Chapter 1

Summary, Issues and Options

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Boxes

SUMMARY

Reasons for Concern

A 1988 OTA survey found that 4 in 10 of a nationally representative sample of Americans over the age of ten had taped recorded music in the past year. The survey results showed that Americans tape-record individual musical pieces over 1 billion times per year. Much of this home audiotaping was for the purpose of copying music from records or compact discs to audiocassettes to be played in the car or in portable cassette players. OTA found that the public–those who had taped and those who had not—believe it is acceptable to copy recorded music for one's own use or to give to a friend as long as the copies are not sold.

But copyright owners of music and sound recordings consider home audiotaping to be a problem. They believe that taping cuts into sales of prerecorded music and reduces royalty payments to songwriters, music publishers, and performing artists. Recent advances in audio-recording technology have made it easier to make high-quality home copies.

In 1986, Japanese and European manufacturers announced their intention to market consumer-model digital audiotape (DAT) recorders in the United States. DAT technology represents a significant advance over conventional, analog tape recorders. The sound quality of DAT recordings is superior, and DAT recorders can produce copy after copy with virtually no degradation in fidelity. The debate concerning DAT and its impact on home copying is one of a growing number of copyright issues identified in a 1986 OTA report on intellectual property.[2]

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

Digital representations of music, video, and other types of information and entertainment for home use cause copyright owners the most concern (see ch. ***2).*** Although some current consumer-model analog audiotape recorders can produce very high-quality copies (especially from compact discs), the quality of successive generations of copies degrades rather quickly. But digital recorders, such as DAT equipment or the forthcoming erasable/recordable compact disc technology, enable the public to make successive generations of virtually perfect copies.

Music in digital form can be easily edited and manipulated, and the music can be copied and stored on a number of different media — tape, computer disk, compact disc, etc. Special, error-correction circuitry can make physical imperfections in the recording, like

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1A royalty is a payment made to a copyright holder or performer for the use of his property. Copyright in the musical composition is usually held by the songwriters/composer and music publisher. Recording companies pay "mechanical" royalties to copyright owners of musical compositions based on the number of recordings sold. Copyright in the sound recording is usually held by the recording company. Recording companies earn revenues from the sale of a recording and pay recording artists their royalties from these revenues (see ch. 5 for a discussion of royalties for music and sound recordings).

2U.S. Congress, Office of Technology Assessment, ***Intellectual Property Rights in an Age of Electronics and Information***, OTA-CIT-302 (Melbourne, FL: Kreiger Publishing Co., April 1986).

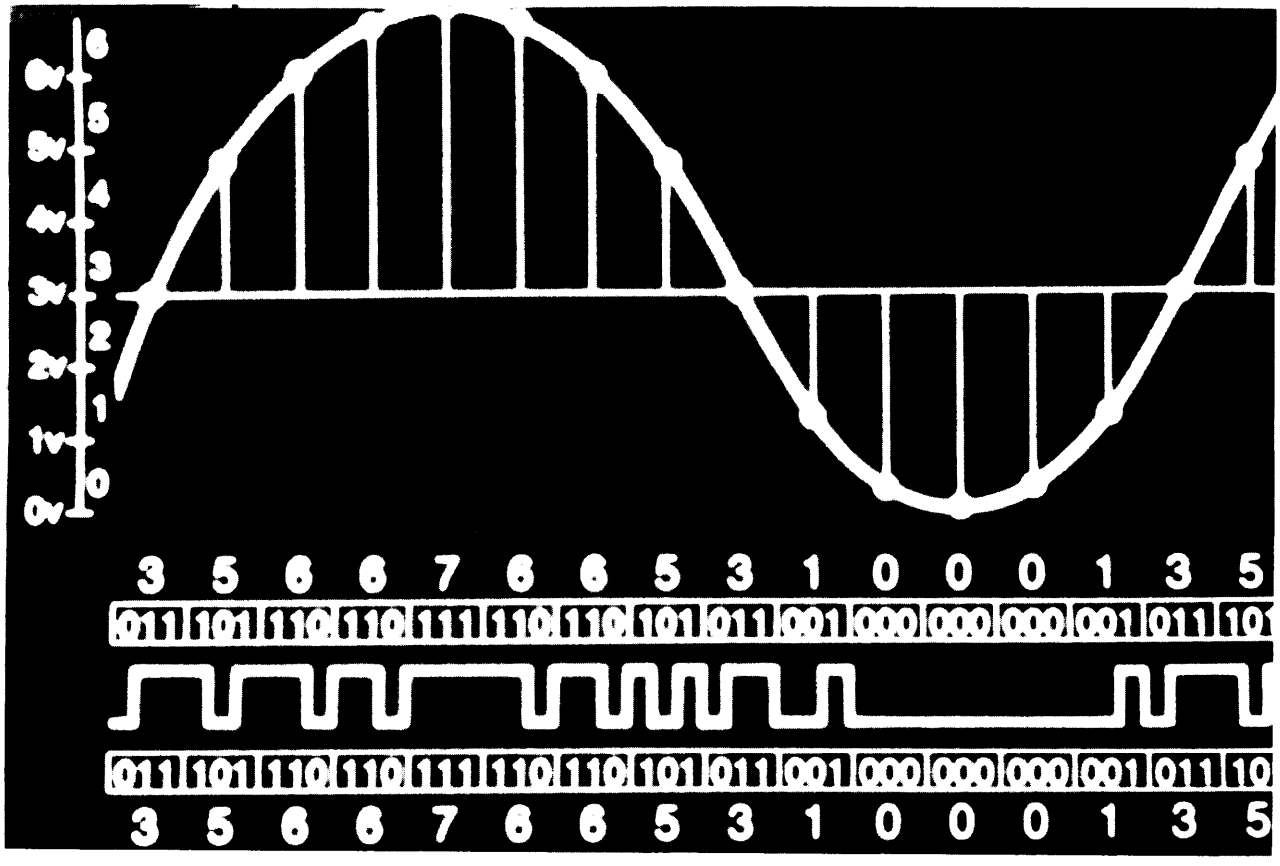

Photo Credit: Optical Disc Mastering

Analog information can be coded as a series of ones and zeros.

dust or scratches, imperceptible during playback. Digital representations offer advantages to consumers, but many copyright holders are concerned that convenient, consumer-model digital recorders will greatly encourage home copying, and many recording companies, songwriters, and music publishers fear that digital audio copying will greatly reduce sales and royalties.

The primary focus of this study is home audiotaping. In it, we examine the nature and extent of home audiotaping and consider the impacts it may have on recording-industry revenues, contrasted with consumer impacts should home copying be restricted. We also briefly examine current home videotaping practices. This report looks beyond near-term potential impacts of DAT to an intellectual property concept called *private use*, of which home copying is one kind,[3] and to technological trends that will become the basis for future debates over personal use of copyrighted material.

[3]Examples of private use include "time-shifting" videotaping from television, copying a magazine article, or making home audiotapes from broadcast or prerecorded material. (See ch. 2 for a discussion of technological change and private use and ch. 3 for a legal discussion of home copying and other private uses; see also ibid., pp. 193-201.)

Contested Issues

Legal Status of Home Copying

Goals of Copyright –American copyright is sanctioned by the Constitution as a form of protection for authors against unauthorized copying of "original works of authorship. "[4] The copyright proprietor is given the exclusive right to use and to authorize various uses of the copyrighted work: reproduction, "derivative use)" distribution, performance, and display. Violation of any of the copyright owner's rights may result in an infringement-of-copyright action. The copyright owner's rights in the work are neither absolute nor unlimited in scope, however. For instance, the duration of copyright is limited (e.g., the life of the author plus an additional 50 years, or 75 years for a work "made for hire").

Copyright was developed for the promotion of intellectual pursuits and public knowledge, primarily for the benefit of the public at large.[5] Benefits accrue to the public from the creativity of authors, and the limited monopoly granted authors is a stimulant to ensure that creativity. *Without a public benefit arising from the copyright system, the grant of a monopoly would not rejustifiable.* Thus, there is a balance between the rights of copy-right proprietors and the rights of the public. Arguments that equate copyright with royalty income run counter to this concept and appear to be inconsistent with the intent of the Framers of the Constitution.

Legal Status **of Home Copying as Private *Use-In*** *this report, OTA defines "home copying" (of* **copyrighted materials) as** *an essentially private, noncommercial activity, so that "home copies" includes copies shared with or given to friends, but not homemade copies that are bought or sold.* This definition is consistent with the definition of private use in the 1986 OTA report on intellectual property.[6]

Thus, home copies are used privately within the household (including personal vehicles) and are not used for implicit or explicit commercial purposes. Admission is not charged and users are a household and its normal circle of friends, rather than the public. "Homemade" copies that were subsequently used for commercial purposes or public performances would not be considered home copies. *This definition appears to be in line with public opinion.* Private use is sometimes referred to colloquially as '(personal use," "private copying, " or "home use. " In this report, OTA uses "home copying' to refer to one form of private use.

The problem of private use arises because its legal status is ambiguous. *Current legislation and case law offer meager guidance as to whether copyright proprietors' rights extend over private use.*[7] While language in the House Report[8] accompanying the 1971 Sound Recordings Amendment to the (former) copyright law made it clear that Congress intended

[4] 17 U. S. C., sees. 102, *et seq. (* 1982)

[5] A fundamental goal of copyright is to promote the public interest and knowledge – the "Progress of Science and the useful Ms. " (U.S. Constitution, Art. I, sec. 8, cl. 8.) A directly related objective is t he promotion and the dissemination Of knowledge to t he public.

[6] The 1986 OTA report defined *private use* as "the unauthorized, uncompensated, noncommercial, and noncompetitive use of a copyrighted work by an individual who is a purchaser or user of that work. " Here "use" includes copying and "unauthorized" does not necessarily mean "illegal" – it means" without consent. " "Noncompetitive" means that the fruits of private use are not sold commercially. (OTA-CIT-302, op. cit., footnote 2, p. 194.)

[7] Although U.S courts have been called on t. resolve some aspects of home use of videocassette recorders, these decisions have been relatively narrow in scope and have applied the fair-use doctrine, absent other statutory guidance. OTA considers that in light of its ambiguous legal status, applying the fair-use doctrine to private use is premature (see the section on fair use that follows).

[8] U.S. Congress, House Committee on th, Judiciary, *Sound* R$_{em}$& *ings: Report Accompanying S.646*, serial No. 92-487, September 1971, p. 7.

to permit home audiotaping for private use, the absence of such language in the 1976 law allows alternate opinions about congressional intent (see ch. 3). The Recording Industry Association of America, Inc. (RI-M), for instance, considers that the 1971 amendment was made irrelevant by the "general overhaul" in the Copyright Act of 1976.[10] The Electronic Industries Association (EIA), on the other hand, considers that the 1976 legislation did nothing to negate "the principle that home taping from broadcasts or prerecorded materials was not an infringement [of copyright]. "[11]

Fair Use and Home Copying– Some uses of copyrighted works, such ascertain copying for the purposes of criticism, news reporting, research, teaching, or scholarship, are "fair uses,') not copyright infringements. Fair use is a defense to a claim of copyright infringement that is codified in the 1976 Copyright Act and interpreted by the courts. Courts determine whether an instance of copying is "fair use" by taking into account the purpose and character of the copying, the amount and extent of the work copied, the nature of the original work, and the effect of the copying on the potential market for or value of the work. [12] *Many consider the doctrine of fair use to be the "safety valve" of copyright law and sufficiently adaptable to deal with home copying and other consequences of technological change.*

Even though the EIA (for example) maintains that the current legality of home copying does not depend on the doctrine of fair use, it considers the concept of fair use as adequate to deal with home copying, so that additional legislation making its legal status more explicit is not needed.[13] The recording industry, on the other hand, considers that home copying is an infringement under the current law and that, in the face of "massive sales displacement and loss of revenues," legislation for additional enforcement is needed to make copyright protection "more than an empty right."[14]

General application of the fair-use doctrine to home copying may be premature because home copying is a private use and the legal status of private use is ambiguous.

Absent other statutory guidance, however, fair use has been applied to legal cases involving home copying. American courts have examined home copying with videocassette recorders (VCRs). In 1984, after a series of conflicting lower court judgments, the Supreme Court determined that under certain circumstances, the taping of a video work in its entirety for watching later would be allowable under the doctrine of fair use. The scope of the Supreme Court's holding was expressly limited to home video recording of over-the-air, commercial broadcasting for time-shifting purposes. The holding did not address the taping of cable or pay television, or the issue of "library building" of recorded programs.[15]

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[9]U.S. Congress, House Committee on the Judiciary, ***Report Accompanying S.22,*** Serial No. 94-1476 September 1976.

[10]H. Rosen, RIAA, letter to J. Winston, OTA, May 2, 1989 (enclosure with comments on draft ch. 5, p. 2). RIAA's membership includes the major U.S. recording companies.

[11]Gary J. Shapiro, EIA, letter to D. Weimer c/o OTA with comments on draft ch. 5, Apr. 28, 1989, p. 3. EIA's membership includes consumer-electronics and blank-tape manufacturers.

[12]Criteria to be considered by the courts in determining whether a claimed infringement is actually a "fair use" are given in Sec. 107 of the Copyright Act of 1976 (Title 17 U. S.C.). The Act specifies other limitations on exclusive rights of copyright holders.

[13]Gary J. Shapiro, EIA, letter to D. Weimer with comments on draft ch. 5, Apr. 28, 1989, pp. 1, 4-5.

[14]H. Rosen, RIAA, letter to J. Winston, OTA, May 2, 1989 (enclosure with comments on draft ch. 8, pp. 1-2; enclosure with comm on draft ch. 9, p. 1).

[15]*Universal City Studios, Inc.* v. *Sony Corp. of America,* 480 F. Supp. 429 (D. C. Cal. 1979), *rev'd,* 659 F. 2d 963 (9th Cir. 1981), *rev'd,* 464 Us. 417 (1984).

Copyright and New Technologies

New Technologies and the Goals of Copyright--All U.S. copyright law, including the Copyright Act of 1976, proceeds on the assumption that effective and efficient copying is a large-scale, publicly visible, commercial activity, and therefore, that legal prohibitions against unauthorized copying are enforceable. This assumption, which was valid 20 years ago, is being seriously challenged today because technology provides consumers with the capabilities to be printer/publisher, on a smaller, less-visible scale.

As defined in this report, private use– such as home copying– differs from commercial piracy in that the copies are not sold commercially. But copyright proprietors now argue that the aggregate economic effect of individuals' private use is equivalent to commercial piracy. **16** They claim that private uses, like home audiotaping, deprive copyright owners of revenues, reduce incentives to create and disseminate new creative works, and discourage newcomers from entering creative professions. Representatives of the recording industry, for example, hold that home taping of prerecorded or broadcast music frequently displaces sales of records, prerecorded cassettes, and CDs, and thereby reduces their revenues. In turn, they argue, this reduces the number and variety of works they find profitable to produce and distribute, so that stakeholders — including performers, studio musicians, songwriters, and music publishers— are deprived of earnings. Moreover, some claim that the greatest harm from home audiotaping falls on new artists and songwriters, and on those in less popular genres (like classical music), so that diversity is substantially reduced. They also claim that home copying reduces incentives to enter or stay in creative fields like music or songwriting, and limits the pool of new talent.[17]

Representatives of the consumer-electronics industry and advocates of home audiotaping challenge these claims by asserting that home taping does not necessarily undermine the Copyright Act's intended balance between the rights of proprietors and the rights of the public. They argue that home taping can stimulate sales of recorded music by increasing interest in music generally and by broadening the market for recorded music. Moreover, they contend that the linkages between industry revenues/royalties and creative incentives are complex, and that restricting home taping would not necessarily result in more employment in the arts or more variety and widespread dissemination of creative works. **18**

New Technologies and the Boundaries of Copyright-New *uses of technology can exploit persistent ambiguities in existing laws. Sometimes this can have the effect of lawmaking.* This may be happening to copyright. The recording industry considers that legal ambiguities and the increasing ease of making copies have been exploited to the point where consumers believe that they have a "right" to tape. On the other hand, technological copy protections, if adopted by recording companies and/or recorder manufacturers, will effectively "take away" this "right." From the public's viewpoint, this would be equivalent to a change in the law.

The private use of copyrighted works raises questions about the degree of protection copyright proprietors should be granted, mechanisms to enforce that protection, and the way

160 TA-CIT-302, op. cit., footnote 2, p. 194.

[17]For an elaboration of these views, see: "HomeAudio RecordingAct," Hearings Before the Committee on the Judiciary, U S. Senate, and its Subcommittee on Patents, Copyrights and Trademarks, 99th Cong., lst, 2nd sess., Hearings on S. 1739, Oct. 30, 1985, Mar. 25 and Aug. 4, 1986.

[18]For an elaboration of these views, see Hearings on S. 1739, Op. cit., footnote 17.

in which the degree of protection should depend on technological change.[19] Congress is being asked to define an appropriate boundary between proprietors' rights and those of users.

Copyright issues raised by home audio- or videotaping are part of broader questions about the general status of home copying and other private uses. **The question remains whether the overall objectives of copyright are best served by granting copyright proprietors exclusive rights over home copying, including the right to be compensated for and/or to prevent home copying.**

Up to now, the courts have made explicit, limited, niche-oriented determinations about cases involving home copying and other private uses. Since there is no other specific statutory guidance, courts have made their determinations according to the doctrine of fair use (see above). Leaving these determinations to the courts, as specific cases arise, has allowed Congress to avoid premature or short-lived copyright legislation, and has helped maintain flexibility in the face of changing technologies. Current technological and business trends, however, may make an explicit congressional definition of the legal status of home copying more desirable in order to reduce legal and market uncertainties and to prevent de facto changes to copyright law through technology.

These trends are:

- The movement to *digital representations* of music, video, and other types of entertainment and information available to consumers. With these come new recording technologies for home use, and more powerful means for home users to interact with and manipulate works, as well as to make derivative works.
- The *erosion of niche boundaries* used to categorize copyrightable works according to their content (e.g., audio, video, computer software) or physical format (e.g., audiotape, videotape, computer disk).
- The emergence of *new delivery infrastructures* to bring music, video, and other forms of information and entertainment into the home (e.g., fiber optic cable, pay-per-view and interactive cable services).
- The efforts of some copyright proprietors (e.g., in sound recordings and motion pictures) to develop and implement *technological means for copy-protection*. These will likely require congressional approval for reasons of antitrust exemption and/or legal enforcement.

Extent of Home Copying and Its Economic Effects

Previous Empirical Analyses and Disagreements – Much of the debate on home copying has focused on surveys and economic analyses to support or rebut copyright proprietors' claims of economic harm.[20] For example, recording companies and RIAA have sponsored several such studies over the past dozen years

[19] Technological changes can expand the scope and power of private uses, offering new capabilities for individuals to reproduce copyrighted material at home, manipulate it to make derivative works, and/or further disseminate it. At the same time, new technologies can be used to control private uses – for example, restricting copying and, thereby, private dissemination and the making of derivative works.

See also OTA-CIT-302, op. cit., footnote 2, ch. 7.

[20] Economic harm is one of the four criteria used by the courts to determine if an alleged infringement of copyright is fair use. As discussed above, application of the fair-use criteria maybe premature because current legislation is ambiguous as to whether copyright proprietors' rights extend to private use like home copying. Nevertheless, harm is relevant to the debate because in considering whether proprietors' rights should extend to private use, Congress may wish to take the economic consequences of private uses into account.

Photo Credit: Dave Maley, Ithaca College

Electroacoustic music studio

(see table 6-1 for a summary of these). Alan Greenspan presented the results of the most recent, by the consulting firm Townsend & Greenspan, in 1985 testimony. The testimony included an estimate of recording-industry revenue losses due to home taping (see ch. 7 for details). These findings were rebutted by the electronics industry and Home Recording Rights Coalition (HRRC), who argued that Townsend & Greenspan's estimates overstated the amount of taping being done and the extent to which home taping displaces sales. Moreover, they argued, the studies for RIAA did not take into account the benefits of home taping for consumers, or the stimulative effects of home taping on sales of recordings. But HRRC did not offer quantitative estimates of their own to counter RIAA claims.

Some of the other unresolved contentions from previous RIAA and HRRC surveys and economic analyses have stemmed from their underlying assumptions, as well as from the survey designs. We conclude that the earlier studies were insufficient as a basis for policymaking, mainly because the method-

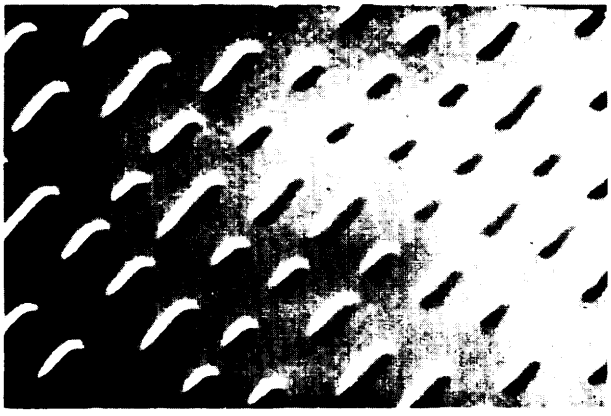


Photo Credit Optical Disc Mastering

Information is recorded on a CD as a series of tiny pits.

ologies and data for the surveys used in the studies were not published in their entirety, preventing independent analysis or verification. There were other methodological factors that limited the usefulness of the earlier studies, and a new OTA survey was designed to address these factors.[21]

One area of continuing disagreement among industry stakeholders is whether only the alleged effects of home taping (or a taping ban) on recording-industry revenues should be considered for policy formulation, as opposed to also considering effects on consumers' benefits or blank-tape revenues.[22] A corollary to this disagreement is whether alleged lost *revenues* or lost *profits and royalties* resulting from home copying should be the basis for estimating claims of economic "harm."

Especially given the ambiguous legal status of home copying, OTA **considers it appropriate to examine effects on consumers, as well as on industry.** The Recording Industry Association of America, Inc. position is that home audiotaping of copyrighted music violates current copyright law, and that the only relevant issue is that the industry is entitled to absolute protection of its music. Therefore, RIAA considers that only the effect on recording-industry revenues, reflected in sales displacement, is relevant.[23] Advocates of home recording like the Home Recording Rights Coalition and Electronic Industries Association consider that (noncommercial) home taping is legitimate under the current law. HRRC believes that the effect of copying or copyright policies on consumer benefits is also relevant. Furthermore, HRRC argues that only the impact of taping on industry profits and royalty payments to performing artists and creators of works should be considered – not gross revenues to recording companies – because profits and royalties are the incentives that determine the supply of new works.[24]

The difference in relative magnitudes (gross revenues versus profits and royalties) is substantial. In his 1985 testimony on behalf of

[21] The survey data obtained for RIAA and HRRC were based on different units of analysis (tapes v. tapings) so that the studies' disparate findings could not be reconciled. The studies did not explore the effects of home copying, or of proposals to restrict or eliminate it, on society's net economic welfare. The studies' focus on active tapers, as opposed to the general population, did not permit analysis for the population at large, or fully consider whether tapers and nontapers had different perceptions as to the fairness of home-taping practices and alternative policies to restrict taping. Finally, the RIAA studies estimated lost industry revenues, not lost profits and royalties (overstating "harm"), and did not fully take price and demand effects into account.

The OTA survey addressed the first three of these points. However, absent industry data with which to estimate price-cost margins, the OTA analyses were also forced to assume that prices remained constant in the short term and to focus on the effects oftaping on revenues (rather than profits and royalties), which tends to overstate industry effects. See ch. 6 and ch. 7 for more details.

[22] The net effect on society's economic welfare can be approximated as the sum of the effects on recording-industry revenues, blank-tape industry revenues, and consumers' benefits.

[23] H. Rosen, Recording Industry Association of America, Inc., letter to OTA, May 2, 1989 (enclosure with comments on draft ch. 8, pp. 1-2).

[24] Gary J. Shapiro, Robert S. Schwartz, and Steven R. Brenner, Home Recording Rights Coalition, memorandum to OTA with comments on economic issues, May 1, 1989, pp. 7-10.

RIAA (see ch. 7), Greenspan estimated that 40 percent of alleged lost revenues represented "compensable" losses to copyright owners and creators (including the recording companies). Considering the recording-industry rule-of-thumb that royalty payments to performing artists and copyright owners are about 20 percent of the wholesale price of a recording, an estimate of 40 percent (of revenues) for profits and royalties seems high.

The **OTA Survey on Current Home Copying Practices and Motivations** –Many of the arguments for and against the proposed legislative solutions to the perceived problem of home taping hinge on empirical studies sponsored by firms and industry groups with a financial stake in the outcome. These include several surveys of home audiotaping behaviors and attitudes. Congressional concerns about the timeliness, bias, and credibility of these surveys led OTA to engage a contractor to undertake a new survey. OTA used an open development process to design a survey that would be useful to Congress yet would provide data for others to assess the economics of home audiotaping as well. The questionnaire and resulting survey data are available to the public through the National Technical Information Service. Here are the highlights of the survey findings:

Audiotaping Four in ten of a nationally representative sample of persons aged 10 and over have taped recorded music (either from a broadcast or from a record, prerecorded cassette, or compact disc) in the past year. This finding is similar to a 1982 survey, but larger than 10 years ago, when surveys found that21 to 22 percent of the population had taped in the preceding year. Music tapers, in general, seem to have a greater interest in music and purchase more prerecorded music than people who don't tape. The majority of nontapers do not listen to recorded music. See table 6-2 for yearly music purchases and tapings estimated from OTA survey results.)

Prerecorded audiocassettes are the most frequently purchased music format. However, the survey finds that tapers more frequently copy from records than from tapes. People who purchase a prerecorded item with the intention of taping it (as did about one-seventh of the sample) are far more likely to purchase a record or CD than a prerecorded audiocassette. Many people seem to copy for the purpose of "place-shifting," that is, copying music from records and CDs to cassettes that are used in automobile and portable cassette decks.

The survey finds that a large majority of people who copied from prerecorded music in their last taping session copied their own recording for their own use. They usually copied with the intention of keeping the tape permanently. About one-fifth made copies for a friend or copied a borrowed item.[25] Few copies were made from homemade tapes.

People who taped from radio broadcasts were less likely to copy full albums than those who copy records, cassettes, or CDs. In about half of the most recent tapings of prerecorded items, whole albums were taped.

Survey data suggest that home taping displaced some sales of prerecorded products. But they also suggest a stimulative effect on sales. That is, home copying helps advertise songs and performers. In addition, a significant number of purchasers bought prerecorded products with the intention of copying them.

25 The OTA survey did not find much evidence of extensive or intensive copying networks or widespread membership in music "swap clubs.)' Of the 1,501 individuals surveyed, 261 reported borrowing audio recordings from persons outside their household. Of these, about three-fourths borrowed from only three or fewer persons, and borrowed *to* copy rarely or a few times a year. Only 16 respondents reported belonging to a music swap club.

Taping of noncopyrighted material occurred more frequently than taping of prerecorded music. Perhaps three-fourths of taping incidents were for something other than music. Tapes of noncopyrighted material vary widely in type, length, and lasting value, with some, like answering machine messages, being reused often.

The survey finds that availability of dual-cassette and high-sped dubbing capability had little to do with the number of homemade tapes. People with many homemade tapes, or with few, or even none, seemed to own equipment with these capabilities in roughly similar proportions. Thus, for analog recording at least, dual- or fast-dubbing technology did not seem to be driving copying behavior.

Contrasts Between Audiotaping and Videotaping Videocassette recordings, unlike their audio counterparts, were largely made for temporary use. Most videotaping fits the definition of "time-shifting" outlined in the Supreme Court's 1984 *Sony* decision (see above). A few specific types of programs-including concerts and educational shows – were copied for permanent use.

The survey finds that, while television taping was common among VCR owners, copying other videotapes was less common. Of the tapes copied, only a minority belonged to the copier. Some originals were rented from video stores, but the bulk were obtained from friends. Thus, there appears to be a modest level of exchange of videotapes among friends for the purpose of copying.[26]

While the survey found a somewhat higher incidence of video copying among music tapers than among nontapers, there was no strong connection between video- and audiotaping behavior. The survey finds that home video and home audio copying were done by different people, for different reasons.

Public Opinions About Home Copying Most members of the public were unfamiliar with copyright law and its application to home taping. Nevertheless, they had opinions on the norms of acceptable behavior in home taping. In general, the public–both tapers and nontapers – believe that it is acceptable to copy a prerecorded item for one's own use or to give to a friend. The only copying that was universally considered unacceptable – by tapers and nontapers – was copying a tape in order to sell it.[27]

Most members of the public had no notion whether home copying was fair to the recording industry, to performers, or to the consumer. They did, however, strongly oppose all the tested suggestions for changes in the system that would impose user fees or limit taping through technological fixes.

OTA's Economic Analysis-OTA commissioned three independent economic analyses. The analysis by Michael Katz developed a theoretical framework for analyzing the economic effects of home copying. It shows that the effects of private use, including home copying, on economic efficiency and on society's economic welfare are complex and ambiguous. The effects of private use depend critically on the assumptions about demand for originals and copies and the effects of copying on the long-term supply of new works. Choosing among assumptions about underlying factors is a subjective process. Some of the most crucial factors are very difficult to measure and several alternative assumptions may be equally plausible — for example, the extent to which consumers would

[26]Of the survey respondents who reported ever borrowing a videotape, the majority reported that they rarely or never borrowed to copy. Of those who did, virtually all reported doing so only a few times a year.

[27]But the youngest respondents (ages 10-14) were almost neutral on this issue — the unacceptability of selling home copies increased with age.

increase purchases of prerecorded music, absent home taping. Thus, the same survey information can support widely different estimates, yet this type of uncertainty is unlikely to be reduced by more data.

William Johnson used the OTA survey to examine some of the factors that influence home audiotaping and purchasing originals. Johnson found that individual choice between copying and buying originals is determined in part by the person's value of time: a person who values his time highly tends to copy less and buy more. Johnson also found that income increases the demand for both copies and purchases and that copying is more concentrated among the young. He was unable, however, to detect statistically significant estimates of the extent that copies substitute for originals.

Fred Mannering used survey data on the consumers' choice of format for listening to music to estimate econometric models of consumers' choice between purchasing recorded music and taping it. He used these estimates to determine the change in consumers' economic welfare (based on their valuation of homemade tapes) in response to a hypothetical ban on home audiotaping. In addition, he estimated hypothetical changes in recording-industry revenues (under various assumptions about the degree to which home tapes displace and/or stimulate sales of recorded music) and hypothetical changes in blank-tape revenues (assuming fewer blank tapes were sold absent copying). While the scenario of a ban is extreme, it allows the change in recording-industry revenues without home taping to be estimated in a manner comparable to Townsend & Greenspan's (see ch. 7), along with effects on blank-tape industry revenues and consumers. The net effect on industry revenues is the sum of the estimated changes in recording-industry and blank-tape revenues. The net effect on society's economic welfare was approximated by adding the industry and consumer effects.

Chapter 7 discusses Mannering's analysis in detail, and presents estimates of the hypothetical effects of a ban on home taping that the same set of survey and other data can be "shown" to support.[28] These examples produce a broad range– varying by a factor of 30–of hypothetical recording-industry revenue changes absent home audiotaping.[29] These variations do not, however, alter the qualitative result, which indicates a consistent loss in consumers' economic welfare and in society's net economic welfare.

The estimated loss in consumers' economic welfare reflects the value consumers place on home taping. It is a monetary valuation of consumers' loss in satisfaction, *without any loss in actual income,* after a taping ban. Absent taping, not all home tapes would be replaced by purchases. (Other applications of this type of analysis include estimating the monetary value of consumers' dissatisfaction from increased airline travel time and the monetary value of increased satisfaction from reducing the time between airline departures.[30])

[28] See tables 7-11 and 7-12.

[29] The variations–24 examples in all, shown in tables 7-11 and 7-12 –differ according to: whether both prerecorded and broadcast music taping or only taping from prerecorded sources is banned, whether an attempt is made to correct for business use of blank tapes, how much sales-displacing material is assumed to be on each tape, how the OTA survey questions on displacement are interpreted and/or discounted to produce a sales displacement rate, and whether the ability to make home tapes is assumed to st i mu late some purchases of prerecorded music.

[30] Steven Morrison and Clifford Winston, ***Economic Effects of Airline Deregulation*** (Washington, DC: The Brookings Institution, 19$6).

Although home taping may reduce the recording industry's revenues, Mannering's analysis suggests that in the *short term* a ban on audiotaping would reduce blank-tape revenues, be more harmful to consumers than beneficial to the recording industry, and result in a loss of benefits to society in the billions of dollars. The *longer-term* consequences of a ban are less clear, and would depend on how recording-industry profits were invested, on how increased revenues would affect the creation of new works, on how recording companies chose to price recordings, on what new technologies were introduced, and on how consumers' tastes changed.[31] **In the long term, the net effects on society's economic welfare might be positive or negative.**

Even if policy formulation is based on short-term economic considerations, net effects should be considered along with effects on individual industries and consumers. Based **on the OTA survey data, Mannering's results show there is no single estimate of the dollar values gained or lost as the result of a taping ban.**[32] A ban would have distributional effects among industries (i.e., recording- versus blank-tape) and consumers, but these effects don't balance. Instead, because consumer benefits from home taping appear to be so large, a ban would result in a large net loss of benefits to society. These net effects should be considered in policy formulation. It is potentially misleading to base policy on an estimate of only one of several harms or benefits.

Congressional Role

Congress faces a complex set of choices regarding home copying. The question of whether the public interest is better served by extending copyright proprietors' rights to private use (thus allowing them to prevent or demand payment for private uses, such as home copying) is fundamental in making these choices. The next section of this chapter discusses the dimensions of the policy choices facing Congress, and presents options to implement them. For the more specific options, the focus is on home audio copying. The final section discusses implementation considerations.

POLICY CHOICES AND OPTIONS

Introduction

Some choices facing Congress offer broad alternatives for action, cutting across boundaries of industry and technology, and offering the opportunity to establish policies for the next decade and beyond. Other alternatives are more narrowly defined within a particular industry or technology, such as home audio copying or home use of DAT recorders. While more narrowly defined policies may be more easily formulated, their usefulness may be shorter-lived, as technology creates other problems.

Previously, the state of technology made an explicit determination about the extent of copyright proprietors' rights over private use less crucial than today. There was less private use and enforcement against private copying was difficult. Now, technological changes have lowered the cost and increased the scope of private copying; at the same time, technological changes make it possible to impose high barriers to unauthorized private copying.

[31] Assessing the long-term effects of financial incentives on creativity and output would be extremely difficult and would require full disclosure of proprietary industry data.

[32] Depending on selections among reasonable assumptions, following a taping ban recording-industry revenues might not change much or might increase by several tens of percent. Blank-tape revenues would decline substantially. See ch. 7 and tables 7-11 and 7-12.

Technological change will continue to erode niche boundaries based on the content or format of copyrighted works and there are spillover effects between industries.[33] Even quite specific options for dealing with home copying must be selected within the broader legal context of private use.

The first choice Congress faces is whether to address home copying issues at all at this time. If it does not act now, or avoids premature legislation that might soon become obsolete, then home audiotaping issues will likely be resolved – with some delay and in a piecemeal fashion – by inter-industry accommodations and/or the courts. As a consequence, the underlying issues of private use will likely resurface in other areas like home videotaping, electronic information, and computer software and result in legal uncertainties that will further complicate industry decisionmaking. Moreover, industry agreements may still require congressional action to ratify the agreement for purposes of enforcement or relief from antitrust. A series of piecemeal accommodations would incrementally define the boundaries of the copyright law.

If Congress chooses to act now, then it must choose whether to address home copying in a comprehensive or limited fashion. Comprehensive policies may be more long-lived, but may take longer and be more difficult to formulate. Limited policies might be developed more quickly but would not resolve parallel issues in other areas. Meanwhile, home-copying controversies in these other areas might result in technological "solutions" that would have the effect of changing the copyright law to extend copyright proprietors' rights into private use. Moreover, polices developed by Congress for a specific area might be argued as precedents in another.

Whether Congress' approach to home copying is broad or narrow, a third set of choices applies for each (or any) area of home-copying: whether to allow it, foster it, or restrict it. To "allow)' home copying would mean stating explicitly that proprietors' rights do not extend into private use. To "foster" home copying would mean not only "allowing" it, but also limiting anticopying measures, including agreements to implement technological copy protections. To "restrict" home copying would mean stating explicitly that proprietors' rights extend to private use– that home copying is copyright infringement. Restricting home copying could also include provisions for legal enforcement of copying bans, mandatory use of technological copy protection, and/or compulsory licenses and fees for home copying.

Interim, narrowly focused legislation might relieve some of the pressing issues in the near term, thus providing time to formulate comprehensive solutions. If this strategy is chosen, the preferred interim policy options (pending comprehensive resolution) might be different from those preferred if only the near-term view is considered. Some interim measures are more difficult or costly to undo than others. For example, an interim home-copying royalty fee could eventually be rescinded, but there would be some inertia, and recipients may have come to view it as an entitlement (e.g., as individuals have viewed subsidized local telephone service or as consumers view their "right" to make home copies). Some technological means for copy-protection may be embedded in the works themselves (e.g., the Copycode "notching"); if changes in the law subsequently held that the

'For example, DAT can be used for computer data storage as well as audiotaping. Some industry observers consider that the controversy over DAT audiotaping has affected development of DAT computer peripherals.

private copying did not infringe copyright, then it might be difficult or costly to undo the protection (e.g., consumers who had purchased players with scanner chips would have to bypass them).

Advisory panel members from the creative and performing arts communities consider home copying (which in their view reduces income to performers and creators) to be particularly unfair to their groups because, compared to recording companies, they tend to be underfunded. They see digital copying as the latest in a series of technologies that has progressively taken away work from performers and musicians and has increased the need for subsidies to maintain the arts. *Opinions differed among members of OTA's advisory panel on the relative importance of home copying to the problem of encouraging the arts. But several panel members felt that the overall issue of financial support for the arts deserves attention. This, however, is beyond the scope of this study.*

Fundamental Copyright Policy Questions

Underlying the choices facing Congress are fundamental policy questions and value judgments. Foremost among these is the issue of whether copyright holders' rights should be extended to private use. Audiotaping has been widespread for years. Copyright holders like recording companies have been unable to prevent home copying unilaterally and have not been able to secure legislation explicitly establishing their rights over home copying and/or home-copying royalties. Technological changes now make it possible for copyright proprietors to restrict unauthorized copying. However, for audio copying, implementing technological copy protections would require agreements between the recording industry and audio-equipment manufacturers and/or legislation.[34]

The intent of U.S. copyright law is to serve the public interest by jointly promoting widespread dissemination of intellectual property while providing sufficient incentives for the creation and distribution of new works. New technologies can assist in both goals.

New **technologies are able to extend the traditional bounds of copyright to include private use. The major question facing Congress is whether extending copyright proprietors' rights to private use is necessary to serve the public interest.**[35]

Other questions concern the rights of the artist or creator versus the rights of the consumer to modify the artistic works. In the United States, the creative artist has traditionally had no protection or control over his work once it is sold (see ch. 3). The purchaser has been free to use, modify, or mutilate the work.[36] Until now, there has been a clear distinction between mass-produced entertainment products and artistic works that are unique or produced in limited numbers. New technologies may provide consumers with the

[34]For example, microprocessors embedded in recorders could recognize copy-protection codes in the software, along with other codes that identify the specific work.

[35]OTA is grateful t. D. Moulton for his comments in this regard. Noting the rapid transformation of creative works into the digital realm, and the consequential improvements in (lower-cost) storage, transmission, and reproduction, Moulton considers that a copyright law for future decades will have to address the issue of compensation due copyright holders whose works are not tied to or fixed in physical media. Toward this end, Moulton suggests a broad approach focusing on documenting and compensating the transfer and use of such intellectual property. (David Moulton, Berklee College of Music, personal communication, Aug. 5, 1988.)

[36]Some recent controversies concerning artists' rights have involved motion pictures (colonization and time compression) and fine arts (painting sculptures), Another involves the rights of composers– protection against "material alteration" for works used for motion picture soundtracks –and writers whose existing works are later incorporated into motion pictures (Bill Holland, "U.S. Pushes 'Moral Rights' for Composers, " *Billboard*, Apr. 1, 1989, p. 4.).

means to modify unique or limited-production works and to create derivative works. The extent to which this becomes possible depends as much on the legal status of these uses as on the state of technology. Thus, congressional consideration of home-copying policies may require some attention to questions about the broader concept of artists' rights and copyright (see box 1-A).

Choices for Congress

The first decision that Congress faces is whether to address home-copying issues at all at this time. This is a real choice — to act now or not. Either choice has its merits. Congress might choose to rely on the courts to resolve home-copying cases according to existing law. Waiting would allow the effects of new digital copying technologies to become more evident, so that any eventual copyright legislation could be based on real experience, rather than on assumptions or projections from analog-copying experiences. If the choice is *not* to act now— i.e., the choice is to maintain the status quo or to avoid premature legislation – then the issues raised by the home audiotaping controversy will likely be slowly addressed in a piecemeal fashion by the courts,[37] by threats of lawsuits,[38] and/or by private arrangements

Box l-A– Questions Concerning Artists' Rights and Private Use

In some European countries a major goal of copyright laws is to protect the connection between the artist and his work through artists' rights or moral rights recognizing the author's creation of the work and/or prohibiting the change, mutilation, or alteration of artists' works. Artists' rights were first recognized by the Berne Convention in 1928. In adhering to the Berne Convention in 1989 the United States specifically did not agree to the provisions for moral/artists' rights (see ch. 3).

. Should the European tradition of moral rights be adopted in the United States so that artists have continuing or permanent rights to the "integrity" of a work? Or, are the creative, economic, and legal differences great enough that a different approach for dealing with artists' rights is desirable?

● If artists' rights are granted in the United States, should these rights end at the home, or should they encompass private domestic uses? Should purchasers be able to do whatever they want with the work within the home — including modifying, enhancing, or destroying it?

. If a purchaser "customizes" a work to meet his or her needs (e.g., cuts a painting down to fit in the home or copies only **favorite** songs from an album to make a custom audiotape), should the Government step into what may be a purely "personal" occurrence? Where are the boundaries?

. If artists' rights are granted in the United States, can they be enforced? How, when, and by whom? What will he the effect on the market valuation of works? What are the privacy and First Amendment implications of enforcement over home uses?

. If artists' rights are granted in the United States, should they only address financial loss, or should emotional distress or a lessening of the artist's creative reputation be included? Who would determine the extent of these harms, and how? Arguably, situations could exist where modification of a work could enhance it aesthetically or materially. Should such modifications constitute "harm"?

SOURCE: OTA

37 The 1984 Supreme Court decision about home videotaping is an example. Although the Supreme Court and Other courts have provided some guidance in home-copying situations, many questions and issues remain unresolved; the Supreme Court has previously inferred that Congress may wish to examine such issues (see ch. 3).

38 This type of threat has been at least partially responsible for the delayed introduction of consumer DAT machines to the U.S. market – now 2 years or more.

between the hardware and software industries themselves.[39]

But court decisions will not put home-copying issues to rest. Issues that surfaced for home audiotaping have already begun to resurface in other areas, like home video, computer software, and other forms of electronic information and entertainment.[40] Absent congressional action, these new controversies might also be dealt within a piecemeal fashion, with industry or the courts incrementally delineating the boundaries of copyright law. Because of antitrust considerations, Government involvement might still be sought to ratify or enforce intra- or interindustry agreements (see box l-B). Over the long term, this pattern of threatened litigation and/or requests for special legislation will become cumbersome and costly to society. The technological trends discussed in the next chapter will tend to increase the number, frequency, and complexity of questions about home copying and private use. Further erosion of niche boundaries can undermine "piecemeal" solutions. Moreover, some copyright proprietors consider that nonaction could disastrously reduce economic returns from intellectual property. The recording industry considers that, "If the rights of copyright owners are not adequately protected, the continued viability of our industry cannot be maintained."[41]

Market uncertainties, deriving from legal uncertainties,[42] have delayed or complicated the introduction of new consumer electronics hardware and new audio formats (for example, DAT and now, erasable/recordable compact discs), and have made market solutions doubtful. There are other difficulties with market solutions:[43] because it is difficult to distinguish between copiers and noncopiers,dd a "pay at the source" approach for copying through the pricing of recordings would likely increase prices for tapers and nontapers alike, with the possibility of reducing demand for originals or encouraging more copying. Offering copyable and copy-protected versions of prerecorded works, or bundling products (e.g., packaging a CD and cassette together at a discounted price) have been considered impractical. However, if home copying was explicitly declared *not* to be an infringing use, then manufacturers and retailers might find it more advantageous to change pricing or product lines.

Similarly, uncertainties stemming from the ambiguous status of home copying may also delay the introduction of new products and technologies in other areas, perhaps affecting the prospects for telecommunications systems, such as fiber-optic cable or new media like high-definition television (HDTV).[45] The effects of these uncertainties and delays are not limited to hardware. Incentives to create

[39] In early 1989, the consumer electronics and record industries reportedly began negotiating agreements regarding DAT machines; the discussions reportedly centered on technical methods to prevent home taping and/or fees on DAT machines or tapes. (Shig Fujita, "Hardware Firms, Labels Closer to Accord on DAT," *Billboard*, Apr. 1, 1989, p. 1; *TV Digest, vol.* 29, No. 12, Mar. 20, 1989, p. 16.)

[40] For example, there is now a movement by the Motion Picture Association of America (MPAA) for technological copy-protection for motion pictures delivered via pay cable and pay-per-view (PPV) services (see ch. 2).

[41] H. Rosen, RIAA, letter to J. Winston, OTA, May 2, 1989, p. 2.

● For example, a firm that considers home copying "illegal" is more likely to seek to prevent home copying, or to be compensated for it, than to change pricing policies to reflect the added value of originals as a potential source of copies.

[43] See ch. 7.

[44] The prevalence of home copying varies according to the type of material. For example, most of the OTA survey respondents had audio recording equipment, and about half reported making home copies from prerecorded material. By contrast, only about one-fifth of the VCR owners had ever copied a prerecorded videotape.

[45] These new infrastructures are examined in U.S. Congress, Office of Technology Assessment, *Critical Connections: Communication for the Future,* OTA-CIT-407 (Washington, DC: U.S. Government Printing Office, forthcoming)

Box 1--B– Industry Agreements and Antitrust

Businesses that desire to join together as an industry to protect their economic interests have two sources of potential protection from the antitrust laws. First, they may direct their actions toward legislative or executive bodies and gain protection under the Noerr-Pennington doctrine. Since the Noerr-Pennington doctrine applies only to government petition, however, Congress or a designated agency would still have to approve industry agreements that require antitrust exemption. Second, they may request a prior *review* of their intended actions by the Antitrust Division of the Department of Justice under 28 CFR section 50.6. The Antitrust Division claims not to be constrained by its business reviews, however. Also, a large proportion of antitrust cases are brought by private plaintiffs, and it is not clear how much private litigation is deterred by business reviews. [1]

The Noerr-Pennington doctrine, initially formulated in a 1961 railroad case *(Eastern R.R. President Conf. v. Noerr Motor Freight, Inc., 365* U.S. 127 (1961)), holds that joint efforts by businesses to influence legislative or executive action represent *political* action (protected by the First Amendment), which Congress did not intend to regulate through the antitrust laws. As the U.S. Supreme Court observed, "the very concept of representation depends upon the ability of the people to make their wishes known" (ibid. at 37), and so "efforts to influence public officials, regardless of intent or purpose...do not violate the antitrust laws, even though *intended* to eliminate competition". *(United Mine Workers v. Pennington,* 381 U.S. 657,670 (1965))

Although the Department of Justice is not authorized to give advisory opinions to private parties, for several decades the Antitrust Division has been willing (under certain circumstances) to review proposed business conduct and state its enforcement intentions. A request for business review must be made in writing to the Assistant Attorney General (Antitrust Division); the requesting parties are under an affirmative obligation to make full and true disclosure with respect to the business conduct for which the review is requested. After the review, the Division may: (i) state its enforcement intention, (ii) decline to pass on the request, or (iii) take such other position or action as it considers appropriate. The Division remains free to bring whatever action or proceeding it subsequently determines that the public interest requires. The request, reply, and other supporting information are generally placed in a public file, unless a firm can make a case for withholding it from the public. To date the Department has never brought a criminal action where there has been true and full disclosure at the time of presenting the request. (Excerpted from 28 CFR, section 50.6,)

According to the Antitrust Division, at the time of publication, there was no public information as to whether the recording industry had submitted a request for a business review.

SOURCE: OTA

[1] T. Brennan, The George Washington University, personal communication, Apr. 24, 1989.

and produce new types of works can also be affected, although these effects cannot be estimated with precision. The linkages are extremely complex, and the effects of changing financial incentives on the supply of creative works are very long-term.

Whatever policy measures are selected, the transition will have adjustment costs; a "seamless)' transition is unlikely.[46] Who bears these costs and how they are distributed among the hardware industries, the software industries, consumers, and the general public depend on the policies chosen.[47] **Choosing an appropriate balance of harms and benefits from uses of new technologies is a political** decision, not a technical one, in which the public has a stake.

[46] There are several possible adjustments. One could be changes in the current levels and/or distribution of industry costs, revenues, and royalties. Another could be establishing mechanisms and institutions to enforce prohibitions on copying and/or to collect and distribute new licensing fees. Still another could be changes in the way one or more industries do business – evolving to new products, new technologies, new markets.

47 The current home-copying debates have been largely distributional in nature, so it is not surprising that policies to resolve them have distributional consequences.

Policy Options

Option 1: Take no action on home copying at this time.

Congress could avoid premature remedies that might be short-lived, and wait until the impacts of digital technologies are assessed. The drawback is that the ambiguous legal status of home copying might hinder creativity and delay the introduction of new consumer technologies. Moreover, the home audiotaping issue, and similar controversies in videotaping and computer software, might lead to piecemeal solutions by the courts or the industries involved. The results of such accommodations might be difficult to undo if they should prove ineffective.

Option 2: Deal with home copying in a broad context. Consider the general problems associated with copyrighted works and technological trends. Determine whether the public interest warrants allowing, fostering, or restricting home copying generally, or specifically for certain types of works.

By taking this action, Congress could establish a relatively stable legal environment and eliminate some market uncertainties. This may take several years to achieve. In the meantime, market and legal uncertainties would continue, and might lead to industry actions such as "voluntary' technological copy-protection. Such measures would, in effect, extend the rights of copyright proprietors into private use before Congress had determined whether it was in the public interest to do SO.

Option 3A: Allow home audio copying.

Option 3B: Allow analog home audio copying

Option 3c: Allow digital home audio copying

These options would end at least some of the legal uncertainties of home audio copying and would free firms to make decisions about prices and product lines in a more certain atmosphere. Copyright proprietors, such as recording companies and music publishers, would be free to copy-protect their works, but clever consumers could circumvent these measures. Intra- or interindustry agreements would be subject to the antitrust laws, but might be accorded special exemptions.

Analog and digital copying could be treated separately. Home analog copying is well established, and might be more dificult to prohibit, restrict, or license than home digital copying, which is not yet widespread in the United States. Because of its speed and high quality, digital copying is thought to present the greater legal and market challenge.

Option 4A: Foster home audio copying.

option **4B:** Foster analog home audio copying

Option ***4c:*** Foster digital home audio copying

Legal uncertainties would be reduced. Under these options, industry agreements to implement copy-protection technologies would likely not withstand antitrust review.

Option 5A: Extend copyright holders' rights into private use and prohibit home audio copying by requiring the use of copy-protection technologies in recorders and software.

Option 5B: Extend copyright holders' rights into private use and prohibit analog home audio copying by requiring the use of copy-protection technologies in recorders and software.

Option 5c: Extend copyright holders' rights into private use and prohibit digital home audio copying by requiring the use of copy-protection technologies in recorders and software.

These options would increase the prices of hardware, because additional features (e.g., protection circuitry and logic) would be re-

quired. The effects on overall demands for hardware and software are uncertain.

Option 6A: Extend copy-right holders' rights into private use and establish a compulsory license for home audio copying.

Option 6B: Extend copyright holders' rights into private use and establish a compulsory license for analog home audio copying.

Option 6C: Extend copyright holders' rights into private use and establish a compulsory license for digital home audio copying.

Congress would have to establish means and criteria for administering and distributing the royalties, and determine whether they should be applied to sales of recorders, recording media, or both.

Option 7A: Extend copyright holders' rights into private use but establish a free compulsory license for home audio copying.

Option 7B: Extend copyright holders' rights into private use but establish a free compulsory license for analog home audio copying.

Option 7c: Extend copyright holders' rights into private use but establish a free compulsory license for digital home audio copying.

This option would broaden the scope of copyright but would retain flexibility in restricting copying or establishing royalties. Observed usage patterns for the new digital copying technologies could be used as a basis for policy, instead of forcing policy-makers to act on assumptions about consumer tastes and behaviors.

Option 8: Select from the above, with different treatment for analog and digital copying, or specific types of copying (e.g., multigenerationa1 copies).

Combinations could allow current behaviors to continue but could tailor uses of new technologies or products (e.g., combining Options 3C and 4B, or 5C and 7B, etc.).

CONSIDERATIONS FOR POLICY IMPLEMENTATION

Distinguishing Among Types of Home Copying

In considering whether to allow, foster, or restrict home copying, or to take no action at this time, Congress must define what home copying is.[48] Furthermore, Congress might wish to set policies that make special provisions for particular types of home copying. Statutory definitions of home copying could be drafted broadly or narrowly and segmented into categories of type and use.

For example, home copies may be made from purchased, rented, or borrowed originals, or from broadcast or pay-per-view material. They may be made for personal use or for a friend or relative. Copies may be made for one-time use or as additions to a home-recording "library."@

The benefits consumers derive from home copying and the impact of home copying on revenues earned by copyright holders depend on the nature of the copy and how it is used (see box 1-C). Home copies are often more flexible than "originals." They can be interrupted, restarted, and manipulated; the programming can be customized for personal

48 For example, the new British copyright law defined "time-shifting" and "cable programming)' when declaring that time-shifting of broadcast or cable programs was not an infringement.

49 Note that these attributes are not intended to be *niche*. specific – for example, one criterion is not whether the commercial source material is "audio" or "video" but whether or not it is priced for a single use or unlimited uses.

Box l-C–Attributes and Uses of Home Copies

Attributes

The *source* of the copyrighted material used to make a home copy could be one or several purchased, rented, or borrowed "hard copy" originals (e.g., records or commercial videocassettes), or original material delivered to the home by broadcast stations (radio, television) or cable/satellite system operators (basic, premium, or pay-per-view services). The original material might be integrated with advertising (e.g., commercial broadcast television or basic cable), delivered with surrounding advertising (e.g., radio, public television, "previews" at the beginning or end of a commercial videocassette), or delivered without advertising (e.g., premium cable channels).

Home copies may be made in the identical *format* as the original, or in formats that differ in terms of the physical configuration (e.g., record/tape/CD), and the forms in which the original and copy store the work *(e.g.,* analog or digital). For example, a DAT recorder could make a digital copy of a prerecorded DAT cassette, or it could make a digital copy of the analog material on a record (by sampling the analog signal). "Format-shifting" (particularly from records to tapes, and from digital compact discs to analog tapes) is currently important for home audiotaping. The OTA survey found that only about a third of home audiotapes made by respondents using prerecorded sources were copied from prerecorded cassettes. The bulk of home audiotapes of this type were copied from records and CDs, presumably for portable or car use. Moreover, an original maybe the source of more than one copy, although the results need not be identical (e.g., a song may be copied onto two different selection tapes).

uses

The uses made of originals or home copies vary according to three dimensions: the frequency of use, the manner of use, and the identity of the user. Looking first at *frequency of use, we see* that an "original" maybe offered in the marketplace for a single use (e.g., a pay-per-view movie or sports event), multiple uses within a freed time period (e.g., a rented videocassette tape), or unlimited uses (e.g., a purchased videocassette tape). A purchased (tangible) original or a home copy are potentially available for unlimited uses. In practice, however, some types of home copies are made to be used only temporarily — e.g., a time-shifted television serial or sports event — while others are intended for repeated uses — e.g., a homemade selection tape of favorite songs, or a homemade copy of a prerecorded videocassette tape.

The *manner of use* of an original or copy may be uninterrupted (e.g., original broadcast material or pay-per-view movies/concerts), or interruptible and/or manipulable (e.g., a purchased original or homemade audio- or videotape that can be stopped and started again after a refreshment break, rewound to catch a missed detail, or "zipped" past commercials).

The ***identity of the user*** of the original and home-made copy maybe the same or different. An owner of an original may use it to make copies for himself or others, he may rent an original to copy, or he may borrow an original from another household member, or a relative or acquaintance.

SOURCE: OTA

taste. To the extent that consumers value this flexibility, they will prefer copies to originals. Originals then become more valuable as a source of copies. Copyright proprietors may be unwilling or unable to adjust prices to account for copying, they may be unable to capture the added value for other reasons, or they may prefer to sell multiple identical originals (e.g., record and tape) than increase retail prices to recover consumers' valuation of copies (for changing from record to tape, custom programming, etc.).[50]

[50] By contrast, the trend toward pay-per-transaction video rentals (see ch. 2) reflects in part the desire of copyright proprietors to share in each rental transaction, as opposed to setting a standard price not based on usage.

For original materials that are supported by advertising (like broadcast or cable programming), home copying ostensibly reduces the value of advertising as well. For example, commercials may not be copied, or if copied, may be "zipped" through.[51] For works that are entitled to performance royalties, because the majority of performers' payments come from fees for *reuse* established in collective-bargaining arrangements, some performing-artist and musician groups believe that their income is reduced if home copying cuts down on repeat broadcast performances.[52]

Detailed categories of home copying could be established (box 1-D),[53] but the number entitled to special treatment through public policy are fewer. It is probably practical to identify only four types of home copying that might merit special policy treatment:

- Copies made from commercial material that is priced according to the expected frequency of usage – e.g., rented originals or material delivered to the home on a fee-per-use basis[54]
- Multiple copies made from the same original
- Multigenerational copies (copies of copies)
- Digital copies

Technological Copy Protections

Implications of Allowing, Fostering, or Restricting Home Copying

Congress could foster or restrict home copying by prohibiting or encouraging technologies designed to control it. Technological restrictions could be built into recording hardware, software, and/or electronically transmitted material. If Congress chose to continue the status quo of allowing home copying, then copyright holders could possibly act on their own to prevent unauthorized copying through technological means.

To *restrict* home copying, Congress might choose to prohibit the domestic sale or importation of recording equipment that did not include a device or circuit to prevent unauthorized copying (e.g., by recognizing special codes embedded in software or transmissions). The Commission of the European Communities' 1988 Green Paper favored this approach tore-

[51] While many newer television sets come with remote control features, and some cable services offer remote control channel selection, for many households it was the VCR that first brought remote control into the home. One aspect of remet e control/VCR use that attracted attention during the Sony case was the potential to not record or to fast-forward time-shifted material past corn mercials. Now, with remote-controls, consumers not only "zip" through commercials during playback, they "zap" from one channel to another during commercials while watching TV. As a result, particularly with the expanded offerings on cable, consumers (particularly those under age 35) are "grazing": flipping through channels out of boredom or to see what else is on. (Peter Ainslie, "Confronting Nation of Grazers," ***Channels,*** September 1988, pp. 54-62. ***Channels*** commissioned a national survey of TV viewing habits.)

A recent survey found that at least 66 million households have remote controls and that, on average, viewers with remote controls or cable "usually" watch twice as many different channels as those without, and those with VCRs watch more channels t han those without. (Data from Commercial Analysts Co. and Frank Magid Assoc. reported in ***Multichannel News,*** Oct. 31, 1988, p. 53.)

[52] OTA staff interviews with representatives of performing artists and musicians, Jul. 13, 1988.

[53] For example, one category might consist of copies of broadcast material kept within the household for a single manipulable use. Another category might consist of copies containing portions of several owned recordings, kept within the household and made to provide the material in a different storage medium for unlimited uses.

[54] The latter would include pay-per-view offerings. Note, however, that pay-per-view is different from direct electronic delivery as discussed in ch. 2. Original material purchased via direct electronic delivery would be treated like any other purchased *original.*

Alternatively, prices for these services could be raised to take copying into account, or copyable and copy-protected versions could be offered at different prices.

Box 1-D–Parameters of Home Copying

The source of the material copied:

- ● Tangible sources
  - Prerecorded material owned within the household
  - Prerecorded material borrowed from outside the household
  - Prerecorded material that has been commercially rented
- . Intangible sources
  - Free broadcast material
  - Material delivered via basic cable service (e.g., broadcast stations)
  - Material delivered via premium cable subscription services
  - Material delivered via delivery-on-demand with per-transaction payment (e.g., pay-per-view)

The disposition and use of the copy:

- ● Kept within the household
- . Given to others outside the household
- ● Loaned to others outside the household

The format of the copy and original:

- ● Same or different storage medium (format shifting)
- . Multiple (partial) copies from the same original
- . Multiple identical copies
- . Multigenerational copies ("cloning" copies of copies)
- . Analog or digital original
- . Analog or digital copy

Quantity and quality of use:

- ● Single uninterrupted use
- . Single interruptible use
- . Single manipulable use
- . Multiple uninterrupted uses for a fixed time period
- . Multiple interruptible/manipulable uses for a freed time period
- . Unlimited interruptible/manipulable uses

SOURCE: OTA

strict digital copying of digital sound recordings.[55] While hardware manufacturers and consumers might complain that such a law would be a costly burden, it would not be the first time that Congress had implemented a technical requirement for domestic consumer-electronics sales. In 1962, Congress passed the "All Channels Receiver Act,"[56] which authorized the Federal Communications Commission (FCC) to prohibit television receiver manufacturers from selling sets that did not receive UHF broadcast stations. In that case, the intent was to foster UHF broadcasting.

In pursuit of this policy, Congress could be expected to permit producers of copyrighted material (e.g., recording companies) to embed copy-protection codes in the software they produced (like computer software is sometimes protected), and perhaps even to require that broadcasters who played copy-protected material (e.g., radio stations) include any anticopying codes in their transmissions instead of removing them before transmission.

To *foster* home copying, Congress might prohibit the sale of recording equipment that is engineered to hinder home copying or other copying deemed fair use, since such designs would be considered restraints of trade. Similarly, Congress might prohibit users of the publicly owned broadcast spectrum from broadcasting anticopy codes that would prevent time-shifting playing at a later time. Such legislation would be justifiable on the same basis as the Copyright Act's first-sale doctrine limiting copyright proprietors' rights (see ch. 3). Finally, Congress might even prohibit software producers (e.g., recording companies) from embedding copy-protection codes in their products, though this would probably be unnecessary in the absence of sensing devices in recorders.

[55] Commission of the European Communities, Green *Paper on* Copyright *and the Challenge of Technology: Copyright Issues Requiring Immediate Attention,* COM(88) 172 final, (Brussels, Belgium: June 7, 1988), p. 136.

[56] Public law 87-529, sw.. 1 (76 Stat. 150, codified at 47 USC 303(s)).

If Congress chose not to act at this time, or chose to *allow* home copying, then copyright holders, such as the recording companies, could act on their own to frustrate unauthorized home copying. Any actions they took to lobby Congress, the executive branch, or the Copyright Office to promulgate protective regulations would seem to fall under the Noerr-Pennington doctrine, and would thereby protect them against antitrust prosecution. If the copyright holders sought to threaten hardware manufacturers to prevent them from marketing recorders that did not adequately inhibit home copying, however, they would face a high risk of antitrust lawsuits.

If Congress were unwilling to require recorders to have anticopying devices, one way for copyright holders to possibly avoid antitrust action would be to submit a letter to the Antitrust Division of the Department of Justice explaining the economic justifications for the proposed action and requesting a business review. If the Department of Justice concurs that the benefits of this protection outweighs its costs (including restrictions on fair-use copying) then they would be protected against Government-initiated antitrust lawsuits. Private antitrust actions could still be initiated but the deference generally given to such Government actions in rule-of-reason cases (as this would be) would likely discourage private plaintiffs.

Special industry exemptions from the antitrust laws are rare and frowned upon by the Department of Justice, and the success of an application for exemption in such circumstances is doubtful. Although (for instance) the soft-drink industry was able to secure a special exemption for its territorial exclusivity agreements,[57] it would seem unlikely that Congress would grant such an exemption, if it were not willing to require recording equipment to contain anticopying devices.

Consumer Resistance

Technological copy protection would likely face resistance from some consumers, particularly in the case of home audiotaping.[58] Although the OTA survey found the public unsure about the fairness of home copying to the copyright owners, they clearly opposed any restrictions on copying. The majority considered changes such as copy protections or fees to be unfair (see ch. 6). Therefore, unless there were legal prohibitions on doing so – and perhaps even if there were — consumers might be inclined to circumvent them if possible, or even to purchase devices to circumvent the protection. Unless prohibited and policed, "gray markets" would likely emerge for recorders without copy-protection or for modified machines.[59]

Provisions for Fair-Use Copying

Any copy-protection technology would have to accommodate fair-use copying (unless the concept of fair use was narrowed) and allow copying of a work once its copyright had expired and it was in the public domain.[60] Special classes of recorders, software, and/or blank media might be required for certain

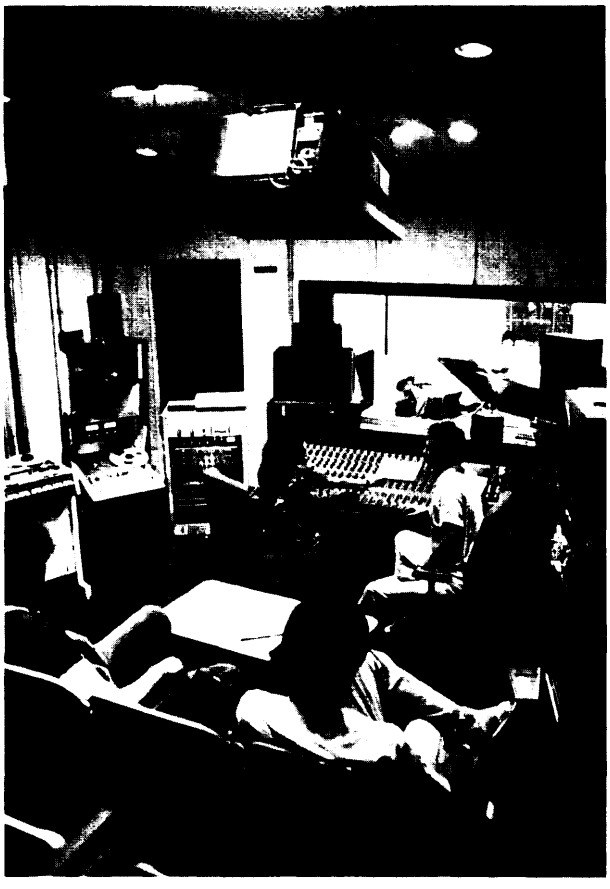
[57] Public Law 96-308, codified at 15 USC 3501.

[58] In the case of computer software, Copy protection has almost disappeared because of consumer resistance and preference for unprotected software; protected software was difficult or impossible to back up for archival purposes or use with a hard disk.

[59] Since 1988, there has been an active gray market for DAT recorders.

[60] For example, a music student might want to copy a particular piano passage – as played by three different pianists – to study differences in technique and expression. Many individuals who are not full-time students or "professional" musicians, composers, or songwriters are actively interested and involved in the study and/or creation of music.

Some believe that the prospect of private use in an era of digital technologies is so disastrous that the doctrine of fair use itself should be repealed. (Eric Fleischmann, "The Impact of Digital Technology on Copyright Law," *Journal of the Patent Office Society,* vol. 70, January 1988, pp. 5-26.)



Credit: Berklee College of Music

M stu ts tu tempo ry ec g tec og

a f u k p fe nal mu an
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Recent Developments: SCMS

As this report was being published, an agreement between the recording industry and consumer-electronics manufacturers was announced. The parties agreed to seek legislation requiring a new DAT format to control multigenerational digital copying on DAT recorders (see details in box l-E). This technological copy protection, called Serial Copy Management System (SCMS), would restrict multigenerational copying of digital audiotapes copied from analog sources or copyrighted digital sources. However, first-generation, direct digital-to-digital DAT copies of CDs or other digital sources would not be restricted.

Compulsory Licenses

An alternative to prohibiting home copying entirely would be to grant some type of *compulsory license* to home copiers, with or without use of copy-protection technologies. A licensing system would also allow reciprocal arrangements with other countries for the payment of home-copying royalties.

One option would be to attach a fee to recorders. Alternatively, a compulsory-license-with-royalty could be combined with copy-protection devices in recorders, to allow "metered" copying.[61] Another option would be to attach a royalty fee to blank storage media. The option of a temporarily free compulsory license would preserve some flexibility

61 One proposed approach to this would be to se]] "debit cards, " carrying a preset value, which could be used to override copy-protect codes. The card would be inserted into the recorder, which would use a microprocessor to debit the card for the fee and record the identity of the material copied on the card or in the recorder's memory. If the "empty" cards were returned, the record of material copied could be used to distribute fees to the copyright owners. (OTA staITinterviews with recording-industry engineers, December 1988.)

For a description of magnetic-stripe or microchip "smart" cards and their uses in debit systems, see: U.S. Congress, Office of Technology Assessment, "Electronic Delivery of Public Assistance Benefits: Technology Options and Policy Issues," OTA-BP-CIT-47 (Washington, DC: U.S. Government Printing Office, April 19S8).

while establishing the legal principle of copyright proprietors' rights over private uses.

If the licensing approach were to be pursued, Congress would have to choose:

- where the royalty fees would be levied – on the blank recording media, on recorders, or both;
- how the royalty fees would be set–by whom and according to what standards; and
- how and by whom the revenues would be distributed.

There are a range of opinions on all of these issues. Several other countries have established home-copying royalty systems, and Norway and Sweden have each established a private-copying tax instead of a royalty system. In evaluating the appropriateness of these systems for the United States, political, legal, social, and market differences need to be taken into account (see ch. 5). Furthermore, some hardware and media might have multiple uses– e.g., DAT for audiotaping or computer data storage. This requires that even "narrow" options (e.g., a fee on media) must be considered in a broader technical context.

Levying the Fees

Fee on Recording Media–This approach has been followed in several countries, including Austria, France, Finland, West Germany, Iceland, Portugal, and Hungary; West Germany and Iceland also impose fees on recording equipment. None of the royalty schemes on recording media has been in place for more than a decade. Fees on the blank media are based either on a percentage of playing time, a percentage of the price, or per unit. Proceeds are distributed among the authors, performers, and producers of copyrighted recordings, based on distribution schemes developed by the individual countries (see table 5-1).[62]

Proponents of this approach consider that a fee on recording media is a more precise measure of how much copying is actually being done than a fee on the sale of the recording equipment. However, because media can be used for purposes other than unauthorized copying, it is not an exact measure. Some proposals have considered making distinctions between different types of recording media, such as tapes used for noncopyrighted material and those used for taping copyrighted music. A meaningful distinction by presumed use can be difficult to draw, however, since an audiotape meant to be used for lectures, dictation, etc. could just as well be used to copy copyrighted music. Distinctions based on different factors such as capacity, price, or quality have been suggested. OTA considers that the likely blurring of niche boundaries will make it increasingly difficult to distinguish between the various recording media available – for example, the same medium might be used to store copied music or computer data. Congress will have to be careful in crafting legislation to avoid being overly specific in using terms like "tape" or '(blank)' that create loopholes in the law,[63] especially in light of new storage technologies.[64]

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[62] Proceeds from blank-audiotape levies in 1987 ranged from about $3.2 million in Finland to $15.3 million in West Germany. Figures from 1988 indicate that revenue from France's blank-tape levy amounted to $16.3 million.

63 For instance one way t. avoid th, fee might be t. sell tapes that were not completely blank but were intended to be recorded over,

64 Future innovations might enable consumers to make copies on computer disks, optical discs, microchips, etc.

Box I-E–Industry Agreement Concerning DAT

On July 28, 1989, representatives of the international recording industry and several consumer electronics manufacturers announced the outcome of a series of working group meetings to negotiate joint recommendations on technological means to limit DAT copying. A Memorandum of Understanding (MOU) was signed in Athens, Greece in June 1989, and subsequently ratified by the participating parties. According to a background paper prepared by the RIAA and EIA,

> "The sole purpose of the Memorandum is to agree on joint recommendations to governmental authorities –the U.S. government, the European Commission, the Government of Japan, and other governmental bodies – as to a format for DAT that accommodates public policy concerns of consumers, artists, and industry, The *only* respect in which this Memorandum has any force or validity is the obligation to support the agreed recommendations to governments, and to plan further meetings addressing possible future recommendations to governments. The Memorandum and the discussions leading to it do not address, and have not addressed, any private business conduct or decisions. "

The recommended format for DAT is based on a version of the Philips "Solo-Copy" method for limiting serial (multigenerational) copying (see ch. *2* for a description of technical alternatives for restricting copying). The format, now called Serial Copy Management System (SCMS), would allow DAT recorders to be used for direct digital-to-digital copying, but would restrict making digital-to-digital copies of the copies. As proposed for DAT, SCMS would not affect home tapingo n conventional analog recorders. However, only one additional generation of copies of DAT tapes copied from analog inputs could be made.

In addition to the International Federation of the Phonographic Industry (IFPI) and RIAA, 15 European and Japanese consumer electronics companies participated in the working group that developed the MOU: Fujitsu General Corp., Grundig, Hitachi Ltd., Matsushita Electric Industrial Co. Ltd., Mitsubishi Electric Corp., NEC Home Electronics Ltd., Philips International B. V., Pioneer Electronic Corp., Sanyo Electric Co. Ltd., Sharp Corp., Sony Corp., TDK Inc., Thompson Consumer Electronics, Toshiba Corp., and Victor Company of Japan Ltd. EIA was not a participating party to the MOU, but was represented in Athens as an observer, and subsequently endorsed the United States legislative goals recommended in the MOU. SCMS standards will be proposed to the International Electrotechnical Commission.

According to EIA and RIAA, the objective of the agreement in the MOU is "government implementation" of the recommendations -i.e., mandating implementation of an SCMS standard– worldwide. In the United States, the EIA and RIAA have (as of August 1989) agreed to ask Congress to consider legislation implementing the recommendations and to work jointly to support its passage. Absent legislation, the parties are not bound to implement SCMS.

Serial Copy Management System (SCMS)

SCMS controls "serial" digital copying on DAT recorders — copying second, third, and successive generations of DAT tapes from a first-generation DAT copy. According to an EIA/RIAA background paper, SCMS will allow any original prerecorded work (e.g., a record, tape, or CD) to be copied indefinitely onto different blank DAT tapes. However, SCMS will limit the number of digital-to-digital copies that can be made from the copies, unless the source material is both digital and "unprotected".

As proposed, the SCMS standard for DAT would be implemented with a special chip (reportedly under development). With SCMS, the DAT sampling rate would he the same as the CD rate, allowing direct digital copying of CDs. Although earlier consumer-model DAT recorders might be retrofitted with the SCMS chip once it became available, the earlier models operate with a different sampling rate and do not permit direct digital copying of CDs.

The SCMS chip would be programmed to read copyright coding information already in the digital subcode channels of digital recordings and broadcasts. These channels are separate from the music channels and include "category codes" indicating what type of digital device is being used as the source (e.g., a CD player, whose output is protected, or a microphone with an internal analog-to-digital converter, whose output is not protected) and "copyright flags" indicating whether or not the material is marked for copyright protection. DAT recorders with SCMS chips would use the combination of the category code and the copyright flag to determine whether copying

Continued on next page

would be permitted. If so, the DAT recorder would write appropriate copy-protection codes into the digital subcode channels of the DAT tape being recorded. For example, if the source material's category code indicated a ***digital source (e.g.,*** CD) and if it were marked for copyright protection, a code of "1,0" would be written onto the DAT copy as it was being made. Then, if a DAT recorder detected the "1,0" code on digital material, the record function would not operate. By contrast, if source material were being copied from a digital microphone and were not copy protected, the DAT recorder would write a code of "0,0" on the copied tape, and future serial copying would not be limited.

SCMS also limits the number of generations of copies that can be made of source material entering the ***analog inputs*** of a DAT recorder. Current technology does not permit identification of copyrighted material in the analog domain. Therefore, material (including analog cassettes, LPs, or radio broadcasts) recorded via the analog inputs would be marked with a copy-protection code of "1,1" in the DAT copy's digital subcode channel. One more generation of digital-to-digital copies could be made from this tape; the second-generation copy would be marked with a " 1,0" code and could not be copied on a DAT recorder.

Other Home-Copying Issues

The agreement to seek legislation mandating the SCMS standard for DAT leaves open the question of royalties (e.g., on blank tape and/or recorders) for home copying. According to an RIAA press release, the MOU states that the three European signatories acknowledge that they accept the principle of royalties and will not oppose efforts by the recording industry to secure legislation implementing royalties for private copying. The Japanese signatories acknowledge that the recording industry places extreme importance on royalties for copying that is permitted to continue following the adoption of any technical standards. All parties to the MOU agreed that the adoption of technical standards should not be relied upon as a basis for supporting or opposing royalties.

RIAA has announced that, although it continues to strongly support royalties to compensate for the DAT copying permitted by SCMS, it will not pursue royalties in the 101st Congress. RIAA has stated that it does intend to pursue royalties subsequent to legislation requiring SC! MS.

The signatories to the MOU have committed to discuss several other copying-related issues, including recordable and erasable compact discs (CD-R and CD-E) and development and implementation of SCMS in the analog domain.

SOURCES: RIAA, "DAT Agreement Reached" (press release), July 28, 1989; RIAA and EIA, "Agreement on Recommendations to Government as to DAT" and "The Serial Copy Management System (SCMS): How It Works" (background papers), July 1989, ***TV Digest, vol. 29, No. 36,*** Sept. 4, 1989.

If a home-copying royalty were attached to blank media, the consequences for home copying are unclear. Possible outcomes could include: no change in the amount of home taping taking place; a decline in sales of blank media, with consumers buying fewer tapes, but reusing them more often or becoming more selective in what they tape;[65] consumers buying prerecorded material with the intention of making more than one copy to trade with friends, thereby spreading the costs; and/or in the case of exemptions for certain types of tapes (i.e., tapes of lower quality), consumers opting to record music on tapes of inferior quality rather than to purchase higher-quality tape subject to the fee.

Fee on Recording Equipment – The rationale for this approach is that a fee placed on the sale of the recording equipment reflects the ownership of copying equipment. However, this would not reflect the number of copies actually made. Unless categories of hardware (or purchasers) were exempted, all purchasers of recording equipment would pay the fees, regardless of whether the equipment was used

'35 For example, many consumers listen to their recent purchases for about a month and then library them.

to record copyright music. This might be considered unfair by those who seldom or never use their recorders to copy prerecorded music.

For this type of royalty system, equipment would have to be classified according to use, whether as players or recorders. It would also be necessary to distinguish between recorders used for copying copyrighted material, such as music, and those used for recording non-copyrighted materials, such as lectures and dictation.[66] For "all-in-one" systems, in which all the components are sold together as one product, it would be necessary to decide whether the royalty fee would be levied on the whole system or only on the recorder.[67]

If a home-copying royalty were levied on recording equipment, several consequences for home copying are possible, including: no change in the amount of home copying; an overall decline in hardware sales; or a lag in the sales of new recorders, with consumers opting to retain their old recorders rather than purchase a new one subject to the levy.

Fee on Both Media and Recording Equipment– This approach has been adopted by such countries as Iceland and West Germany. Some proponents argue that a fee on both the hardware and the recording media is more appropriate, since both the hardware and the recording media are necessary for copying. They also argue that a more equitable return to the affected parties is ensured since both the manufacturers of the recording media and hardware will have to share in the payments to the rights owners. The levy would likely be passed on to consumers in the form of higher prices.

A royalty on media and equipment may give the impression that consumers are being double-charged. Such perceptions might motivate consumers to buy only limited quantities of recorders capable of making home copies, and to purchase players (as opposed to player/recorders) for the car, travel, etc.

Setting the Fees

Amount-A theoretical approach to determining the amount of a fee to place on the recording equipment and/or tape would be to attempt to determine a comprehensive estimate of the overall net financial impact of home taping on copyright holders. Any estimate of this sort, however, depends on assumptions, and different assumptions can yield a broad range of plausible (and sometimes implausible) estimates.

Three practical approaches used abroad for royalties on media are:

1. a flat fee, regardless of price or capacity;[68]
2. as a percentage of the price; and
3. based on the capacity (playing time) of the recording medium.[69]

In most countries where a royalty on recording media has been established., it is based on playing time, although the capacity of new media will vary depending on the type of material being stored (e.g., compact-disc storage of audio or full-motion video).

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[66]This distinction might be more difficult than it appears, since a recorder typically used for recording noncopyrighted materials can also be used to copy music.

[67]Manufacturers might also think about deletingthe recording feature from "d-in-one" systems if the fee were based on the cost of the entire system.

[68]Some have criticized this approach on the grounds that the royalty on a tape of inferior quality willbe the same as that on one of superior quality and the latter is more likely to be used to tape recorded music.

[69]Some believe that the latter is most appropriate, since playing time is the best measure of how much home taping is being done.

Royalty fees on hardware could be based on a flat fee or as a percentage of the price of the recording equipment. A flat fee might be simpler to administer than one based on price. However, some argue a flat fee would be inappropriate because the royalty on an inexpensive recorder would be the same as that on one with more features, and the royalty will be reduced if it is pegged to the price of less-expensive recorders.

Special fees might be adopted for dual-cassette and dubbing machines that make tape-to-tape copies. If a royalty surcharge is placed on this type of equipment, the result maybe a decrease in the sale of dual-cassette recorders, as well as decreased sales of prerecorded **cas**settes. Home tapers might opt to buy more CDs and records and tape from them.

Incidence and Exemptions – Congress would have to decide whether home-copying levies would be collected from manufacturers or consumers. If the levies were collected from manufacturers, they will likely be passed on to consumers through higher prices. If the manufacturer were responsible for the fee, decisions will have to be made as to whether retailers will have to special order exempt tapes/equipment, and as to how royalty-exempt consumers will be able to recover the royalty. Unless there are provisions for exempt consumers to special-order tapes and/or equipment, everyone would be subject to increased prices at the point-of-sale.

If the consumer were responsible for the payment of fees, it would be necessary to decide how individuals will prove that they are eligible to receive an exemption. Would they also have to prove that they will not use tapes/equipment to copy copyrighted music? If so, how would they go about proving it? What would happen if a customer wants to buy tapes in bulk, and doesn't yet know whether

Photo Credit: Courtesy of Gene Bachero and *the* Casuals

Home musicians make practice tapes

he will use them to tape lectures or music? Would that individual be able to purchase royalty-exempt tapes/equipment at the retail store, or will he have to fill out a form to obtain a rebate? Either method would involve more work for both the retailer and the customer. The task of having to fill out additional forms and/or provide proof of exemption might deter some individuals from seeking reimbursement.

It has been suggested that exemptions be issued to professional users, to handicapped persons,[70] on exports, on equipment or tape found to be "unsuitable" for the home taping of music **on** the basis of "technical criteria" such as reproduction quality (i.e., business dictation machines and micro cassette tapes),[71] and on machines that are not designed to copy (i.e., microphone-only recorders and playback-only devices). If exemptions were given to "professionals," this term would have to be defined to indicate who qualified for exemption– home musicians, for example, may also use consumer-model recorders during practice sessions or to work on new

[70] If exemptions are made for handicapped persons, would they be issued to organizations representing them, or to individuals?

71 Some recorders, although not most suitable for recording copyrighted music, are nonetheless capable of doing so.

material. Additionally, special provisions for fair-use copying, such as partial exemptions from the royalty, would need to be considered.

Administering and Distributing Home-Copying Royalties

As discussed above, home-copying royalties could depend **on** the type of copyrighted work being copied (e.g., recorded music, television broadcasts, etc.) and/or the identity of the copier (e.g., the handicapped, students, members of the general public, etc.). The royalty fee might even be set arbitrarily low for some or all classes of users.[72] The question of how the royalty scheme should be administered and how royalty revenues should be distributed would have to be addressed.

Chapter 5 discusses proposals for the administration and distribution of audio home-copying royalties, including the provision proposed in the Home Audio Recording Act introduced in the 99th Congress. For this discussion, we proceed on the assumption that royalties for home copying should be claimed through efficient centralized collection/distribution societies, rather than by individual copyright holders making claims against manufacturers, importers, retailers, or consumers.

Administration –Administration of a home audio copying royalty might be assigned to an already-existing organization, such as ASCAP, BMI, SESAC **or** the Harry Fox Agency.[73] Other types of copying-rights organizations, like the Copyright Clearance Center, which collects and distributes photocopying royalties, might also be considered.[74]

ASCAP, SESAC, and BMI are performing-rights societies, so using this model would presume that patterns of copying and performance (namely, radio air play) are similar. The Harry Fox Agency collects mechanical royalties (based on sales), so that using its database as a basis for distribution would presume that patterns of copying and purchasing are similar and the best-selling works are the most copied. Both models (copying is associated with air play, copying is associated with sales) are arguable; it may be that the less popular or less accessible works are copied more, for convenience or because consumers do not value them highly enough to be willing to pay the retail price.[75] One potential advantage to using an existing society's structure is that the administrative expenses would tend to be lower, compared to starting an entirely new organization. The structures of these particular organizations, however, are such that recording companies and performers (who are not composers or songwriters) would have little say in their management.

Another possibility might be to expand the responsibilities of the Copyright Royalty Tribunal (CRT) to include determining and distributing home-copying royalties, but this would require additional staff and funding. Under the compulsory licensing provisions of the Copyright Act of 1976, the CRT (an independent agency in the legislative branch) is currently responsible for determining and distributing royalties from cable retransmission and public performances on jukeboxes, and for determining the royalty rates for phonorecords and some public broadcast transmissions. But cable retransmissions are relatively easy to monitor, compared with home copying.

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[72] This would be somewhat analogous to the "health care" exception proposed during the 100th Congress to permit the unauthorized but noncommercial performance of audiovisual works for patients in health care facilities. See U.S. Congress, Congressional Research Service, "Videocassette Recorders: Legal Analysis of Home Use)" Douglas Reid Weimer, Jan. 10, 1989, p. 13.

[73] See ch. 5 for a description of these organizations.

[74] J. Alen, Copyright Clearance Center, personal communication, Apr. 28, 1989.

[75] The study's advisory panel members were of divided opinion on this.

A new private or public organization could be established. By starting fresh, all the beneficiaries could be given voice in the organization's management. There are two disadvantages to this approach: 1) startup costs would be higher; and 2) it would take time to set up the organization and its procedures. It might take some time before startup costs were met and the bulk of royalties were actually distributed. Moreover, setting up a new organization is not easy or trouble-free.

Whichever general approach (augmenting an existing administrative infrastructure or establishing a new one) were chosen, the source of operational funding would have to be determined – whether it was intended to be self-supporting (via overhead charges on collected royalties) or supported by appropriated funds.

Distribution – Distribution of audio home-copying royalties raises some questions:

Should the proceeds go as directly as possible to the persons and legal entities whose rights are being used and whose interests (it has been determined,) are being harmed by home copying? If so, then royalty revenues would be distributed in some fashion among established recording companies, songwriters and composers, music publishers, singers, musicians, studio personnel, etc.[76] But if Congress considers that a major reason to grant rights over private use is because of the harm to new talent (struggling artists or composers, new acts) and/or less popular genres, then special attention may be warranted for these classes of potential beneficiaries.

Should the distribution be based on sales, performances, both, neither? Basing the distribution on sales or air play maybe inexact. More importantly, Congress might consider that extra incentives (via these royalties) are more desirable for struggling or new talent, or for genres like classical music. This would, however, promote works by new talent at the expense of the established, or subsidize less popular material at the expense of material with a larger market.

Other countries with home-copying royalties have followed a number of approaches to the above,[77] and if Congress were to establish a royalty scheme for home copying, it might choose to reserve at least some portion of the proceeds to nurture new talent or certain types of works or performances, like classical or "new" music. If, for instance, the effect of home audio copying that concerned Congress the most was that it diminished market incentives for producing the work of *new* artists, then some home-copying royalties could be targeted to provide financial incentives for productions or performances that would not otherwise be attempted.[78] The Music Performers Trust Fund, for example, is a fund set

[76] For example, t. provide incentives to artists to continue to develop new material, it might be desirable to give a Portion of the royalty directly to the performing artist, rather than give a larger portion to the record company to allocate according t o contractual provisions. On the other hand, givinga larger share to the record company might give it more incentives to record new acts and material.

77 & ch. 5. In France, for example, proceeds from the audiotape tax are divided unequally among authors, Performers and producers. In Belgium, the proceeds from a proposed levy on blank tape would be split, with half going to artists, authors and recording companies, and the other going to support artists and cultural institutions in Belgium three language communities. In Iceland, proceeds from the levy on blank audiotapes are allocated to performing artists and producers, composers and writers, the performers' share is deposited into a fund to be used for the promotion of the profession, particularly for music schools. In Sweden, tape tax revenues are turned over to the government, which uses two-thirds for unspecified purposes; of the remainder, most is put into a cultural fund, with a small portion divided among the author, performer, and producer. In West Germany, royalties are collected on blank tape and on recorders. Revenues are distributed among the various collection societies for music authors, performers, and producers, and lyric authors, which then distribute royalties to their members,

[78] Although top recording artists, composers, and songwriters might object that this would deprive them of their due, there would seem to be at least some justification for such an action. The recording industry already relies on the large profits from their most successful releases to subsidize new releases, since the targeted monies would be used to finance new releases, at least some would flow back to the recording companies anyway,

up to foster and encourage the use of live music. For every recording sold, the recording company contributes to a fund to be used for the continuation of live public performances, such as performances in nursing homes, public concerts, or any other type of public performance where no admission fee is charged. The funds are allocated among individuals who participate in the performances.