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Satellite/Dish Antenna Technology: A Copyright Owner's Dilemma

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Satellite/Dish Antenna Technology: A Copyright Owner’s Dilemma

In 1976, Congress completely revised the 1909 Copyright Act, primarily due to technological advancements which antiquated the prior law. Due to subsequent technological advancements, however, the 1976 Copyright Act is no longer responsive to current needs. Privately-owned dish antennae utilized in conjunction with communication satellites exemplify technology not covered by the existing legislation. Policy considerations suggest that the Act should be amended to protect copyrighted works transmitted via satellite and received through privately-owned dish antennae.

This Note will examine dish antenna technology in light of the 1976 Copyright Act and the policy considerations behind the revised copyright legislation. The first section will review the historic development of cable television, subscription television (STV), multipoint distribution systems (MDS) and satellite technology. Included in this discussion will be an overview of the evolution of distribution chains that provide the public with programming from these communications media. The historical survey is followed by a summary of the exclusive rights and protection specifically granted to creative artists under the 1976 Copyright Act. Next, it will be argued that current copyright legislation does not grant protection to copyrighted works communicated by satellite technology and received by privately-owned dish antennae for private use. Protection given to similar technologies under the Federal Communications Act will then be examined and compared with protection given under the Copyright Act. The Note then examines the value of the contributions of the copyright owner and the members of the distribution chain in light of the underlying policies of the Copyright Act, the analogous case law and the practical implications of a contrary result. This Note concludes with alternative solutions which could be implemented by Congress to resolve copyright issues arising as a result of dish antenna technology.

HISTORY OF SATELLITE TECHNOLOGY

The Devices

The first commercial community antenna system was constructed in 1950 for the express purpose of bringing television network programming to remote

2. One example of advancing technology presenting copyright questions not yet resolved under the 1976 Copyright Act involves the Sony "Betamax" videocassette recorder. See infra text accompanying notes 164-82. Other examples of copyright problems created by the new technologies which are not addressed by the 1976 Copyright Act will be discussed herein.
communities unable to receive any broadcast television signals. The success of this system led to the construction of similar systems and ultimately to the advent of cable television. Those marketing the cable system were also able to offer subscribers television programming via microwave relay from independent television stations in distant cities whose signals could not otherwise be received. Increasing numbers of cable subscribers, and recognition of potential economic rewards from cable television, eventually spurred the development and sale of additional forms of signal transmission. The first of these, subscription television (STV), began broadcasting in 1977. By "scrambling" their over-the-air transmissions, STV operators are able to provide a single channel of programming to their subscribers who, for a fee, "lease" decoders that unscramble the signal. Multipoint distribution service (MDS), another new form of broadcast technology, transmits its signals on a microwave frequency. Like STV, MDS also requires the viewer to lease a special receiver in order to receive an unscrambled signal. Unlike STV, MDS currently provides subscribers with as many as four channels of programming.

One of the most advanced methods of television communications is dish antenna/satellite technology. This system enables the viewer to receive signals
coming from distances of up to one-third of the earth's surface without additional equipment or expense arising from the increased distance of the source of the transmission, by aiming a fifteen-foot wide "dish" antenna directly at the transmitting satellite. Home Box Office was the first distribution medium to transmit signals via this new communications medium. With future capability to obtain access to data processing equipment, meter reading, alarm systems, and any other service which has communication capacity, the potential for satellite technology seems infinite.

The Distribution Chain

One of the most popular uses of satellite technology is the transmission of programs not otherwise available on commercial or public television, such as recently released movies, music television, all news or sports channels, and congressional hearings. Producers of movies, sporting events, and other original programming sell their "product" to companies such as Home Box Office, Showtime, and Cinemax. These companies, or distributors, then lease a "transponder" from the satellite owner. The distributors charge local cable, MDS, and STV franchisees a percentage of their profits for the right to receive and retransmit the distributor's programming. These local franchises provide individual subscribers with equipment that can be used to convert the satellite transmissions into signals capable of being viewed on ordinary television sets.

Until recently, the equipment used to receive satellite transmissions was owned solely by the franchisees, principally due to the cost and complexity of the equipment. By 1979, however, the costs of owning a dish antenna

13. See generally Technology, supra note 8, at 806-11. While MDS is able to receive signals within a 25-30 mile radius, and STV, 100 miles, cable is limited to neighboring areas "connected" to the main antenna by coaxial cable. Id. at 806, n.143.
15. See infra text accompanying note 24.
16. Technology, supra note 8, at 807 n.147.
17. ARTHUR L. SINGER, JR., ISSUES FOR STUDY IN CABLE COMMUNICATION 7, 8 (1970).
18. Technology, supra note 8, at 807 n.147.
25. In 1979, for example, Nickelodeon, a distribution medium owned by Warner Communications, Inc., earned ten cents per month for each of the franchisee's subscribers who received Nickelodeon's programming. Comparable fees were charged by UA/Columbia Cablevision, another program distributor. Bernstein, Television's Expanding World, 99 FORTUNE, July 2, 1979, at 64.
26. Technology, supra note 8, at 807 n.147.
27. See generally Comment, supra note 6, at 592.
28. Id. at 589.
had declined dramatically and the equipment had become readily obtainable. A private individual owning a dish antenna can receive a distribution medium's relay signals, avoiding the need to lease equipment from franchisees. The continued popularity of satellite communications systems suggests that continued refinements and reduced costs of dish antennae will eventually result in increased ownership for private use.

EVOLUTION OF THE COPYRIGHT ACT

The Exclusive Rights

Copyright protection was first granted to provide those who possessed creative abilities with a stimulus to continue to pursue their activities for the public good. The copyright clause of the Constitution of the United States specifically gave 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." Congress employed these constitutional powers in the enactment of the Revised Copyrights Act by providing the creative artist or his assignee with a limited monopoly over certain "uses" of his creative work. The 1976 Copyright Act also obligates the "user" of the copyrighted work to obtain, in certain cases, the authorization of the "owner" of the creative work prior to its use. By granting the copyright owner the right to "control" his work, Congress sought to encourage artistic expression.

The revised Act identifies various types of works entitled to copyright protection. Section 102 of the Act provides copyright protection for "original works of authorship fixed in any tangible medium of expression." Motion pictures and other audiovisual materials are among the specific works qualifying for copyright protection under this section. For purposes of the Act,

29. The early, large "earth stations," which included a dish antenna, amplifiers, a modulator, as well as a system to retransmit satellite signals, was priced in the upper six figure range. By 1979, however, an individually-owned dish antenna cost $36,000 and could be obtained through, among other sources, the Neiman-Marcus Christmas catalog. In 1980, the Canadian government started an experiment involving the installation of miniature dish antennae in remote areas of the country for $3,500. One American satellite operator proposal called for the future sale of a two-foot dish antenna at a recommended price of $200. Perle, supra note 14, at 326-27.

30. Television use has continued to expand since its inception and, with the advent of the new technologies, consumers have continued to demand increased forms of entertainment as evidenced by the growth of cable and videogames.

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

32. U.S. CONST. art. 1, § 8, cl. 8.


34. This monopoly is limited to a specific duration. See generally 17 U.S.C. § 302-04 (1976).


38. Id.
audiovisual works include works consisting of sequential images shown with the use of a machine or device together with accompanying sounds in which a creative work is embodied.39

The copyright owner whose works are protected under section 102 is granted the exclusive right to do and to authorize under section 106, any of the following: to reproduce the copyrighted work, to prepare derivative works, to distribute copies to the public, to perform the copyrighted work publicly, and to display the work publicly.40 The new technologies "facilitate the exercise of these five basic rights bestowed upon the copyright proprietor."41 The Supreme Court, however, has noted that "[t]he Copyright Act does not give a copyright holder control over all uses of his copyrighted work."42 Instead, only a violation of those rights specifically enumerated in the Act may constitute infringement, "[i]f a person, without authorization from the copyright holder, puts a copyrighted work to use within the scope of one of these exclusive rights."43 Although the use of a dish antenna by an individual for his private use increases access to a broad range of copyrighted works, the reception of the work via private dish antenna is not violative of the copyright owner's exclusive rights as defined by section 106.44

Application of Exclusive Rights to the Dish Antenna Problem

The exclusive rights enumerated in section 106 of the 1976 Copyright Act are not applicable to dish antenna reception and, consequently, use of this new satellite technology by an individual in the privacy of his own home would not constitute infringement.45 Section 106(1) grants the copyright owner the right to make copies or phonorecords of the copyrighted work.46 The House Report defined reproduction of a work as "a fixation in tangible form [which] must be 'sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.'"47 A showing of images on a screen or tube, therefore, would not constitute a reproduction and, hence, would not violate subsection (1).48 Im-

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41. Josiah, Motion Pictures and Other Audiovisual Works, CURRENT DEVE. COPYRIGHT L. 201 (1982).
43. Id. at 394-95.
44. See supra text accompanying notes 36-44.
45. Id.
48. S. REP. No. 983, 93d Cong., 2d Sess. 103 (1974). It should be noted, however, that recent cases have held that visual images displayed on computer game screens are copyrightable and that "copies" could be made therefrom. See Atari, Inc. v. North Am. Phillips Consumer Elec. Corp., 672 F.2d 607 (7th Cir. 1982); Stern Elec., Inc. v. Kaufman, 669 F.2d 832 (2d Cir. 1982); Midway Mfg. Co. v. Arctic Int'l, Inc., 547 F. Supp. 999 (N.D. Ill; E.D. 1982). However,
ages received via dish antennae are not fixed in a tangible medium and last only for the duration of the satellite signal's transmission.

Section 106(2), which gives the copyright owner the right to make derivative works, is also not infringed when a copyrighted work is communicated by a dish antenna. A derivative work is defined as "work based upon one or more pre-existing works, such as a translation, musical arrangement, . . . or any other form in which a work may be recast, transformed, or adapted." The House Report states that a derivative work "must incorporate a portion of the copyrighted work in some form." Melville Nimmer in his treatise further refines these definitions, suggesting that a derivative work "involves [making] changes in the preexisting material [of the copyrighted work]." These explications suggest that reception of the broadcast signal of a copyrighted work by a dish antenna would not constitute a derivative work since only the manner in which the work is received and not the copyrighted work or the original transmission of the broadcast signals is changed. Consequently, individual dish antenna reception of satellite transmissions does not violate section 106(2).

Furthermore, dish antenna reception of a copyrighted work does not impinge upon the copyright owner's exclusive right to distribute copies, as defined by section 106(3). As has been discussed, however, dish antenna receptions of a copyrighted work do not constitute "copies" since the work must be fixed in a "tangible medium of expression." Dish antenna reception is transitory and does not constitute a copy as defined.

Finally, dish antenna reception does not violate the copyright owner's exclusive rights granted under sections 106(4) and (5). Both section 106(4) (granting the copyright owner the exclusive right to perform the work publicly), and section 106(5) (granting the copyright owner the exclusive right to display the work publicly), do not "afford the owner protection with respect to private performances [or displays] by others." Performance or display of a work in public occurs when "a substantial number of persons outside of a normal circle of family and its social acquaintances is gathered." Therefore, regardless of the distribution media used to transmit the broadcast signal, the insertion

the sounds and images appearing on television screens via dish antennae are distinguishable from images and sounds appearing on videogame screens, since the images appearing on the latter are "a finite but enormous number of [repeating] sequences." Midway, 547 F. Supp. at 1002. On the other hand, images and sounds received via dish antennae are neither finite nor repetitive and, as a result, are not copyrightable under section 106(1).

52. 1 M. Nimmer, Nimmer on Copyright § 3.02, at 3-4 (1978).
of the word "publicly" in sections 106(4) and (5) precludes at-home television viewing with one's family and friends from being violative of the Copyright Act. 58

Section 106 of the revised Copyright Act grants the copyright owner the exclusive right to use and to authorize the use of his work in five specific ways. 59 When one or more of those rights are exploited by someone other than the copyright owner, without his consent, infringement results. However, when the copyrighted work is used in other ways not specified within the Copyright Act, no violation has occurred. In the present case, dish antenna reception of copyrighted works does not fall within the terms of the revised Act. Therefore, in viewing copyrighted programming transmitted via satellite, private dish antenna owners are not engaging in infringing activity under the 1976 Copyright Act.

Fortnightly Corp. v. United Artists Television, Inc. and Section 111

Prior to the 1976 revision of the Act, copyrighted works were being retransmitted for profit by cable companies without authorization from or compensation to copyright owners. 60 Commercial television broadcasters became alarmed with the success of cable, since they were required to pay the copyright owner for the use of the copyrighted works, while cable systems simply picked-up and retransmitted the broadcasters' signals for profit without paying for this privilege. 61 The advantages of cable, particularly its ability to provide additional programming from independent commercial television stations in distant cities, also tended to draw viewers from local television broadcasters, causing declining revenues as well as the eventual demise of several local broadcast stations. 62

Copyright owners voiced their grievances against commercial cable systems in 1968, in Fortnightly Corp. v. United Artists Television, Inc. 63 The Fortnightly Corporation, an owner and operator of two cable systems, picked up and retransmitted motion pictures owned by United Artists. United Artists, in its complaint, alleged that Fortnightly had publicly performed their copyrighted works and thus had violated one of the exclusive rights delineated

58. See supra note 56.
62. See Carter Mountain Transmission Corp. v. F.C.C., 321 F.2d 359, 365 (D.C. Cir. 1963). It may be argued that private financial gain and protection for copyright owners and those who exhibit copyrighted works should not be guaranteed under the free enterprise system. This argument, however, ignores the tremendous disincentives that would result from depriving the copyright owner of financial remuneration for his creativity, as well as from depriving broadcasters of their ability to make a profit. See infra text accompanying notes 103-33.
The Court held that the retransmission of the broadcast by commercial cable systems was not a performance of the copyrighted work. The Court’s analysis centered on the functional distinction between broadcasters and the viewing public. As articulated by the Court, viewers were able to receive electronic signals transmitted by broadcasters and then merely converted these signals by providing the necessary equipment, a television set. Broadcasters, on the other hand, played an active role in selecting, procuring, and communicating programs to the public, and thus “publicly performed” the work. The Court stated that the cable system’s function “fell on the viewer’s side of the line,” in light of the cable system’s inability to select, affect, or “propagate” programming. In addition, the Court concluded that cable companies merely supplied the equipment necessary to receive the signal and did not perform the copyrighted work.

As a result of the advancements made in cable technology and the inequities resulting from the *Fortnightly* decision, Congress expanded copyright protection beyond the exclusive rights in section 106 by enacting section 111 as part of the 1976 Copyright Act. In section 111, however, Congress disregarded the *Fortnightly* Court’s rationale for its decision, since the retransmission of the copyrighted work still does not constitute either a reproduction, derivative work, distribution, public performance, or public display. Instead, section 111 simply requires that the copyright owner be compensated when his work is retransmitted by the cable system. Consequently, although copyright protection for cable retransmissions remains unavailable under the exclusive rights section of the Act, the copyright owner has additional rights beyond those enumerated in section 106. Section 111 was designed to strike a balance between the economic interests of the copyright owner and the development of the cable industry. By providing that copyright owners be compensated for their works, section 111 increases the financial stability of the cable in-

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64. *Id.* at 400-01.
65. *Id.* at 397-99.
66. *Id.* at 398.
67. *Id.* at 400.
68. *Id.* at 399.
69. *Id.* at 400.
70. *Id.* at 399.
71. The rapid growth and profitability of cable systems led Congress to enact section 111 of the 1976 Copyright Act. Prior to passage of the revised Act, cable systems, unlike commercial television broadcasters, were able to retransmit broadcast signals at a profit, without compensating the copyright owner for the use of his work. House Report, *supra* note 47, at 88-89; Cong. & Ad. News, *supra* note 47, at 5703.
72. *Id.*
dustry by encouraging continued creativity. In order to guarantee financial remuneration for the copyright owner, section 111 provides that cable television systems pay a "compulsory license" fee based on a stated percentage of their profits to the Copyright Royalty Tribunal, which is then responsible for compensating the copyright owners whose works were used by the cable systems. According to the House Report, the premise behind the fee requirements is that "cable systems are commercial enterprises whose basic retransmission operations are based on the carriage of copyrighted program material and that copyright royalties should be paid by cable operators to the creators of such programs." Consequently, those who commercially retransmit the copyrighted work without meeting the requirements of section 111 infringe upon the copyright, while those who receive satellite transmissions for their own, private use via dish antennae do not violate the 1976 Copyright Act.

**Protection Under the Federal Communications Act**

**STV Protection**

The Federal Communications Act of 1934 was created "to make available, so far as possible, to all people of the United States a rapid, efficient, nationwide and world-wide wire and radio communication service with adequate facilities at reasonable charges." The Act established the Federal Communications Commission (FCC), which has been responsible for regulating the telecommunications industry and affecting communications policy. In carrying out its mandate, the FCC has necessarily become adept in its dealings with continually advancing technology and, in light of these new developments, their jurisdiction has correspondingly expanded.

In drafting the revised Copyright Act, the House Committee on the Judiciary carefully worked around the various rules and regulations adopted by the Federal Communications Commission to enact legislation capable of resolving copyright questions which arise due to the new telecommunications

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78. Under section 111, however, the copyright owner does not have the ability to deny the cable system the right to retransmit the work but can only require compensation for the retransmission through the compulsory license.


82. *Id.*


The interrelationship between the copyright and the federal communications laws requires restraint to avoid overlapping legislation. Therefore, it may be argued that the Federal Communications Act, rather than the Copyright Act, should be used to combat the dish antenna problem.

Section 605 of the Federal Communications Act of 1934 is intended to protect two-way communications from unauthorized interception. Section 605 states in part:

[n]o person not being entitled thereto shall receive or assist in receiving any interstate or foreign communication . . . [and use such communication] for his own benefit or for the benefit of another not entitled thereto.

... [T]his section shall not apply to the receiving . . . of any radio communication [which is] broadcast . . . for the use of the general public . . . .

In *National Subscription Television v. S & H TV*, the Ninth Circuit held that S & H TV violated section 605 by selling decoders used to descramble the plaintiff's STV broadcast signals. The court's analysis centered on the fact that the plaintiff's broadcast signal was only for the use of paying subscribers and not for the general public. Consequently, scrambled STV signals are protected by section 605, and those who receive or assist third parties in receiving communications to which they are not entitled violate the Federal Communications Act.

In its decision, the Ninth Circuit addressed the implications of a contrary result. According to the court, the ability of an individual to receive the STV descrambled signal without paying for this service would reduce the plaintiff's income, which would in turn discourage capital investment in and development of STV systems and prevent present systems from obtaining premium creative works. The court perceived the decoders as a threat to the development of STV, ultimately leading to the demise of the service. In light of the increased public accessibility to more diverse programming and the affordability and popularity of the service, this presented an unattractive alternative.

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89. 47 U.S.C. 605 (1934).
This rationale, however, was ignored in Orth-O-Vision Inc. v. Home Box Office, Inc.,99 where the New York district court held programming transmitted via MDS was not protected under section 605. According to the Orth-O-Vision court, "broadcasting," as defined by section 153(a)(b) and (o) of the Federal Communications Act, was the communication of a work intended to be received by the general public. To receive the widest possible dissemination of programming, the court found that section 605 did not prohibit the unauthorized reception of the distribution medium's transmissions, despite the threatened destruction of the industry.

Following the National Subscription Television and Orth-O-Vision cases, similar actions were instituted in other circuits.100 The Orth-O-Vision holding continues to be criticized and has never been followed.101 As a result of the Orth-O-Vision decision, most states have enacted legislation which outlaws the use of decoders to "steal" service provided by STV systems.102

Federal Communications Act Protection or Copyright Protection For Dish Antennae Reception

Like the decoder problem in National Subscription Television and Orth-O-Vision, the potential economic injury resulting from the sale of dish antennae to individual users could greatly affect the development of the fledgling telecommunications industry. The subscribers' fees are the only means presently available to maintain the financial stability of both the franchisees and the distribution media,103 such as Home Box Office, which require capital in order to continue providing increased programming diversity. In addition, satellite operators who provide the equipment used to transmit the broadcast signals are dependent upon the distribution media for financial support. Protection is needed to ensure the continuation of these services.

The 1976 Copyright Act could also be used to resolve these problems. Section 506(a) of the revised Copyright Act states that "any person who infringes a copyright . . . for purposes of private financial gain" is guilty of criminal infringement.104 Dish antenna technology presently enables the private dish antenna owner to escape from paying a subscriber's fee to either the cable, MDS, or STV franchises for increased programming diversity ultimately being provided by the franchises, programmers, and satellite operators. The ability to circumvent payment for benefits provided by the cable industry was faced by the Court in Fortnightly Corp. v. United Artists, Inc.105 Congress responded to the decision in Fortnightly by enacting section 111 of the 1976 Copyright Act, which guarantees the copyright owner compensation for the

100. E.g., Chartwell Communications v. Westbrook, 637 F.2d 459 (6th Cir. 1980).
102. See infra text accompanying notes 194-97.
103. Ladd, supra note 77, at 250.
105. See supra text accompanying notes 63-70.
transmission of his work by cable franchises. Since the new dish antenna technology has created substantially the same situation as was confronted in *Fortnightly*, it seems logical to suggest that the copyright laws should address the analogous problem for MDS and STV licensees\(^{106}\) as well as for the new dish antenna technology.\(^{107}\)

By amending the Copyright Act to resolve the problems created by MDS, STV, and privately-owned dish antennae, Congress will be able to provide the courts with a consistent basis for resolving similar issues in the future, as well as provide copyright owners with protection that will be recognized around the world. In light of the inconsistent holdings in *Orth-O-Vision*\(^{108}\) and *National Subscription Television*,\(^{109}\) the courts need guidelines to resolve the issues created by technological advancements. It must be realized that the federal communications laws protect only United States nationals; such protection would therefore not be available for satellite-relayed broadcasts that may be received in other countries. Protection under the Copyright Act, however, could be extended to copyright owners whose works are received in other countries, due to various international agreements and treaties honored in all but twenty countries around the world.\(^{110}\) Under these international arrangements, the same copyright protection is given to "foreign" copyright owners as that given by the reciprocating countries to their own nationals.\(^{111}\) Thus, assuming satellite piracy problems become international in scope, "national treatment" dictates that countries which provide copyright protection for their nationals, will also necessarily protect United States copyright owners.

**COPYRIGHT PROTECTION IS NECESSARY**

Under the 1976 Copyright Act, private dish antenna reception of a copyrighted work does not infringe upon the exclusive rights of the copyright owner.\(^{112}\) In keeping with the basic goals of the Copyright Act,\(^{113}\) however, copyright owners whose works are viewed with the aid of a privately-owned dish antenna should be given protection.

*Economic Incentives*

The 1976 Copyright Act limits the copyright owner's control of his work

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106. MDS and STV licensees could be treated in a manner similar to the cable systems. Section 111 could easily be amended to require MDS and STV licensees to pay a statutorily-prescribed fee to the copyright owner.
107. See infra text accompanying notes 206-09.
112. See supra text accompanying notes 45-58.
113. See supra text accompanying note 31.
Consequently, by requiring prior permission for the use of the copyrighted work, the Copyright Act enables the copyright owner to control how the work is used, as well as to extract a fee from the user in return for the right to make copies, derivative works, distributions, performances, or displays of the work. In this way, the copyright owner is provided with an economic incentive to continue producing creative works. Society also benefits from this arrangement, since the copyright owner is induced to increase public access to his work as well as to generate additional original work.

Commercial television, movie theaters, video cassette rentals and sales, and cable franchises provide the copyright owner with a medium for his work. To increase revenue, the copyrighted work will usually be licensed to more than one of these media. Thus, the copyright owner is able to increase his revenues while increasing public access to his work.

Securing a fair monetary return, however, is only a secondary motive of the Copyright Act. The primary goal of the Act is to increase public access to creative works and "private motivation [of the copyright owner] must ultimately serve the cause of promoting broad public availability of literature, music, and the other arts." The compulsory license provision in section 111 is structured so that for a specified fee, the copyright owner's authorization to use the work is implied.

Financial remuneration plays an essential role in promoting public access to creative works. Any economic injury that the copyright owner suffers from the unauthorized use would be a disincentive and could result in a decision to decrease public access to his work. The House Report on the Copyright Act acknowledged problems under the 1909 Copyright Act, wherein copyright "royalties" would not be paid by cable franchises and specifically recognized the right of the copyright owner to be paid for the use of his work by com-

114. *Fortnightly*, 392 U.S. at 393-95.
115. Prior authorization, as a means of obtaining compensation, must be distinguished from income obtained from compulsory licensing under sections 111 (cable), 115 (phonorecords), and 116 (juke-boxes) of the Copyright Act. Because of the undue burden and impracticality of requiring certain users of copyrighted works to negotiate with each copyright owner whose work is used, the Copyright Act established compulsory licensing whereby cable systems, record distributors and juke-box owners may pay a statutorily-determined amount for the use of the copyrighted work, without asking for prior authorization from the copyright owner. See, e.g., *House Report, supra* note 47, at 89; *Cong. & Ad. News, supra* note 47, at 5704. However, a compulsory license may be given only after the initial public distribution of the work was authorized by the copyright owner. Thus, the copyright owner, upon initial authorization, knowingly gives up the right of control of the work in return for a guaranteed source of income each time the work is used.
117. See Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975).
118. *Id.* In further support of this principle, at least one of the pre-revolutionary war statutes allowed one other than the copyright owner to publish a work if the copyright owner refused to do so. *Seltzer, Exemptions and Fair Use in Copyright* 10 n.39 (1978).
120. *See infra* note 132.
mercial cable systems operators. The economic rewards for the use of the copyrighted work have become an important consideration in granting protection in addition to balancing the public's right to access with the incentives necessary to stimulate creativity.

**Dish Antenna Reception and Economic Disincentives**

A private dish antenna owner is able to receive satellite transmissions of copyrighted programming without paying the franchisee, distribution medium, or copyright owner. For the franchisee, the initial problem of potential customer loss is exacerbated by the loss of its "elitist" image. In addition, the franchisee is faced with a further reduction of subscribers due to their resentment of those who, like private dish antenna owners, are able to avoid making repeated payments to the franchisee. The lost profits of the franchisee affect the profits of the distribution medium, which receives its revenues according to the number of the franchisees' subscribers. As a result of decreased profits for distributors and franchises, the copyright owner who sells his work faces a diminution of his income.

Further economic injury to the copyright owner may result after the audiovisual work has been seen by the viewer. Generally, continued exposure leads to a decreased interest in the subsequent showing or viewing of the copyrighted work. For example, when a copyrighted work is to be shown on commercial television, it is highly unlikely that, following the initial broadcast, viewers will spend money to see the work a second time (except in rare cases where the viewer's appreciation of the work leads to a second expenditure of time and money to see the work again). Because of the reduced number of potential viewers following the initial public showing of the work, alternate media forms such as movie theaters and cable television spend less to show the work than the initial distribution medium. Thus, the greater the exposure the copyrighted work receives upon the initial showing, the less alternate distribution media will be willing to spend for the opportunity to show the work again.

Dish antenna reception increases exposure of the copyrighted work; yet the copyright owner is not compensated for this increased exposure. Dish antenna reception results in further dilution of the value of the secondary "markets" for the work, where the copyright owner would otherwise be compensated.

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123. *Piracy*, supra note 122; Brief, supra note 122, at 19.
124. *Piracy*, supra note 122; Brief, supra note 122 at 18.
125. *See supra* text accompanying notes 142-45.
126. Examples of various "protected" communications systems for audiovisual works which would give the copyright owner control over his work are network television, independent (local)
Thus, copyright owners, whose works are received via dish antennae, are not only denied compensation for the initial showing of the work, but are also faced with reduced revenues for the work’s subsequent distribution.

The copyright owner who licenses his work to independent television stations is also faced with the threat of reduced income with the advent of the dish antenna.\(^{127}\) According to the *House Report*, Congress recognized the economic impact that cable had on the copyright owner, noting that the “retransmission of distant non-network programming by cable systems causes damage to the copyright owner by distributing the program in an area beyond which it has been licensed. Such retransmission adversely affects the ability of the copyright owner to exploit the work in the distant market.”\(^{128}\) The amount of income received by the copyright owner from independent stations is based on the size of the potential local audience receiving the station’s broadcast signal. Satellite technology, however, enables the viewer to receive additional programming from independent “superstations”\(^{129}\) in distant cities.\(^{130}\) As in the case of cable, the reception capability by viewers outside the licensing area makes it increasingly difficult to market a copyrighted work beyond where it was originally licensed.\(^{131}\) This could, in turn, result in the copyright owner’s decision to limit the use of his work to markets where he is assured of compensation for each performance.\(^{132}\) This decision would also result in decreased public access to the work.\(^{133}\)

### Market Readjustment and Increased Valuation

It may be argued that the advent of the new technologies would not have a negative effect on the value of the copyrighted work. Instead, copyright owners in jeopardy of losing income due to dish antenna reception will simply

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127. HOUSE REPORT, supra note 47, at 90; CONG. & AD. NEWS, supra note 47, at 5704-05.
128. *Id.*
129. Examples of “superstations” are WGN in Chicago and WTBS in Atlanta. The programs broadcast by these stations are received by various cable systems around the country and then retransmitted to cable subscribers.
130. *See supra* text accompanying note 4.
131. HOUSE REPORT, supra note 47, at 90; CONG. & AD. NEWS, supra note 47, at 5704-05.
132. The recent commercial television release of the movie *Mary Poppins* represents one example of the copyright owner’s fear of reduced income due to increased, uncompensated exposure of the work. *Mary Poppins* was first released in 1964. 29 TV GUIDE No. 47, Issue 1495 (Nov. 21, 1981), at A-7. It was not until 1981 that the film was finally released to CBS for commercial television audiences. *Id.* at A-28, A-36. The specific reason given for the refusal to release the film at an earlier date was fear of home recording. Brief for Appellee at 6 n.8, Universal Studios, Inc. v. Sony Corp. of Am., 480 F. Supp. 429 (C.D. Cal. 1979), rev’d, 659 F.2d 963 (9th Cir. 1981) [hereinafter cited as Brief] (citing Brief for Appellant at 69 n.76, Universal Studios, Inc. v. Sony Corp. of Am., 480 F. Supp. 429 (C.D. Cal. 1979), rev’d, 659 F.2d 963 (9th Cir. 1981)).
133. *See supra* text accompanying note 118.
demand higher rates from the distribution medium responsible for the initial showing of the work. In this way, copyright owners would be fairly compensated even though they did not receive revenues for subsequent broadcasts of their works.

This argument, however, ignores economic risk already inherent in the valuation of the copyrighted work. Unless the copyright owner has established a consistent "track record," it is unlikely that a copyright owner will be able to demand higher prices for potential lost revenues from fear of secondary market dilution, particularly in light of the speculative impact the new technologies would have on the work and because of the availability of alternate programming. In addition, a windfall could result to either the producer or the distribution medium due to the uncertainty of audience acceptance. For example, if the work is more successful than initially anticipated, the copyright owner would be deprived of the full value of his work, thus establishing a disincentive for continued creativity. Since technology is continuing to outpace the law, viewers will be increasingly unable to obtain "high-quality" work. On the other hand, where the work is not as successful as originally expected, the purchaser might be deterred from future investment, thus leading to a decrease in program availability and diversity.

Another argument suggests that the market for syndicated works has actually increased in value with the advent of satellite technology, cable, MDS, and STV. In 1976, it was estimated that one-fourth of all programming by cable companies and broadcasters consisted of work being syndicated from the networks. As programming continued to expand, it is argued, the competition for syndication rights would increase between broadcasters and cable operators, thus making syndication rights more and more valuable, and thereby promoting continued creativity if copyright owners share in the increasing values.

This argument, however, ignores the financial disincentive resulting from the inability of the copyright owner to exploit his work in more than one outlet. Although an increased number of independent stations will be looking for unexploited new works, the copyright owner's compensation will not reflect the true value of the work. In addition, the ability of the new technologies

134. Unlike the risk taken under this system, commercial television broadcasters, for example, reward the copyright owners according to the market share based on various ratings surveys. Copyright owners whose works are also communicated via cable are compensated according to a specified percentage of the cable system's profits. See 17 U.S.C. § 111 (1976). Thus, the uncertainty created under a theory of marketplace "readjustment" is alleviated for works communicated via cable or commercial television and society's response to the copyrighted work is accurately reflected in its valuation.

135. See supra text accompanying notes 122-33.

136. Interview with Jack Valenti, President of the Motion Picture Association of America, reprinted in A Blank Tape for Hollywood, NEWSWEEK, Jan. 30, 1984, at 58.


138. See HOUSE REPORT, supra note 47, at 90; CONG. & AD. NEWS, supra note 47, at 5705.

139. Note, supra note 137, at 623.
to receive signals from independent stations in distant cities will substantially reduce the copyright owner's ability to license the work to other markets.\textsuperscript{146} It is therefore uncertain whether the copyright owner would actually benefit from the increased value of syndication rights.

It could also be argued that the initial viewing does not reduce the number of subsequent viewers, but instead, leads to enhanced sales of the work. According to this argument, increased exposure from dish antenna reception, like publicity, will cause more people to want to see the work. Proponents of such a position suggest that there is no correlation between home viewing and theater attendance, since the two provide their audiences with completely different environments in which to view the copyrighted work.\textsuperscript{144} Both arguments, however, ignore basic economic principles of diminishing marginal utility.\textsuperscript{142} Within a limited time period, as the consumer continues to use a good or service, a point is reached where the amount of satisfaction from each additional use declines.\textsuperscript{143} The law of diminishing returns applies to virtually all consumer goods and services,\textsuperscript{144} including transmissions of copyrighted works. Therefore, the initial showing(s) of the work will provide the viewer with more satisfaction than subsequent showings, thus leading to reduced willingness on the part of viewers and the distribution media to pay for the right to show or see the work again in secondary markets.

If the various distribution media, copyright owners, and franchisees are to continue to provide public access to creative works, they must receive financial benefits for their efforts.\textsuperscript{145} Otherwise, due to an insufficient return on investment, businesses will be unable to attract the capital necessary for continued program diversity. Estimates of privately-owned dish antennae presently in operation fall between 150,000\textsuperscript{146} and 384,000.\textsuperscript{147} Lost revenue is substantial\textsuperscript{148} and growing.\textsuperscript{149} As a result, according to United States Represen-

\textsuperscript{140} See supra text accompanying notes 124-25.
\textsuperscript{141} Over the past twenty years, movie theater ticket sales have remained at a constant level, despite the increase in home entertainment technologies. \textit{See Variety}, Dec. 2, 1981, at 5, col. 2.
\textsuperscript{143} Id.
\textsuperscript{144} Id.
\textsuperscript{145} \textit{See generally} Chartwell Communications v. Westbrook, 637 F.2d 459 (6th Cir. 1980).
\textsuperscript{146} Telephone interview with David Chance, Commercial Markets Manager of Scientific Atlanta (Nov. 11, 1983). Affidavit on file with the INDIANA LAW JOURNAL.
\textsuperscript{147} Survey conducted in 1983 by the Society for Private and Commercial Earthstations (SPACE). The actual figure probably falls between 150,000 and 384,000. According to Mr. Chance, although he believes Scientific Atlanta's estimate to be low, he also believes that the survey taken by SPACE is high since (1) many of the dish antennae recently sold represent replacement sales and (2) SPACE hopes to obtain increased power and prestige with Congress as a result of a larger membership.
\textsuperscript{148} Based on Nickelodeon's figures cited supra note 25, revenues lost to the distribution medium will equal approximately $1.5 million (based on Scientific Atlantic's figure) per month. Assuming further that franchisees charge approximately $17 per month for each subscription, lost sales to the franchisees equal $2.55 million per month.
\textsuperscript{149} According to the SPACE survey, dish antennae installation for the years 1980-83 equaled 5,000; 19,000; 124,000; and 240,000. It is apparent, then, that the continued growth of dish
tative Henry A. Waxman, "unless [these] trends are reversed . . . there will be no programs left to steal." 150

Copyright Treatment of Dissimilar and Analogous Technologies

From the time of the adoption of the first American copyright law in 1790, 151 to the enactment of the 1976 Copyright Act, Congress has continued to expand copyright protection to new forms of creative expression resulting from various technological advancements. 152 The language of the current law appears to be particularly flexible with respect to the effects that unforeseen technological developments might have on copyrightable material. An example of this flexible language is found in section 102 of the 1976 Copyright Act which provides copyright protection for works fixed in a medium "now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 153 This language, however, is ambiguous with respect to solving problems relating to new technology.

Like the present law, the 1909 Copyright Act was unable to accommodate the new technologies. Although the phonograph had first been invented in 1877, 154 recordings under the 1909 Act were not copyrightable. 155 However, it later became apparent that the unauthorized manufacture and distribution of records was causing serious harm to the copyright owner and to record companies. 156 Consequently, Congress enacted the Sound Recording Amendment of 1971, giving copyright protection to creative artists whose works are embodied in sound recordings. 157

The purpose behind the Sound Recording Amendment was to prevent users other than the copyright owner from commercially exploiting the copyrighted work. 158 The amendment, however, did not prohibit individual home taping of the copyrighted work "which was a common and unrestrained practice." 159

antennae usage will lead to a further reduction in the distribution medium's franchisees' and copyright owners' profits.

151. The Copyright Act of 1790 provides protection for certain printed matter such as maps and books. S. SHEMEL & M.W. KRASLOVSKY, supra note 110, at 112.
152. HOUSE REPORT, supra note 47, at 51; CODE & CONG. AD. NEWS, supra note 47, at 5664.
154. 100 Years of Sound Reproduction, HIGH FIDELITY, January, 1977, at 92.
155. Id. at 94.
156. In 1970, prior to the Sound Recording Amendment, it was estimated that $60 million was being lost annually due to record piracy. In addition, approximately one fourth of all tapes sold were unauthorized duplications accounting for more than $100 million in lost revenues. See S. SHEMEL & M.W. KRASLOVSKY, supra note 110, at 95.
159. See H.R. 487, supra note 158, at 7; 1971 CONG. & AD. NEWS, supra note 84, at 1572.
Congress was forced to exempt from liability private, non-commercial tapings of the copyrighted work, in order to avoid turning a common but allegedly harmless practice into a crime. The decision to exempt such tapings, however, has had a major detrimental effect on the record industry due to decreased record sales160 and there has recently been a movement towards the repeal of this part of the amendment.161

The dish antenna reception of a copyrighted work, however, does not yet constitute a common and unrestrained practice. Yet, with the continuing growth of unscrambled satellite-relayed television,162 it appears that the growth of dish antenna usage may be inevitable.163 Congress still has the opportunity to exercise some form of control over private dish antenna ownership and could do so effectively, before the practice becomes common and unrestrained.

Another recently-developed technology causing problems similar to those created by dish antenna/satellite technology is the video-cassette recorder. Like private dish antenna reception, video-cassette recorder technology was not dealt with expressly in the Copyright Act revision. In Sony Corp. of Am. v. Universal City Studios, Inc.,164 the Court focused on whether unauthorized video-cassette recordings of copyrighted works for noncommercial use constituted infringement under the 1976 Copyright Act. Sony began selling video-recorders in the United States in 1965,165 but it was not until 1975 that Sony began its first, full-scale marketing campaign to increase the marketability of the product.166 In 1976, plaintiffs, realizing the potential harm to their work from increased video-cassette recorder usage, filed this suit against the defendants to enjoin further sales of Sony's video-recorders.

Although no provision in the 1976 Copyright Act specifies how video-recorders should be treated,167 the district court found that home video-recordings made from television broadcasts of copyrighted material, when used for noncommercial purposes, were "fair use"168 under the 1976 Copyright Act.169 The Ninth Circuit later reversed the district court's decision, holding that uncompensated video-cassette recordings of copyrighted works were infringements.170 That ruling was recently reversed by the Supreme Court,

160. BILLBOARD, Sept. 18, 1982, at 5, col. 2. See also BILLBOARD, Sept. 18, 1982, at 1, col. 5.
161. During the last week in October 1983, the Senate opened hearings on the Home Recording Act, a bill which would require manufacturers of tape recorders and blank tapes to contribute to a royalty pool, which would ultimately be given to copyright owners of recorded music. See generally N.Y. TIMES, Nov. 2, 1983, § 1, at 18.
162. As of 1977, it was estimated that there were 3700 cable television systems serving approximately 11.9 million homes. M. HAMBERG, supra, note 5, at 20.
163. See supra note 149.
165. Brief, supra at note 132, at 10.
170. 659 F.2d 963 (9th Cir. 1981).
which held that in-home video-recordings for noncommercial use were not violative of the Copyright Act.\textsuperscript{171}

In its 5-4 decision, the Supreme Court reasoned that individuals who, in the privacy of their own home recorded copyrighted audiovisual works for personal use, were not guilty of infringement, since there was no evidence that the economic value of the copyright was being harmed.\textsuperscript{172} The Court also stressed that the new technology benefitted society by increasing public accessibility to creative works.\textsuperscript{173} This reasoning, however, ignores the fact that unlike other types of law, proof of damage has never been required to show copyright infringement as long as potential injury is evident.\textsuperscript{174} This rule is particularly well justified in light of the difficult, if not impossible, task of finding and proving damages in an infringement action.\textsuperscript{175} In addition, the Court failed to realize that duplicate copies of an original work increase public accessibility. Since the copyright laws restrict the use of a copyrighted work as defined under section 106, public accessibility alone cannot be the sole determinate in exempting video recordings from infringement.

Dish antenna technology, like videocassette recorder technology, increases public access to creative works. It is also difficult to prove that dish antenna reception of signals from distant areas reduces the copyright owner’s ability to exploit his work in other markets. For the same reasons as cited for video-cassette recorders, the potential harm to the copyright owner from private dish antenna reception outweighs the benefits of increased public accessibility to copyrighted works.

The Supreme Court’s analysis in \textit{Sony}, emphasized the inability of the plaintiff to show any specific damages, as the public was not required to pay for the initial broadcast.\textsuperscript{176} In the Court’s view, there was no reason to deprive those who viewed the shows at a later time on video-cassette tapes of the same privilege, since no harm could be shown in an “indirect economic relationship.”\textsuperscript{177} In the case of dish antenna technology, however, much of the potential for abuse comes from the use of the antenna to receive transmissions from distribution media who do receive financial remuneration from subscribers of either cable, MDS, or subscription television systems which specifically pay for the privilege of receiving the copyrighted work.\textsuperscript{178} As a result, the potential for economic harm that results from the private use of

\textsuperscript{171} See supra note 164.
\textsuperscript{172} Id. at 32.
\textsuperscript{173} Id. at 35.
\textsuperscript{174} Williams & Wilkins Co. v. United States, 487 F.2d 1345, 1368 (1973). In \textit{Sony}, however, the Supreme Court defined “potential” harm as “meaningful likelihood of future harm.” The Court, then, seems to eventually require proof of definitive damages which will arise with the continued activity rather than speculative or “potential” harm. See supra note 164, at 32.
\textsuperscript{175} M. Nimmer, supra note 52, § 13.05[E][4][c], at 13-14.
\textsuperscript{176} See supra note 164, at 30-31.
\textsuperscript{177} Id.
\textsuperscript{178} See supra text accompanying notes 24-27.
dish antenna/satellite technology presents a valid reason for granting copyright protection to the copyright owner.

It should also be noted that the Supreme Court, in the *Sony* case, limited its findings to video-cassette recordings of copyrighted works. Specifically, the Court did not concern itself with the issue of whether copying programs transmitted by pay or cable television systems was violative of the Act.\(^{179}\) Since dish antenna reception of signals transmitted by satellite includes programming broadcasts of cable and pay television systems, the copyright issues involved in dish antenna reception remain unanswered by the Court.

The differing interpretations of the Act, as shown by both the *Sony* dissent and majority, indicate the apparent confusion in the Court's attempt to correctly employ copyright principles not clearly defined by Congress. In light of this uncertainty, legislation is pending before Congress which will clarify the Copyright Act with respect to its application to the *Sony* problem.\(^{180}\) Although the proposed legislation will probably not be enacted during this election year, the ambiguity of the copyright law with respect to "high-tech glitches awaiting legal resolution"\(^{181}\) will require Congress to act.\(^{182}\)

*The Validity of the Copyright Laws*

It may be argued that creativity is not discouraged as a result of the lack of financial remuneration from dish antenna owners, since the copyright owner has other means of obtaining profit and gratification (through public exposure) from his work.\(^{183}\) It is, however, within the province of the copyright owner to grant one or more of the exclusive rights under section 106, without requiring financial remuneration, and the copyright owner can do so simply to get exposure for his work. Under the Act, however, the copyright owner retains the ability to control who has access to the work. Therefore, the copyright laws provide more than financial incentives to promote creativity and to allow the copyright owner to decide if and how the public will obtain access to his work.

It might also be argued that the limited monopolies imposed upon all users of creative works assist wealthy copyright owners in making more money. Furthermore, since alternative distribution media are available for communication of copyrighted work, additional financial and exposure incentives through protection of works communicated by the new technologies is perceived as

\(^{179}\) N.Y. Times, Jan. 18, 1984, § 2, at 43, col. 1.

\(^{180}\) Although each bill differs from the other, the legislation may be broken down into two groups: the first set of bills provides compensation to the copyright owner for the use of his work through taxation of the profits of the video-recorder manufacturer while the other bills allow individual users of a copyrighted work for private use to be free from liability.

\(^{181}\) N.Y. Times, Jan. 18, 1984, § 2, at 42, cols. 5-6.

\(^{182}\) See supra note 126, at 58.

\(^{183}\) Examples of alternative ways to market or expose audiovisual works are movie theaters, commercial television, and video-cassette rentals. See supra text accompanying note 126.
unnecessary. Limiting the media from which income can be earned, however, cannot be justified simply due to the availability of other income-earning media. Nor is there any justification for limiting the economic potential of the investment. The wealthy copyright owner should not be precluded from increasing his revenues simply because he is wealthy. Nor should the copyright laws be indiscriminately applied to "old" as opposed to "new" technologies. Opportunities for financial remuneration and broad exposure of the copyrighted work will continue to promote creativity, regardless of the previous "success" the copyright owner has achieved with his work.

Protection for the Distribution Media

For the most part, the broadcasting industry in the United States consists of privately-owned businesses which operate primarily for profit.\textsuperscript{184} The economic potential of the new communications technology has induced several companies to take considerable risks and to invest significant amounts of effort and money in an industry that appears to promise worthwhile returns in the future.\textsuperscript{185} With the continual technological advances that are now being made, the profit potential appears to be somewhat diminished and it is likely that unless protected, companies which have offered these new services to the public will be incapable of financial survival,\textsuperscript{186} since the distribution medium would otherwise lose their ability to profitably exhibit the audiovisual works that comprise its programming.\textsuperscript{187} It must then be asked whether the value of these services warrant copyright protection for the highly dynamic broadcast communications industry.

\textbf{Alternatives to the Dish Antenna Problem}

Home reception of satellite transmissions for personal use is inevitable; as technology continues to improve and costs continue to decline this practice will become more prevalent.\textsuperscript{188} Congress has already enacted legislation to regulate problems analogous to those created by the privately-owned dish antenna.\textsuperscript{189} It is now time for Congress to "take hold of the moment" and act on the problem before it becomes a "common and unrestrained practice."\textsuperscript{190}

\begin{itemize}
\item[184.] Ladd, \textit{supra} note 77, at 250.
\item[185.] As an example, R.C.A. is offering to construct and operate earth stations at all 725 commercial television stations in the country at a cost of approximately $25,000 each. Perle, \textit{supra} note 14, at 327-28.
\item[186.] See \textit{supra} note 92, at 826.
\item[187.] \textit{Id.} at 825.
\item[188.] Perle, \textit{supra} note 14, at 337.
\item[189.] See \textit{supra} text accompanying note 157.
\end{itemize}
One possible solution to problems arising as a result of dish antennae reception is to regulate dish antennae by requiring that private owners pay a compulsory license fee similar to that paid by cable systems under section 111 of the 1976 Copyright Act. This alternative, however, poses several problems. Ownership of "receive-only earth stations," or dish antennae, which can receive but not transmit broadcast signals, was deregulated as of 1979. Deregulation contributed to the growth of dish antenna usage. However, as a practical matter, regulations have not been successful in keeping up with advancing technology. It would also be difficult to reverse deregulation in light of the trend to allow the marketplace to resolve issues created by advancing technology, even though an increase in dish antennae necessarily leads to an increase in satellite signal piracy.

A second possible option to resolve the dish antenna problem is to rely on state theft of service laws. The imposition of criminal sanctions on those who engage in the unauthorized interception of satellite transmissions would arguably deter continued piracy. This alternative, however, ignores the evidentiary problems arising from enforcement. Dish antennae have alternative uses which would not be illegal under theft of service laws and mere possession alone does not, in and of itself, indicate that it is being used for illegal purposes. Due to the proliferation of dish antennae, enforcement would also be difficult. In addition, state legislation, unlike federal regulation, would most likely result in disparate application.

A third possible alternative available to protect both the copyright owner and the fledgling telecommunications industry would be to enjoin, temporarily or permanently, the sale of dish antennae. This alternative is analogous to the Federal Communication Commission's injunction of the unauthorized sale of decoding devices used to descramble signals transmitted by subscription television systems. Although this solution is a viable one, problems are inevitably created. Deregulation suggests that the issuance of an injunction would probably not be upheld. Dish antennae also may be used for purposes other than viewing original television programming. The inherent nature of an

192. Id.
193. Id.
194. Id. at 337.
195. Id. at 337.
196. Perle, supra note 14, at 337.
197. Theft of service laws would also result in uneven treatment since some states specifically exclude satellite transmissions as a violation. Id.
198. See supra note 92, at 820.
199. See supra note 195.
injunction would prohibit all public access to satellite transmissions and stifle the continued development of a potentially invaluable system of communication. This solution, in essence, minimizes public access to the copyrighted work. In addition, this solution is limited in scope, since Congress will continually face similar problems which will result from further technological developments. Such action would also necessarily delay the progress of future advancements in the telecommunications industry, since the incentive to discover new technologies would be minimized. Consequently, it is questionable whether this alternative is in the public interest.

One possible technological solution to the problem would be to scramble the signals transmitted by the distribution medium. STV licensees scramble their signals so only their subscribers who receive decoders can receive their signals.

The code used to unscramble the signals could then be copyrighted, in order to deter attempts to unscramble the code. Any person who purchases a dish antenna and unscrambles the code without prior authorization would be guilty of infringement. Like theft of service laws, however, this solution is somewhat limited due to the difficulties and costs of enforcement. Encoding transmissions is also costly and interferes with the quality of the reception. In addition, encoding transmissions simply makes it more difficult to receive the transmission, but it does not prohibit reception.

Advertising revenues, as opposed or in addition to subscribers' fees, also represent a viable alternative to ensure the capital necessary for the continued growth of the telecommunications industry. Music Television and the superstations are supported, in part, by advertising and as a result, the broadest possible exposure is encouraged. This solution, however, eliminates the consumer's preference of paying subscribers' fees for the purpose of advertising avoidance and for the purpose of viewing more specialized programming with limited audience appeal. Advertising avoidance, in turn, requires subscribers' fees and limited exposure. Advertisers may also be unwilling to sell to the various telecommunications franchises since spot prices are conveyed nationally and may be misleading. Costs of national advertising over the new telecommunications systems may be prohibitive since the Screen Actors' Guild may require compensation for nationwide exploitation of spot commercials. The

200. See Perle, supra note 14, at 337.
201. Home Box Office, Inc. is presently in the process of scrambling its satellite signal. HBO SATELLITE SCRAMBLING FACT SHEET (1983). According to the company, "as the price of satellite receiving equipment continues to drop and the private ownership of dishes proliferates, theft of satellite signals is a problem with far reaching implications for cable operators and Home Box Office alike. It is to counter this growing problem that HBO is taking the initiative of scrambling its signal." Id. The new system employs coding which is considered to be the "highest level of non-classified encryption (coding) approved by the U.S. government." Id.
202. Despite the time and expense involved in encoding a satellite relay signal, Home Box Office, Inc. admits only that "breaking" the code would simply be too time-consuming and "economically unfeasible." Id.
203. Perle, supra note 14, at 329-30 (citing supermarket ad for roast beef in Atlanta causing Boston shoppers to run to their stores).
204. Id. at 330-32 (quoting letter from R.E. Turner, President of WTCG Television, Atlanta to J. Indelli, Division Sales Manager/South of Metromedia Producers Corp. (Mar. 5, 1979)).
uncertainty of the "reach" of the new market makes the higher cost undesirable in light of the risk. National advertising over the new communications media would also eliminate test advertising.\textsuperscript{205}

\textit{Copyright Alternatives}

Although feasible alternatives exist which could resolve copyright issues arising from dish antenna/satellite technology, the most effective and logical solution would require Congress to amend the 1976 Copyright Act. By enacting copyright legislation specifically designed to address problems resulting from continually advancing technologies, the copyright owner can be guaranteed compensation for the use of his work. One option which would safeguard the copyright owner's interest would be to tax the sale of dish antennae. This alternative is presently being considered by Congress to deal with similar problems which have arisen as a result of videocassette recorder technology.\textsuperscript{206} The tax, which could be added on to the purchase price of the dish antenna, could be collected and distributed by the Copyright Royalty Tribunal to the respective copyright owners. A similar alternative is to appropriate a specified percentage of the profits made by those who sell dish antennae to the public. These costs would ultimately be passed on to the consumer and would also ensure the copyright owner of compensation for his work.

A third possible solution to the problems created by the privately-owned dish antenna is to require all dish antenna owners to register with the Copyright Royalty Tribunal and to pay an annual compulsory license fee similar to that imposed upon cable programmers and distributors under section 111.\textsuperscript{207} Like taxing either the dish antenna owner or the manufacturer, however, this solution would be costly to administer and would also create problems related to the fair distribution of funds to the respective copyright owners and programmers contributing to the production of the creative work.\textsuperscript{208} Yet, all these solutions would protect the economic interests of the copyright owner.

Unlike protection granted under the 1976 Copyright Act, the Federal Communications Act would not provide protection beyond national borders and would be unable to provide copyright owners with either a mechanism to ensure compensation or remedies against those who violate the Act. State theft of service laws also are inadequate in light of the need for uniformity as well as the evidentiary and enforcement problems that could result. Placing a temporary or permanent injunction on the sale of dish antennae, like the various technological solutions, also provides temporary and inadequate relief for a

\textsuperscript{205} Id. at 327.

\textsuperscript{206} See supra note 180. One proposal not yet suggested by Congress is to tax individual owners of the view recorders, either upon the initial purchase of the machine or upon purchases of blank tapes. It is, however, highly unlikely that this proposal will be brought before Congress, in light of various political considerations involved in taxing individual users.


\textsuperscript{208} See generally National Cable Television Assoc. v. Copyright Royalty Tribunal, 689 F.2d 1077 (1982).
problem that arises from the advent of new communications technologies. Advertising also presents a viable alternative to the problem. However, copyright alternatives, as opposed to advertising, would enable the viewer to receive more particularized programming and would meet consumer preferences of advertising avoidance.

Of the copyright alternatives discussed, a compulsory licensing requirement is the preferable solution, despite administrative burdens and expense. An annual compulsory licensing fee would more adequately compensate the copyright owner than a one-time flat fee (tax), since the latter alternative would require that fees be either so high as to make the purchase of a dish antenna prohibitive or, if kept to a more "reasonable" amount, would be inadequate to promote creativity and, thus, not be in keeping with the purposes of the Act.

CONCLUSION

Satellite and dish antenna technology pose a grave threat to the system of protection granted to copyright owners under the 1976 Copyright Act. By giving private dish antenna owners the ability to bypass the franchisee, dish antenna technology effectively deprives the copyright owner of control over the use of his work and the appropriate financial incentive necessary to stimulate continued creativity. In addition, by stripping satellite operators, distribution media, and local franchisees of a profit motive,\(^\text{209}\) the efficient development of the new communications technologies may come to a grinding halt.\(^\text{210}\)

Legislation presently in effect fails to address the problem. Congress must act now to establish guidelines that can be used to resolve similar questions arising as a result of the continued development of communications media technology. Although several alternatives are possible, amending the 1976 Copyright Act is the most appropriate response to the issues created by the unauthorized reception of copyrighted audiovisual works. By requiring dish antenna owners to pay either a tax or licensing fee, the economic interests of the copyright owner\(^\text{211}\) and the telecommunications industry can easily, equitably, and effectively be protected.

SYDNEE ROBIN SINGER

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210. See supra note 92, at 826.