. Since the 1950s, Congress has unsuccessfully attempted numerous proposals and revisions of draft bills to grant performance rights in sound recordings. Id. H.R. 1805 is the most recent attempt to grant performance rights in sound recordings. H.R. 1805, 97th Cong., 1st Sess. (1981). Congressional attempts, however, have proved unsuccessful due to strong opposition from the broadcasting industry. D’Onofrio, supra note 83, at 173. The opponents rely on the copyright clause and on the first amendment to argue the unconstitutionality of a sound recording performance right. Id.


99. Id. at 856. The amount of home recording was small because of the state of recording technology. Id.

100. Id. Tape cassette recorders are small, convenient, and inexpensive. Id. The recorders can record directly from turntables, receivers, and other tape decks. Id.

101. Id.
The practice of home recording has become commonplace. This significant increase is adversely effecting copyright owners. The value of individual copyrights are declining because home sound recording technology enables the user to reproduce and distribute copyrighted works with ease. Accordingly, traditional enforcement mechanisms are inadequate because violators are no longer easily identifiable. The result is an unworkable scheme of copyright enforcement.

B. COPYRIGHT AND SOUND RECORDINGS

The legal status of home sound recording is still uncertain. The debate on this issue concerns whether home duplication of sound recordings for personal use constitutes copyright infringement. In particular, the issue centers on whether the 1971 Sound Recording Amendment (1971 Amendment) intended to exempt home sound recording from the then-extant 1909 Act, and, if so, whether Congress incorporated this intent into the 1976 Act.

102. See id. (estimating that about 60% of American households own at least one tape recorder).
103. See Leete, supra note 23, at 551-54 (explaining that there is evidence that recording technology is threatening the record industry and artists).
104. Note, Toward a Unified Theory, supra note 13, at 454. Recording technology makes copyrighted materials increasingly available to the public. Id. The record industry claims that this phenomenon results in an annual loss of about $1 billion in industry profits. Leete, supra note 23, at 552.
105. Note, Toward a Unified Theory, supra note 13, at 454; see Teruo Doi, Copyright Problems of the Videogram, PAT. & LICENSING, Aug. 1985, at 15, 16 (noting that copyright owners have difficulty holding individuals who record at home liable for copyright infringement).
106. Note, Toward a Unified Theory, supra note 13, at 454. In response to congressional inaction in revising the copyright system, the courts must apply outdated copyright doctrines to current allegations of copyright infringement. Id.; see IPR, supra note 13, at 97-123 (discussing the detrimental effects of recording technology on the American copyright system).
107. See Leete, supra note 23, at 551-54 (noting that a debate exists over whether copyright owners require more protection than the copyright law now provides because of the advent of new tape recording technology); Comment, Home Audio Recording, supra note 98, at 855-59 (arguing that home duplication of copyrighted audio recordings constitutes copyright infringement); Cole, Home Videotaping of Copyright Material: Cracks in the 1976 Copyright Act?, 11 CAP. U.L. REV. 215, 262-63 (1982) (stating that congressional legislation is needed to clarify the legal situation concerning both home videotaping and audio taping); Nimmer, Copyright Liability for Audio Home Recording: Dispelling the Betamax Myth, 68 VA. L. REV. 1505, 1505-06 (1982) [hereinafter Nimmer, Betamax Myth] (arguing that no exemption from copyright liability exists for home audio recording).
108. Supra note 107 and accompanying text.
110. See Comment, Home Audio Recording, supra note 98, at 859 (discussing
Originally, the 1909 Act provided no copyright protection to sound recordings.\(^{111}\) The 1909 Act, however, granted copyright protection to the composer of a musical work.\(^{112}\) The dramatic increase in the unauthorized reproduction and commercial distribution of records and tapes in the late 1960s necessitated the expansion of the scope of copyright protection.\(^{113}\) Congress amended the 1909 Act with the 1971 Amendment.\(^{114}\) This amendment provided copyright protection to sound recordings for the first time.\(^{115}\)

The inability of the 1909 Act to cope with rapid developments in technology caused Congress to revise the Act in 1976.\(^{116}\) The 1976 Act specifies the exclusive rights of the copyright owner,\(^{117}\) lists exemptions whether home audio recording is exempt from the 1976 Act).

\(^{111}\) See id. at 858 (noting that the framers of American copyright law did not believe that an artist's particular interpretation of a musical composition was also a unique work of authorship entitled to copyright protection). Therefore, the 1909 Act gave no protection to sound recordings. Id.

The inability of the American copyright system to extend protection to the products of new technology is directly related to the fact that the concept of copyright developed as the product of a particular kind of technology, the printing press. Patterson, supra note 18, at 836. This early concept of copyright fostered the belief that copyright protection extended only to printed matter. Id. Sound recordings are not a form of printed work and therefore did not receive protection. Id.

\(^{112}\) Nimmer, Betamax Myth, supra note 107, at 1508.

\(^{113}\) Comment, Home Audio Recording, supra note 98, at 858.

\(^{114}\) Nimmer, Betamax Myth, supra note 107, at 1508.

\(^{115}\) See supra notes 89-97 and accompanying text (describing the scope of protection accorded to sound recordings). See Nimmer, Betamax Myth, supra note 107, at 1508 n.13 (noting that copyright in a sound recording is different from copyright in the musical or other underlying work that is the subject of the sound recording). Nimmer states that the composer of the music, whose rights may be acquired by a music publisher, owns the copyright in the underlying musical work. Id. Both the 1909 Act and prior copyright laws recognized this copyright. Id. The Sound Recording Amendment of 1971, however, provided a copyright for those responsible for the artistic rendition of the musical work as fixed in the form of a "phonorecord," which means a phonograph record or tape. Id.


\(^{117}\) Copyrights, Pub. L. No. 94-553, 90 Stat. 2546 (1976) (codified at 17 U.S.C. § 106 (1982)). The rights of the copyright owner are as follows:

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 for 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.

Id.
for certain uses of an author's work, and codifies the judicially-developed fair use doctrine. Furthermore, although the 1976 Act provides protection for sound recordings, it does not exempt home sound recording of copyrighted works from liability for infringement. Thus, liability concerning home recording is avoidable only under the doctrine of fair use.

C. THE FAIR USE DOCTRINE

The fair use doctrine permits the reasonable use of copyrighted material under certain circumstances without the consent of the copyright owner. This judicially-developed doctrine is codified in the United States Code, section 107 of the 1976 Act. Although the 1976 Act fails to specifically define fair use, it identifies four specific factors that are considered in determining what constitutes a reasonable reproduction of copyrighted works. These four factors include:

(1) the purpose and character of the use;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.

Courts do not strictly impose these factors as rules of law; instead they are used as elements when determining the merits of the affirmative defense. The relative importance of the factors involved in the

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120. Comment, Home Audio Recording, supra note 98, at 861.
121. Id.
124. Id.
125. Id.
fair use analysis are not indicated in the language of section 107 or its legislative history.\textsuperscript{127} Numerous cases and commentators, however, imply that the most important factor is section 107(4), the economic effect of unrestricted use upon a protected work.\textsuperscript{128} In accordance with this trend, the Supreme Court in \textit{Sony Corporation of America v. Universal City Studios, Inc. (Sony)},\textsuperscript{129} emphasized the economic impact of the private use of videotape recorders.

D. \textbf{The Sony Case}

In \textit{Sony}, the Supreme Court faced the issue of whether private home use of videotape recorders to record copyrighted works from broadcast television constituted a copyright infringement.\textsuperscript{130} Universal City Studios and Walt Disney Productions sued Sony shortly after Sony introduced the videotape recorder into the American market.\textsuperscript{131} The plaintiffs alleged that the home recording of their copyrighted programs constituted an infringement and that Sony was liable for contributory infringement.\textsuperscript{132} The plaintiffs also contended that the infringement had the potential to cause them to suffer significant monetary damages.\textsuperscript{133}

Sony asserted that private home videotaping did not constitute an infringement, and if it did, it did not fall under any theory of infringe-
Sony insisted that a majority of copyright holders made no objection to having private viewers "time-shift," record their broadcasts for viewing at a later time. Furthermore, Sony demonstrated, through the use of testimony, that "time-shifting" did not cause any harm to the potential market for, or the value of, the plaintiffs' copyrighted works.

A closely divided Supreme Court held that Sony was not a contributory infringer for two reasons. First, the private home videotaping of some programs is authorized. Second, the copyright law exempts certain unauthorized copying under the fair use doctrine.

The Court, however, had difficulty in deciding the case. This difficulty is demonstrated by the 5-4 decision, the carry-over of the case to a second term of the Court, and the need to hear reargument of the issues. Sony thus signifies the inadequacy of the law in response to developments of technology. Moreover, although the application of the fair use doctrine to a technological advancement resolved the Sony case, much uncertainty still remains.

One question is whether the

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134. Id.
135. Id. at 436-38; see Clark, supra note 122, 455 n.25 (defining "time-shifting" as the use of a home videotape recorder to record a broadcast program, for subsequent viewing).
138. Id. at 444.
139. Id. at 454-55.
140. Leete, supra note 23, at 574.
141. Id.
142. See Fisher, Reconstructing the Fair Use Doctrine, 101 HARV. L. REV. 1661, 1661-95 (1988) (examining the need to formulate a better fair use doctrine). The opinions of the Supreme Court do not prescribe a rule to govern future fair use controversies. Id. at 1668. The Court notes that a fair use analysis is applicable on a case-by-case basis. Id. Therefore, a fair use analysis is inherently flexible and precludes the formulation of exact rules. Id. The Court, however, decided that lower courts should consider the four factors, mentioned in section 107, when deciding whether a use is fair. Id.

The majority of the Sony Court, focused the fair use analysis on the fourth factor listed in section 107: the impact on the potential market factor. Id. at 1669. Lower courts may have difficulty determining whether the fourth factor is violated in a particular case. Id. at 1672. A court will have to estimate the magnitude of damages caused to plaintiff's market. Id. This is difficult because a court cannot always define the market involved in the dispute. Id. at 1669-72.

Fisher believes that the fair use doctrine is filled with inherent defects. Id. at 1661-95. The market impact test is not helpful because of the difficulty in determining damages. Id. at 1672. Furthermore, the Court has not determined what constitutes commercial and noncommercial uses of protected works. Id. at 1672-74. Finally, the Court
rationale applied in *Sony* is an appropriate means to resolve cases of alleged copyright infringement that involve other technological advances.

**E. THE DAT CONTROVERSY**

The American record industry hopes to resolve the DAT controversy through negotiation, legislation, or litigation. As noted earlier, the industry is attempting to negotiate with Japanese manufacturers of DATs and also lobbying Congress to pass legislation to mandate the installation of copycode scanner chips. These efforts have not produced a solution because the National Bureau of Standards concluded that the chips were inadequate to prevent the recording of CDs onto digital tape. The Bureau found that the copycode scanner chips did not always work, distorted sound, and were easily circumvented.

Despite this setback, the record industry is still committed to finding a means to alleviate the recording threat of DAT. The industry supports placing a royalty on blank DAT tapes. In addition, the record has failed to formulate a method of determining how much copying gives rise to liability. *Id.* at 1675-78. Because of these defects, creators and users of intellectual works are uncertain of their rights. *Id.* at 1693. Most importantly, the doctrine promotes a society that is incapable of effectively resolving disputes in an orderly manner. *Id.* at 1694-95. Fisher concludes that the courts must reconstruct the fair use doctrine to resolve these deficiencies. *Id.* at 1794.

143. See Plan to Bar CD Piracy is Called Inadequate, N.Y. Times, Mar. 3, 1988, at D2 (noting the statement of Jason S. Berman, President of the Recording Industry Association of America, discussing possible resolutions to the DAT controversy).

144. See supra notes 9-12 and accompanying text (discussing the debate surrounding copycode).

145. Iversen, With Anti-Copy Chips Dead, a New DAT Battle is Brewing, ELECTRONICS, Mar. 17, 1988, at 46-48. The National Bureau of Standards, after a five month study, rejected the proposal of the record industry that requires copycode chips in DAT recorders. *Id.*

146. *Id.* at 46.


There is concern among the American record industry that Sony will not protect CBS Records from DAT. *Id.* at 49. Walter Yetnikoff, head of CBS Records, believes that Sony will seek a common solution to the DAT problem. *Id.* Akio Morita, co-founder of Sony, suggests that Sony will eventually introduce DAT to the American market at the proper moment. *Id.*

148. Iversen, supra note 145, at 48.
industry proposes a system known as "unicopy" that prevents a DAT recorder from making more than one copy of a prerecorded source.\textsuperscript{149}

The industry vows to sue manufacturers, vendors, and users of DATs if they are introduced into the American market before a solution is reached.\textsuperscript{150} This strategy is in response to the failure of the movie studios to sue Sony before the importation of the first videotape recorders into the United States.\textsuperscript{151} Because the videotape recorder had become a staple article of commerce, the movie studios could not persuade the Court in \textit{Sony} to restrict home videotaping.\textsuperscript{163}

\section{F. The Fair Use Doctrine and DAT}

DAT does not raise a new or different home sound recording issue.\textsuperscript{153} DAT recorders essentially do not function differently from other recorders, because their principal use is for playback and for home sound taping.\textsuperscript{154} Litigation concerning the legality of DAT sound recording therefore evolves around the issue of whether home sound recording is exempt from copyright liability under the fair use doctrine.\textsuperscript{155}

The Court in \textit{Sony} specifically noted the importance of section 107(4) of the 1976 Act, which provides that fair use can limit exclusive rights.\textsuperscript{156} A fair use analysis, as applied to home sound recording, focuses on whether the act of home sound recording possesses a potential

\textsuperscript{149} \textit{Id.}

\textsuperscript{150} \textit{See id.} at 46 (noting statements of Jason S. Berman, President of the Recording Industry of America, concerning possible litigation over the DAT controversy).

\textsuperscript{151} \textit{See J. LARDNER, supra note 7, at 17-32 (explaining the concerns of the attorneys for the movie studios in \textit{Sony}).} The attorneys agreed that the studios had to sue Sony as soon as possible because a few thousand videotape recorders were already sold in the United States. \textit{Id.} at 20. The attorneys feared that they could not win the lawsuit if videotape recorders became too plentiful because courts would deem the videotape recorder a staple article of commerce and, would not restrict home videotaping. \textit{Id.}

\textsuperscript{152} \textit{See id.} at 258-70 (discussing the decision in \textit{Sony}). Lardner writes that the majority of the Court viewed the videotape recorder as a staple article of commerce. \textit{Id.} at 264. Furthermore, Lardner concludes that Justice O'Connor's statements during reargument suggest that the Court could "have decided the case on the staple article of commerce question alone." \textit{Id.} at 265.

\textsuperscript{153} \textit{See Hearings on H.R. 1384, supra note 9, at 92 (statement of Charles D. Ferris) (comparing the home sound recording issue to the DAT controversy).}

\textsuperscript{154} \textit{Id.} at 98.

\textsuperscript{155} \textit{See Hearings on S. 506, supra note 9, at 29-30 (statement of Charles D. Ferris) (stating that the controversy surrounding DAT is really a home sound recording issue); see also supra notes 120-21 and accompanying text (explaining that the fair use doctrine is applicable because home sound recording is not exempt under the 1976 Act).}

effect on the market or the value of prerecorded tapes and records.\textsuperscript{157} This analysis involves the rationale of the Court that section 107(4) creates a presumption of harm to the copyright owner when the infringing use is for commercial purposes.\textsuperscript{158} Conversely, when the infringement is for noncommercial use, the Court requires the owner to show proof of present harm or some meaningful likelihood of future harm.\textsuperscript{159}

The application of section 107(4) to DAT sound recording results in divergent sentiments from two interest groups. The first group, the Recording Industry Association of America (RIAA),\textsuperscript{160} assumes a protectionist attitude toward copyright. The RIAA asserts that audio copyright infringement causes, and will continue to create, severe economic hardship for the sound recording industry.\textsuperscript{161} The RIAA contends that home taping significantly displaces the revenues of the record industry because people are taping, rather than buying, prerecorded music.\textsuperscript{162} Moreover, the RIAA argues that the principal impact of DAT technology will inevitably further reduce sales of prerecorded products.\textsuperscript{163}

The second interest group, the Home Recording Rights Coalition (HRRC),\textsuperscript{164} opposes the RIAA position. The HRRC believes that "consumers have, and deserve, the right to purchase new consumer home recorders and to tape at home for personal use."\textsuperscript{165} The HRRC rejects the economic hardship argument and emphasizes that the recording industry is more profitable than ever, and that record companies are experiencing profits superior to any ever attained.\textsuperscript{166} According to the HRRC, this resurgence is possibly related to home taping.\textsuperscript{167}

Finally, the HRRC asserts that home taping of prerecorded materials is a noncommercial private use. This use is described as making

\textsuperscript{159} Id.
\textsuperscript{160} Hearings at H.R. 1384, supra note 9, at 33 (statement of Jason S. Berman) (defining the RIAA as including companies that produce and market about 90% of the prerecorded music sold in the United States).
\textsuperscript{161} Id. at 33-49; see supra notes 107-21 and accompanying text (noting the history concerning the controversy of home taping).
\textsuperscript{162} Hearings at H.R. 1384, supra note 9, at 33-49.
\textsuperscript{163} Id. at 46.
\textsuperscript{164} See id. at 89 n.1 (defining the HRRC as including companies that manufacture, sell, and distribute audio cassette recorders and audio tapes, and related equipment). Membership also includes trade associations and consumer groups. Id.
\textsuperscript{165} Id. at 91.
\textsuperscript{166} Id. at 92.
\textsuperscript{167} Id.
copies that are listened to in a more convenient place.\footnote{168} This practice, "place-shifting," is analogous, it is argued, to the concept of "time-shifting" put forth in \textit{Sony} and thereby legitimizes the unauthorized duplication of copyrighted materials.\footnote{169}

A resolution to the debate is not imminent. The arguments of both the RIAA and the HRRC are based on unsubstantiated allegations regarding the fair use issue of whether DAT poses a present or future harm to the recording industry. The lack of a resolution concerning DAT exemplifies the confusion pervading the present state of American copyright law. The confusion produces a system that is unable to provide the developers of new technologies definite guidelines concerning potential liability for copyright infringement. This is because, historically, American copyright law lagged behind technology.\footnote{170} A new technology, such as DAT, is therefore necessary to hasten the next revision of the copyright law. A revision is essential to clarify potential liability for copyright infringement, and to promote cooperation and participation with foreign countries in the field of international copyright.\footnote{171}

To effectuate this revision, the United States Congress must examine successful copyright systems around the world to come up with a solution to resolve the weaknesses of its own copyright law. Due to its underlying ideological rationale, one of flexibility, the Japanese copyright system represents a suitable model.\footnote{172} With its ideological foundation, Japan effectively adjusts to the rapid changes in technology.\footnote{173}

\section*{II. JAPANESE COPYRIGHT SYSTEM}

The ideological foundation of the Japanese copyright system is based

\footnote{168} \textit{Hearings on S. 506, supra} note 9, at 31 (statement of Charles D. Ferris). Ferris explained that home taping is about listening to music from wherever it is most convenient, whether from one's car stereo or from one's personal stereo. \textit{Id.}

\footnote{169} \textit{Id.}

\footnote{170} \textit{Hearings on H.R. 1384, supra} note 9, at 31 (statement of Jason S. Berman).

\footnote{171} \textit{See Comment, Domestic Barriers, supra} note 81, at 83-85 (discussing the lack of American participation in international copyright conventions).

\footnote{172} \textit{See Masaakira Katsumoto, The New Japanese Copyright Law} 121 (1975) (explaining the basic purpose behind Japanese copyright law). Japanese copyright law attempts to satisfy three demands: (1) the promotion of the arts; (2) the protection of those who serve to disseminate the works to the public, but only insofar as such protection does not conflict with protecting the rights of the author; and (3) the public interest. \textit{Id.}

\footnote{173} \textit{See id.} at 122 (noting that the main task of the Japanese copyright system is to reconcile the turmoil caused by conflicting interests in an advanced technological age). Furthermore, Japanese law is also intended to meet the requirements of contemporary cultural life. \textit{Id.}
The underlying principle of Japanese law is natural justice. Natural justice provides that the right in the work attaches at the act of personal creation. This principle is based on the rationale that the author is, in essence, a creator of a work. Consequently, the author, similar to other creators, is entitled to compensation for his or her efforts.

Unlike the Anglo-Saxon system, which focuses on the proprietary right and subordinates the personal right of the author, the Japanese system emphasizes two facets. First, the system premises much of its copyright law on the notion that the author is entitled to the fruits of his or her labor. The result attained is that authors acquire a property right in the work. This right gives the author a right to exploit his work economically. Second, the Japanese system recognizes a personal right in a work. This right acknowledges that the work possesses an intellectual and personal link with the author. This personal right permits authors to publish their works or not as they wish, when they wish, and in the form they wish. Moreover, the authors...
may defend their work against any distortion or abuse. \(^{188}\)

A. RATIONALE BEHIND THE JAPANESE COPYRIGHT LAW OF 1970

The Japanese government enacted its current copyright law in 1970. \(^{189}\) The Japanese government protects not only the copyright and personal rights of its authors, but also the author’s "neighboring rights," which are limited rights analogous to copyright. \(^{190}\) Because of this, many commentators regard the Japanese law as one of the most advanced copyright statutes in the world. \(^{191}\)

Although the Japanese copyright system is based on the European system, Japan balances the rights of the copyright owner and the reasonable demands of the public differently. The Japanese system of personal rights de-emphasizes the individualism of an author's right in a work. Instead, Japanese copyright law emphasizes the idea that works form a considerable national asset. \(^{192}\) Hence, the law, through the recognition of personal rights, attempts to further encourage and reward creativity that contributes to the development of the national culture. \(^{193}\)

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\(^{188}\) See Id.

\(^{189}\) Japanese Copyright Law, Law No. 48 of 1970, reprinted in 2 COPYRIGHT LAWS, supra note 81.

\(^{190}\) Teruo Doi, INTELLECTUAL PROPERTY LAW OF JAPAN 201 (1980) [hereinafter Doi, LAW OF JAPAN]; see also infra notes 199-224 and accompanying text (providing a general discussion on neighboring rights).

\(^{191}\) Doi, LAW OF JAPAN, supra note 190, at 201; see Teruo Doi, JAPANESE COPYRIGHT PROTECTION, 29 J. COPYRIGHT SOC'Y U.S. AM. 367, 368 (1982) [hereinafter Doi, Japanese Copyright Protection] (noting that the Japanese copyright system incorporated many facets from other copyright systems around the world).

\(^{192}\) See S. STEWART, supra note 33, at 3 (explaining that the development of culture is one of four justifications of a copyright system); see also Masakira Katsumoto, supra note 172, at 121-23 (noting that article 1 of the 1970 Copyright Law emphasizes the development of Japanese culture). Article 1 states in pertinent part that the purpose of this law is to secure the protection of the rights of authors, and to contribute to the development of culture. Id. at 121. See R. CHRISTOPHER, THE JAPANESE MIND 193-210 (1983) (noting that information is viewed as a cultural asset in Japanese society). The Japanese possess the belief that the attainment of knowledge is of paramount importance. Id. at 207. Christopher states that Japanese enthusiasm for information is comparable to no other contemporary society. Id. at 193. For example, books play a more important role in Japan than in either the United States or Europe. Id. at 193-94. Approximately 35,000 new books are published each year in Japan. Id. at 194. In per capita terms, Japanese publishers print nearly twice as many books as American publishers. Id.

\(^{193}\) Supra note 192; see S. STEWART, supra note 33, at 7-10 (noting the basis of the Anglo-Saxon system). The underlying philosophies of both the Japanese and Anglo-Saxon systems are to promote creativity. Id.
B. ARTICLE 30: THE FAIR USE DOCTRINE UNDER JAPANESE LAW

The policy of the Japanese government to foster creation and promote the national culture is achieved through emphasizing the public right to gain access to information. Accordingly, the exclusive rights granted the authors are subject to a number of limitations. These limitations are codified in the Japanese Copyright Law of 1970 as exemptions to certain uses of an author's works from copyright liability.\footnote{194}{Doi, LAW OF JAPAN, supra note 190, at 217. These limitations are provided in articles 30-50, which include chapter II, Rights of Authors, section 3, Contents of Rights, subsection 5, Limitations of Copyright. Id.}

Article 30,\footnote{195}{Japanese Copyright Law, Law No. 48 of 1970, reprinted in 2 COPYRIGHT LAWS, supra note 81, art. 30. This article exempts certain acts of reproduction for private use. Id. Article 30 provides: It shall be permissible for the user to reproduce by himself a work forming the subject matter of a copyright for the purpose of his personal use, family use or other similar uses within a limited circle, except in the case where such reproduction is made by means of automatic reproducing machines ("automatic reproducing machine" means a machine having reproducing functions and in which all or main parts of reproducing devices are automatic) placed for the public. Id.} which parallels the American copyright doctrine of fair use, illustrates the limitations placed on the monopoly rights of an author in Japan.\footnote{196}{See id. (noting the balancing in Japanese law between public access to works and a creator's right to control his or her work).} The exemption is particularly broad. Article 30 provides that one may reproduce an author's copyrighted work for the purpose of personal use at one's home or within a similarly limited circle.\footnote{197}{Id.} Under this provision, it does not matter what kind of instrument or method is used when the reproduction occurs in an individual's home.\footnote{198}{See supra note 195 (noting that the public use of an automatic reproducing machine is the only means of private copying that is prohibited).}

C. JAPAN AND NEIGHBORING RIGHTS

The integration of neighboring rights is a direct consequence of the broad nature of the fair use doctrine in Japanese copyright law.\footnote{199}{See S. STEWART, supra note 33, at 174-78 (explaining the concept of neighboring rights); see also supra note 195 (describing the Japanese fair use doctrine).} Neighboring rights provide a broader base of compensation for the exploitation of a creator's work.\footnote{200}{See MASAAKIRA KATSUMOTO, supra note 172, at 122 (noting that the 1970 Act grants the right to performers, broadcasting organizations, and record producers to receive compensation for their efforts in presenting the works of authors to the public). Neighboring Rights are covered in chapter IV of the 1970 Act, sections 1-7, articles 89-104. Id.} Adequate compensation is achieved

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\footnote{194}{Doi, LAW OF JAPAN, supra note 190, at 217. These limitations are provided in articles 30-50, which include chapter II, Rights of Authors, section 3, Contents of Rights, subsection 5, Limitations of Copyright. Id.} \footnote{195}{Japanese Copyright Law, Law No. 48 of 1970, reprinted in 2 COPYRIGHT LAWS, supra note 81, art. 30. This article exempts certain acts of reproduction for private use. Id. Article 30 provides: It shall be permissible for the user to reproduce by himself a work forming the subject matter of a copyright for the purpose of his personal use, family use or other similar uses within a limited circle, except in the case where such reproduction is made by means of automatic reproducing machines ("automatic reproducing machine" means a machine having reproducing functions and in which all or main parts of reproducing devices are automatic) placed for the public. Id.} \footnote{196}{See id. (noting the balancing in Japanese law between public access to works and a creator's right to control his or her work).} \footnote{197}{Id.} \footnote{198}{See supra note 195 (noting that the public use of an automatic reproducing machine is the only means of private copying that is prohibited).} \footnote{199}{See S. STEWART, supra note 33, at 174-78 (explaining the concept of neighboring rights); see also supra note 195 (describing the Japanese fair use doctrine).} \footnote{200}{See MASAAKIRA KATSUMOTO, supra note 172, at 122 (noting that the 1970 Act grants the right to performers, broadcasting organizations, and record producers to receive compensation for their efforts in presenting the works of authors to the public). Neighboring Rights are covered in chapter IV of the 1970 Act, sections 1-7, articles 89-104. Id.}
through granting rights that are similar to those rights protected under copyright law. Neighboring rights, however, are not as exclusive because they are usually rights applicable to derivative works. Consequently, the scope of the neighboring rights is confined to the reproduction right, the performance right, and the broadcasting right. For example, under the concept of neighboring rights, performers possess the right to receive royalties from radio and television broadcasts of sound recordings. Although the provisions of the Japanese copyright system are modeled after the Rome Convention, the Japanese rights are more extensive than those that other nations grant.

Article 89 states that:

(1) Performers shall enjoy the rights mentioned in Article 91, paragraph (1), Article 92, paragraph (1) and Article 95bis, paragraph (1) as well as the right to secondary use fees mentioned in Article 95, paragraph (1) and the right to remuneration in Article 95bis, paragraph (3).

(2) Producers of phonograms shall enjoy the right mentioned in Article 96, paragraph (1) and Article 97bis, paragraph (1) as well as the right to secondary use fees mentioned in Article 97, paragraph (1) and the right to remuneration mentioned in Article 97bis, paragraph (3).

(3) Broadcasting organizations shall enjoy the rights mentioned in Articles 98 to 100.

(4) Wire diffusion organizations shall enjoy the rights mentioned in Articles 100bis to 100quater.

(5) The enjoyment of the rights referred to in any of the preceding paragraphs shall not be subject to any formality.

(6) The rights referred to in paragraphs (1) to (4) (except the right to secondary use fees and the right to remuneration referred to in paragraphs (1) and (2)) shall be called "neighboring rights."

Japanese Copyright Law, Law No. 48 of 1970, reprinted in 2 COPYRIGHT LAWS, supra note 81, art. 89; see Doi, Japanese Copyright Protection, supra note 191, at 369 (stating that another characteristic of Japanese copyright law is that it provides a separate chapter for the protection of performers, manufacturers of phonograph records, and broadcasting organizations); see also Masaakira KatsuMoto, supra note 172, at 148-50 (noting that the 1970 Act recognizes the concept of neighboring rights); Yoshio Nomura, Japan, in S. STEWART, supra note 33, at 609-14 (same); Doi, LAW OF JAPAN, supra note 190, at 238-55 (same).

201. See S. STEWART, supra note 33, at 180 (noting the scope of neighboring rights).

202. See id. at 178 (noting that neighboring rights presuppose a pre-existing work). The concept of neighboring rights usually applies to works based on a previous work. Id. Thus, performers are granted protection only if they perform a pre-existing work. Id. Phonograms and broadcasts are nearly always based on pre-existing works and hence the neighboring rights doctrine grants them protection. Id.

203. See supra notes 199-202 and accompanying text (explaining the concept of neighboring rights).

204. See generally 2 COPYRIGHT LAWS, supra note 81 (reprinting the laws of as many as 58 countries that recognize performers' rights in sound recordings).

205. See supra note 86 (discussing performance rights).

206. See Yoshio Nomura, Japan, in S. STEWART, supra note 33, at 609 (noting that under Japanese law performers, broadcasters, and wire diffusion organizations are granted secondary rights in the uses of works); Japanese Copyright Law, Law No. 48 of 1970, reprinted in 2 COPYRIGHT LAWS, supra note 81, arts. 95, 97 (noting that the
The rights accorded under the Japanese system are predicated on the recognition of an author’s personal right and proprietary right. The acknowledgment of two separate rights provides the works of creators with protection under a proprietary right, a personal right, or both. Accordingly, the Japanese copyright system extends protection to producers and performers of sound recordings. These protections, while not incorporating personal rights, do grant proprietary rights to accommodate advances in recording technology.

1. Protection of Performers

Japanese law defines performers as those who perform literary and artistic works as well as those who perform different types of entertainment. Protection under neighboring rights extends to recording, broadcasting, and wire diffusion of performances. In addition, the secondary use of phonograms is dealt with in articles 95 and 97 of the Japanese Copyright Law of 1970. These articles define secondary use as follows:

Article 95(1) (secondary use of commercial phonograms) defines the principle of secondary use:
When broadcasting organizations and wire diffusion organizations have broadcast or diffused by wire commercial phonograms incorporating performances with the authorization of the owner of the right mentioned in Article 91, paragraph (1) (except broadcast or wire diffusion made upon receiving such broadcasts or wire diffusions), they shall pay secondary use fees to the performers whose performances (in which neighboring rights subsist) have been so broadcast or diffused by wire.

Id. art. 95(1).

Article 97(1) (secondary use of commercial phonograms) defines the principle of secondary use:
When broadcasting organizations, etc. have broadcast or diffused by wire commercial phonograms (except broadcast or wire diffusion made upon receiving such broadcasts or wire diffusions), they shall pay secondary use fees to the producers whose phonograms (which are mentioned in Article 8, item (i) or (ii) and in which neighboring rights subsist) have been so broadcast or diffused by wire.

Id. art. 97(1).

207. See Doi, LAW OF JAPAN, supra note 190, at 206-11 (stating that the Japanese copyright system provides both personal and economic rights protection). Personal rights are covered in articles 18-20 of the 1970 Act. Id. at 206. Economic rights are covered in articles 21-28 of the 1970 Act. Id. at 210-11.


209. See Doi, LAW OF JAPAN, supra note 190, at 242-43 (noting that Japanese law does not provide performers with personal rights). Tort remedies are available against defamation. Id. at 243. A performer can prove defamation if adequate distortion or unauthorized change of a performance is shown. Id.

210. Japanese Copyright Law, Law No. 48 of 1970, reprinted in 2 COPYRIGHT LAWS, supra note 81, art. 2(1)(iii-iv). The law defines performers as actors, dancers, musicians, singers, others who give a performance of work, and those who conduct or direct a performance. Id.

211. Id. arts. 91, 92, and 2(1)(ixbis) (noting that wire diffusion means wire trans-
performer's right in the recording extends to the reproduction of the recording.212

Article 91(1) provides performers with the exclusive right to make sound or visual recordings of their live performances.213 In effect, article 91(1) requires the performer's authorization before making sound or visual recordings of the performer's performance.214 The article includes the recording of live performances, as well as the recording of performances which are broadcasted or transmitted to the public.215 Accordingly, reproduction of sound recordings that are made without authorization from the artist, as well as reproduction for a purpose inconsistent with the performer's authorization, infringes upon the performer's rights under Japanese law.216

2. Protection of Record Producers

Record producers include those who first record and market a recording.217 Under article 91(1), a record producer may reproduce recordings with the authorization of the performer as long as the reproduction is within the scope of the authorization.218 Although this

mission intended for public reception). To promote broadcasting activities and, at the same time, protect the interests of performers, Japanese copyright law regulates the relationship between performers and broadcasting organizations. Doi, LAW OF JAPAN, supra note 190, at 243. This system of interest balancing is incorporated in article 93, article 94, and article 95. Japanese Copyright Law, Law No. 48 of 1970, reprinted in 2 COPYRIGHT LAWS, supra note 81, arts. 93-95. Article 93 permits a broadcasting organization to make recordings of a performer's authorized performance for broadcasting purposes. Id. art. 93(1). Article 94 allows the broadcasters to broadcast the recordings alluded to in article 93. Id. art. 94(1). Finally, through mandating the payment of royalties for those recordings broadcasted in accordance with article 94, article 95 protects the interests of performers. Id. art. 95(1). Each provision requires the broadcasting organization to obtain the performer's authorization before conveying a performer's work to the public. Id. In addition, under certain circumstances, the broadcasting organization must pay a reasonable amount of compensation to the performer and the producer of records. Id. arts. 95(1)-97(1).

213. Id.
214. Id.
215. Id.
216. See Doi, LAW OF JAPAN, supra note 190, at 241-42 (noting cases that held that copyright protection extends to the reproduction of sound recordings); see also Hamasaka v. Ishiyama Kaden K.K., Tokkyo To Kigyo Jan. 1979, 64 (Tokyo Dist. Ct., Nov. 8, 1978), cited in Doi, LAW OF JAPAN, supra note 190, at 241-42 (holding the defendant guilty of copyright infringement when defendant made and sold cassette tapes that copied a cassette tape of plaintiffs' performance).
218. Id. arts. 96, 97.
reproduction is not deemed a work of authorship, copyright law, through neighboring rights, grants the reproduced recording protection. The granting of this right is predicated upon the recognition of the creative element in the recording of sound.

The producer's exclusive right to reproduce recordings extends to the right to broadcast or to a public performance. This right, however, only entitles the producers to receive payment for the secondary use of the recordings. Moreover, only those broadcasting organizations and wire diffusion organizations that principally broadcast music must pay the royalties.

D. THE JAPANESE ACCEPTANCE OF DAT

Although the scope of protection and subject matter accorded under the Japanese copyright system is extensive, the Japanese Copyright Law of 1970 does not explicitly exempt home sound recording of copyrighted works from copyright liability. Instead, Japanese law generally exempts home reproduction of copyrighted works under article 30. Despite the lack of an exemption, the introduction of DAT into Japan does not foster much debate regarding home sound recording.
This is because the Japanese system maintains an equitable balance between the owners of copyrighted works and public access to works.DAT does not pose a significant threat because Japanese law provides owners of a wide variety of works with adequate compensation.

CONCLUSION

The introduction of the DAT illustrates the inherent defects of the American copyright system. The individuals traditionally granted copyright protection use the author's personal rights as an argument to extend the author's proprietary rights. This argument, however, is inconsistent with the history of copyright and engenders a very rigid copyright system. The realization of both a proprietary right and a personal right resolves this conflict. The realization allows broader copyright protection that extends to performances of sound recordings. Moreover, it enables the United States to join the Rome Convention and, in turn, provides domestic recording companies and artists with increased economic benefits. Finally, such an approach provides the American copyright system with needed flexibility.

Although the ideological foundation of the American copyright system differs from the Japanese system, the United States can still adopt the flexibility of Japanese copyright law. Such an adoption is possible because both systems profess a philosophy that the function of copyright is to benefit society through the promotion of creativity. Congress therefore should finally recognize that two rights, a personal right and a proprietary right, merit equal protection under American copyright law. This acknowledgement will expand the scope of copyright protection because it provides the creator of a work protection under either or both a proprietary right and a personal right. With the recognition of two distinct rights, American law is permitted to grant copyright protection to those works of creators that do not possess elements of personal right. The American copyright system thus adopts a more flexible...

and Publishers adopted the argument of the American music industry that record sale revenues have decreased yearly because of widespread home copying. Id. The belief is that the Japanese record industry will collapse without the introduction of a system for compensating the record companies for home taping. Id. The Electronics Industries Association of Japan contends that the current prosperity of the music industry is owed to past developments of higher-quality audio equipment. Id. Finally, European electronics makers are attempting to restrain possible Japanese attempts to market worldwide DATs without copy-guards. Id.

229. See supra note 192 and accompanying text (explaining the underlying philosophy of the Japanese copyright system).

230. See supra notes 199-224 and accompanying text (noting the employment of the concept of neighboring rights).
scheme under which it grants protection to works. Creative works such as performances would become integrated within the scope of copyright protection and provide other individuals, not only authors, with a method of compensation for their efforts. Consequently, the fiction that copyright protection is accorded only to the author of an original work is destroyed.

A system recognizing these rights could avoid the upheaval surrounding DAT. An extension of protection would offset the loss of potential revenue from such an advance in recording technology. In this way, a balance is achieved between the concept of copyright and technology. In the end, society benefits from the wonders of uninhibited creativity and innovation.