

"Contributory infringement" may be found when "one who, with knowledge of the infringing activity, induces, causes or materially contributes to the infringing conduct of another."²⁴³ Contributory infringement is based on a connection to the infringing activity (not necessarily to the direct infringer). A contributory infringer may be liable based on the provision of services or equipment related to the direct infringement.²⁴⁴

SERVICES

A contributory infringer may be liable based on the provision of services related to the infringement. Courts have found contributory infringement liability, for instance, when a defendant chose the infringing material to be used in the direct infringer's

resulting from the performance of a musical composition by a band or orchestra whose activities provide the proprietor with a source of customers and enhanced income. He is liable whether the bandleader is considered, as a technical matter, an employee or an independent contractor, and whether or not the proprietor has knowledge of the compositions to be played or any control over their selection." Shapiro, Bernstein & Co. v. H.L. Green Co., 316 F.2d 304, 307(2d Cir. 1963)(citing some 10 cases).

243 Gershwin Publishing Corp. v. Columbia Artists Management, Inc., 443 F.2d 1159, 1162 (2d Cir. 1971) (holding management firm's authorization of clients' performances of copyrighted compositions to be contributory infringement).

244 A library is exempted from liability for the unsupervised use of reproducing equipment located on its premises provided that the equipment displays a copyright law notice. 17 U.S.C. § 108(f)(1). This exemption does not apply to the user of such equipment, see 17 U.S.C. § 108(f)(2), and no other provider of equipment enjoys any statutory immunity.

work,²⁴⁵ and when a defendant was responsible for the day-to-day activities where the infringement took place.²⁴⁶

Copyright owners may allege contributory infringement in NII-related cases against service providers, such as BBS operators. As noted earlier, the court in Playboy²⁴⁷ found the BBS operator directly liable for the display of the unauthorized copies on the service, as well as the "distribution" of unauthorized copies to subscribers. However, another court recently cited the Playboy case in finding that the plaintiff had established a *prima facie* case of contributory infringement by a BBS operator. In Sega Enterprises Ltd. v. MAPHIA,²⁴⁸ the court issued a preliminary injunction against the BBS operator based on the operator's "role in copying [Sega's copyrighted video games], including provision of facilities, direction, knowledge and encouragement."²⁴⁹ The court found that the BBS operator had knowledge of the uploading and downloading of unauthorized copies of Sega's copyrighted video games and that it solicited the copying of the games.²⁵⁰

245 See Universal Pictures Co. v. Harold Lloyd Corp., 162 F.2d 354, 366 (9th Cir. 1947) (rejecting defendant's argument that as an employee, he was not responsible for his employer's decision to use infringing material, in light of defendant's personal selection and appropriation of the protected material).

246 See Boz Scaggs Music v. KND Corp., 491 F. Supp. 908, 913 (D. Conn. 1980) (finding defendant liable based on own admission of responsibility and control over radio performances of protected works).

247 Supra note 115.

248 Supra note 119.

249 Sega, supra note 119, at *18. The court found a *prima facie* case for both direct infringement, based on the BBS operator's permitting of the uploading of the copyrighted games onto the BBS, and contributory infringement, based on the operator's "role in copying" the games. Id. at *17-18.

250 Sega, supra note 119, at *7. A class action against another BBS operator was recently filed which seems to allege both direct and contributory infringement. See Frank Music Corp. v. Compuserve Inc., Civil Action No. 93 Civ. 8153 (JFK) (S.D.N.Y.) (complaint filed Nov. 29, 1993). The Complaint alleges that defendant, by providing access to its BBS by subscribers, engaged in: (1)

Two recent libel decisions may provide additional guidance.²⁵¹ In Auvil v. CBS "60 Minutes"²⁵² the court held that a network affiliate which exercised no editorial control over the network broadcast (although it had the power to do so) served only as a conduit and was not liable for republishing defamatory statements.²⁵³ Despite the fact that the affiliate had some idea of the content and had access to the broadcast hours before it aired, the court refused to hold it liable for any defamation contained therein. The court found it unrealistic to force, in effect, the creation of editorial boards "which possess sufficient knowledge, legal acumen

"permitting, facilitating and participating in the recording of performances of the [Plaintiffs' works] into, and storing such recordings in, Compuserve's computer database by permitting and enabling its paying subscribers to upload such performances thereto"; (2) "maintaining a storage of unauthorized recordings of [the Plaintiffs' works] (uploaded by its subscribers) in and as part of Compuserve's computer database"; and (3) "permitting, facilitating and participating in the recording (i.e. re-recording) of the performances of [the Plaintiffs' works] (theretofore stored in its computer database) by permitting and enabling its paying subscribers to download such recorded performances therefrom." Complaint at 6-7. In addition, the Plaintiffs allege that Compuserve had "control over the nature and content of materials stored in its Bulletin Board and downloaded therefrom"; that Compuserve "had actual knowledge of, or in the exercise of reasonable diligence could have determined, the nature and content of materials stored in its Bulletin Board and downloaded therefrom"; and that Compuserve "had actual notice, or in the exercise of reasonable diligence could have determined, that recordings of [the Plaintiffs' works] were uploaded (recorded) to, stored in, and downloaded (re-recorded) from its computer database." See Complaint at 7.

251 Defamation cases may be distinguished, however, based on the knowledge requirement, which is absent in copyright infringement cases.

252 800 F. Supp. 928 (E.D. Wash. 1992).

253 *Id.* at 931. The state common law in this case holds a person who "republishes" defamatory statements made by another liable. Given the broadness with which the jurisdiction had interpreted republication, the court assumed, for purposes of disposition of the affiliate defendants' motion for summary judgment that the affiliates did republish the defamation.

and access to experts to continually monitor incoming transmissions and exercise on-the-spot discretionary calls or face . . . million dollar lawsuits at every turn."²⁵⁴ The court borrowed reasoning from book seller cases -- "one who only delivers or transmits defamatory material published by a third person is subject to liability if, but only if, he knows or had reason to know of its defamatory character"²⁵⁵ -- finding "no logical basis for imposing a duty of censorship on the visual media which does not likewise attach to the print chain of distribution."

It should be noted, however, that in the Auvil case, the court found that the injured parties were not impaired by limiting conduit liability to those situations where culpability is established; "[t]he generating source, which in a national broadcast will generally be the deepest of the deep pockets, may still be called upon to defend."²⁵⁶ This likely would not be true in BBS cases, where the generating source -- a BBS subscriber -- may not have as deep pockets as the BBS operator and, in fact, may be unidentifiable.

A similar result was reached in Cubby, Inc. v. CompuServe Inc.²⁵⁷ In that case, the court held that libelous material uploaded to a bulletin board system by a subscriber did not subject the BBS operator to damages for libel. The court determined that a BBS was a "distributor" (akin to a public library or bookstore) rather than a "republisher," and thus the operator was liable only if it "knew or had reason to know of the allegedly defamatory . . . statements" that had been uploaded.²⁵⁸

254 Id.

255 Id. at 931-32 (quoting Dworkin v. Hustler Magazine, Inc., 634 F. Supp. 727, 729 (D. Wyo. 1986) (quoting Restatement (Second) of Torts § 581).

256 Id. at 932.

257 776 F. Supp. 135 (S.D.N.Y. 1991).

258 Id. at 141.

EQUIPMENT

Contributory infringement liability may also be based on the provision of equipment or other instrumentalities or goods used in or related to the infringement. The leading case is Sony Corp. v. Universal City Studios, Inc.,²⁵⁹ a 5 to 4 decision by the Supreme Court in which the majority of the Court held that the manufacturer of videocassette recorders was not a contributory infringer for providing the equipment used in the unauthorized reproduction of copyrighted works. Borrowing a patent law principle, the Court reasoned that manufacturers of staple articles of commerce that are capable of substantial noninfringing uses should not be held liable as contributory infringers.²⁶⁰ The Court held:

[T]he sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes. Indeed, it need merely be capable of substantial noninfringing uses.²⁶¹

259 464 U.S. 417 (1984).

260 *Id.* at 440.

261 *Id.* at 442. The Court cited two principles of patent law, but used only one as the appropriate analogy for copyright law:

The Copyright Act does not expressly render anyone liable for infringement committed by another. In contrast, the Patent Act expressly brands anyone who "actively induces infringement of a patent" as an infringer, 35 U.S.C. § 271(b), and further imposes liability on certain individuals labeled "contributory" infringers, § 271(c).

Id. at 434-35. Section 271(b) of the Patent Act provides, "Whoever actively induces infringement of a patent shall be liable as an infringer." 35 U.S.C. § 271(b) (1988). Section 271(c) provides, "Whoever sells a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer." 35 U.S.C. § 271(c) (1988).

The Court determined that the key question was whether the videocassette recorder was "capable of commercially significant noninfringing uses."²⁶² The Court also held that in an action for contributory infringement against a manufacturer of copying devices, "the copyright holder may not prevail unless the relief that he seeks affects only his programs, or unless he speaks for virtually all copyright holders with an interest in the outcome."²⁶³

The dissent²⁶⁴ did not agree that the patent "staple article of commerce" doctrine of contributory infringement was applicable to copyright law.²⁶⁵ Recognizing the "concerns underlying the 'staple article of commerce' doctrine," the dissent concluded that "if a significant portion of the product's use is noninfringing, the

262 *Id.* at 442. "In order to resolve that question, we need not explore all the different potential uses of the machine and determine whether or not they would constitute infringement. Rather, we need only consider whether on the basis of the facts as found by the District Court a significant number of them would be noninfringing." *Id.* The Court declined to "give precise content" to the issue of how much use is needed to rise to the level of "commercially significant." *See id.*

263 *Id.* at 446.

264 Of the four dissenting Justices, two remain on the Court today (now-Chief Justice Rehnquist and Justice Blackmun, who recently announced his impending retirement from the Court). Two of the Justices in the majority remain on the Court (Justice Stevens, who delivered the opinion of the Court, and Justice O'Connor).

265 *See Sony, supra* note 7, at 490 n41 (Blackmun, J., dissenting) ("The doctrine of contributory patent infringement has been the subject of attention by the courts and by Congress . . . and has been codified since 1952, . . . but was never mentioned during the copyright law revision process as having any relevance to contributory copyright infringement."); *see also id.* at 491 (disagreeing that "this technical judge-made doctrine of patent law, based in part on considerations irrelevant to the field of copyright . . . should be imported wholesale into copyright law. Despite their common constitutional source, . . . patent and copyright protections have not developed in a parallel fashion, and this Court in copyright cases in the past has borrowed patent concepts only sparingly.")

manufacturers and sellers cannot be held contributorily liable for the product's infringing uses."²⁶⁶

If virtually all of the product's use, however, is to infringe, contributory liability may be imposed; if no one would buy the product for noninfringing purposes alone, it is clear that the manufacturer is purposely profiting from the infringement, and that liability is appropriately imposed. In such a case, the copyright owner's monopoly would not be extended beyond its proper bounds; the manufacturer of such a product contributes to the infringing activities of others and profits directly thereby, while providing no benefit to the public sufficient to justify the infringement.²⁶⁷

Other cases against producers or providers of the instrumentalities of infringement since Sony generally have not been successful.²⁶⁸ However, the court in the recent Sega case²⁶⁹ issued a preliminary injunction against a BBS operator who sold special copiers, the "only substantial use" of which was to copy Sega's copyrighted video games.²⁷⁰ The court found that Sega established a prima facie case of contributory infringement by the BBS operator

²⁶⁶ See Sony, supra note 7, at 491. Examples of such products would be typewriters, computers, cameras, and fax machines.

²⁶⁷ Sony, supra note 7, at 491-92.

²⁶⁸ See, e.g., Vault Corp. v. Ouaid Software Ltd., 847 F.2d 255 (5th Cir. 1988) (seller of computer programs that defeat anti-copying protection is not liable as contributory infringer because programs can be used to enable user to make legal archival copies of copyrighted computer programs under Section 117, which the court found to be a substantial noninfringing use). But see RCA Records v. All-Fast Sys., Inc., 594 F. Supp. 335 (S.D.N.Y. 1984) (operator is liable for contributory infringement based on its provision of sound recording facilities where public could make unauthorized phonorecords).

²⁶⁹ Supra note 119.

²⁷⁰ See Sega, supra note 119, at *13.

based on the operator's "advertising, sale and distribution" of the video game copiers.²⁷¹

d. CONFLICT OF LAWS

Conflict of laws issues may arise in NII-related copyright infringement actions. Resolution of these issues determines what law the court should apply. If the infringer and the infringement are in the United States, the U.S. Copyright Act would apply. However, different situations may present themselves which will raise conflict issues. For instance, users in country A, where certain actions are not considered copyright infringements, may use works located on servers in country B, where such actions are. Which country's law controls the resolution of a copyright infringement dispute -- the country from which a copyrighted work is uploaded or to which it is downloaded, or the country where the host server is located? In the case of direct transmissions, which country's law applies -- the country of origin of the transmission or the transmitter, or the country of the reception? It may be that rights of the copyright owner are exercised in each country. These issues, however, may be no more problematic than the current conflict issues that arise due to the use of telephones, fax machines or modems in international commerce.

7. INTERNATIONAL IMPLICATIONS

a. BACKGROUND

Other countries -- including Finland, Japan and Sweden -- and the European Union are initiating their own studies of the means to promote the development of national information infrastructures.

²⁷¹ See *Sega*, *supra* note 119, at *19. The court found that there was "no need to make archival copies of [Sega's] ROM game cartridges" because the "ROM cartridge format is not susceptible to breakdown" and Sega would replace defective cartridges. See *id.* at *13. The court also found that it was unlikely that customers would buy the copiers, at a cost of \$350, for the purpose of backing up Sega's video game programs, which sold for \$30 to \$70 each. *Id.*

For example, on February 7, 1994, Swedish Prime Minister, Carl Bildt, addressed the Swedish Academy of Engineering Sciences and called for the creation of a national coalition to spearhead the development of an advanced Swedish information infrastructure. It is important to note that the task force which the Prime Minister is assembling will include, among others, representatives of the Ministry of Justice who will be responsible for the development of rules for the protection of intellectual property in the system. On March 3, 1994, Commissioner Bangemann, Vice President of the European Commission met with Secretary of Commerce Ronald Brown and Assistant Secretaries Bruce Lehman and Larry Irving to discuss the possibilities for U.S.-EU cooperation in regard to the NII.

Without taking into account, from the outset, rules for the effective protection of intellectual property, the development of the international information superhighway will be severely hindered. How disparate domestic information superhighways will evolve into a Global Information Infrastructure (GII) will depend on the rules of the road, and one of the most important of those sets of rules is ensuring protection for the works of intellectual property that moves through international channels and into the emerging national information infrastructures. Adequate and effective protection of intellectual property in international commerce must be ensured.

Development of the GI I will make international copyright laws a concern for every user of the system. When the globe is blanketed with digital information dissemination systems, a user in one country will be able to manipulate information resources in another country in ways that may violate that country's copyright laws. Because copyright laws are territorial, and the standards of protection embodied in the international conventions leave room for national legislative determinations, acts that may be an infringement in one country may not be an infringement in another country. The complexity that such a system creates will make doing "electronic business" over the information superhighways difficult unless we move promptly to identify needs for protection and initiate efforts to work toward a new level of international copyright harmonization.

U.S. copyright industries are significant contributors to the United States' current trade accounts, reducing our balance of payments deficit by some \$34 billion in 1990. Inadequacies in the

present system of intellectual property protection for copyrights and neighboring²⁷² or related rights and the consequent losses to these industries from piracy and from trade barriers arising from differences in forms of protection have been estimated to cause losses to these industries of \$12 to 15 billion annually. Improved protection for copyrights and neighboring rights would contribute to reducing these losses and improving the balance of payments.²⁷³

An important aspect of the participation of foreign entities through a GII in the United States domestic information infrastructure is the provision of adequate and effective intellectual property protection in the country wishing to participate. To the extent that participation in the NII can be linked to the provision of intellectual property protection, it will promote the ability of U.S. businesses to use the NII and the GII to communicate works to foreign consumers via other countries' information infrastructures. If we are to ensure that commercial enterprises will make full use of the capabilities of the NII to communicate and deliver information and entertainment products, there must be assurances that their intellectual property rights will be protected effectively under strong copyright laws in all countries participating in a GII.

However, in considering such linkages, careful consideration will have to be given to obligations under international intellectual property treaties and other international agreements such as the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT), especially in view of the recently completed Uruguay Round with its various intellectual property and market access provisions.

²⁷² "Neighboring rights" are discussed *infra* pp. 89, 92.

²⁷³ See Stephen E. Siwek & Harold W. Furchtgott-Roth, International Intellectual Property Alliance, Copyright Industries in the U.S. Economy (1993).

b. THE INTERNATIONAL FRAMEWORK

In the 1970's, then-U.S. Register of Copyrights Barbara Ringer observed that if Justice Story considered copyright to be the metaphysics of the law, then international copyright is its cosmology. That message is brought home to us in 1994 by the need to evaluate the applicability of copyright in the context of the complexities of international commerce in information and entertainment products via advanced information infrastructures.

First, we must understand that there is no such thing as an international copyright, but rather a system of international copyright law. There are several international treaties that link together most of the major trading nations of the world and provide nations with a means for protecting, under their own laws, each others copyrighted works and similar materials. This situation is further complicated because there are two major legal traditions applicable to the protection of what we in the United States regard as copyrighted works. To understand the complexities of the international copyright law system and the international treaties, it is necessary to have a basic appreciation of these two major legal regimes.²⁷⁴

The United States and other countries that follow the Anglo-American legal tradition have "copyright systems," the principal focus of which is on protecting the author's economic rights. The theory of our system is that providing such protection will induce the creation of more works which will "promote the progress of science" and redound to the public benefit.

²⁷⁴ See generally Stephen M. Stewart, International Copyright and Neighbouring Rights, (2d ed. 1989) (hereinafter "Stewart"). Stewart presents a summary of international copyright principles and summaries of the copyright laws of a number of countries. Stewart also identifies socialist copyright laws as a category. However, since the demise of the USSR, the former socialist countries have moved rapidly to enact Western-type copyright legislation. The recently enacted copyright law of the People's Republic of China also follows the civil law model.

Countries that follow the civil law tradition, however, regard authors' rights as natural human rights, or part of one's right of personality. As a part of this tradition, the protection of so-called "moral rights" of the author is an essential part of the system.²⁷⁵ Moral rights normally include the right of an author to be named as the author of a work and the right to object to uses of the work which could bring dishonor or discredit on the author's reputation. In these civil law systems, moral rights reflect a part of the author's personality and are non-transferable, and may be not waivable. Economic rights, in many instances, may be subordinated to moral rights. Under these systems, only works which are original, in that they reflect the personality of the author, are entitled to protection. Productions that do not meet this originality requirement, but still merit some protection, are protected under a system of "neighboring rights." Needless to say, with such divergent theoretical bases sometimes the copyright and the authors' rights systems are in conflict. One of these areas of conflict is in the nature and level of rights for owners of neighboring rights.

Neighboring rights are similar to the rights protected by copyright or authors' rights and are applied to protect the rights of producers of phonograms, performers and broadcasters. Under the copyright system, many of the rights covered under neighboring rights are actually copyright rights. For example, under the U.S. copyright law, sound recording producers and performers are regarded as joint authors of sound recordings. Under droit d'auteur (or authors' rights) systems, such producers' and performers' rights would be protected as neighboring rights. Neighboring rights, while similar in economic character to authors' rights, are protected generally at a lower level and are entirely separate and distinct from the higher-level rights granted to authors.

INTERNATIONAL TREATIES

The World Intellectual Property Organization (WIPO) is responsible for the administration of, and activities concerning

²⁷⁵ Stewart at 6.

revisions to, the international intellectual property treaties.²⁷⁶ The principal WIPO copyright conventions include the Berne Convention for the Protection of Literary and Artistic Works (Paris 1971) (hereinafter "Berne Convention"),²⁷⁷ the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (hereinafter "Rome Convention"),²⁷⁸ and the Geneva Convention for the Protection of Producers of Phonograms Against the Unauthorized Reproduction of their Phonograms (Geneva Phonograms Convention).²⁷⁹ WIPO also administers the Paris Convention for the Protection of Industrial Property (Stockholm 1967) which is not discussed in this report. UNESCO²⁸⁰ and WIPO jointly administer the Universal Copyright Convention (Paris 1971) (hereinafter "UCC"),²⁸¹ which is a lower-

276 There are 143 members of the Convention Establishing the World Intellectual Property Organization (WIPO) as of January 1, 1994. Done at Stockholm on July 14, 1967; entered into force for the United States on August 25, 1970. 21 UST 1749; TIAS 6932; 828 UNTS 3.

277 Berne Convention (with Appendix) for the Protection of Literary and Artistic Works of September 9, 1886, completed at Paris on May 4, 1896, revised at Berlin on November 13, 1908, completed at Berne on March 20, 1914, revised at Rome on June 2, 1928, at Brussels on June 26, 1948, at Stockholm on July 14, 1967, and at Paris on July 24, 1971, amended at Paris on July 24, 1979. Done at Paris on July 24, 1971; entered into force for the United States on March 1, 1989. There are 105 members of the Convention.

278 International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations. There are 45 members of the convention, but the United States is not a member. The Rome Convention is jointly administered by WIPO, the International Labor Organization (ILO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

279 Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of their Phonograms. Done at Geneva on October 29, 1971; entered into force on April 18, 1973; for the United States on March 10, 1974. 25 UST 309; TIAS 7808; 888 UNTS 67. There are 50 members of the Convention as of January 1, 1994.

280 UNESCO is the United Nations Educational, Scientific and Cultural Organization.

level copyright convention that was negotiated in the years following World War II largely to bring the United States into the world of international copyright. Virtually all of the members of the UCC are also members of the Berne Convention, and by the terms of the conventions the Berne Convention governs relations between members of both.

The Berne Convention is the principal international copyright convention, and is the largest and most detailed. The United States joined the Berne Convention in 1989. While it is generally regarded as providing adequate international standards of protection, some believe that it should be updated account for advances in electronic communications and information processing technology. Its members come from the world's major legal traditions -- the Anglo-American common law copyright system and the European civil law droit d'auteur system. However, despite its level of detail, as previously noted, and in part because it must accommodate differing legal traditions, in some areas its standards may be insufficient to deal with the world of digital dissemination of copyrighted works.

The principal treaty for the protection of neighboring rights, the Rome Convention, was adopted in 1961, and is considered by many to include standards that are inadequate for dealing with the problems raised by current technological advances and the level of trade in the products and services affected by its operation. It provides for the protection of producers of phonograms against unauthorized reproduction of their phonograms, for performers to prevent certain reproductions and fixations of their performances and it provides limited rights for broadcasting organizations. It also provides for protection against certain "secondary uses" of phonograms, such a broadcasting, but it contains the ability for members to reserve on this right. The United States does not belong to the Rome Convention.

The Geneva Phonograms Convention provides for the protection of phonograms against unauthorized reproduction and distribution

281 Universal Copyright Convention, as revised, with two protocols annexed thereto. Done at Paris on July 24, 1971, entered into force on July 10, 1974. 25 UST 1341; TIAS 7868.

for a minimum term of 20 years. It does not provide for a performance right in sound recordings. The United States belongs to the Geneva Phonograms Convention.

WIPO has convened a Committee of Experts on a Possible Protocol to the Berne Convention to account for developments since the 1971 revision of the Convention, and a Committee of Experts on a New Instrument for the Protection of Performers and Producers of Phonograms to consider how to provide improved rights for performers and producers of phonograms.

c. COPYRIGHT HARMONIZATION

The performers and the kinds of performances to which neighboring rights apply are not universally agreed. This has led to divergent regimes for the protection of economically important rights, both among industrialized and developing countries. A consequence of this divergence is that U.S. performers and producers have been denied the ability to share in remuneration for the use of their products and performances in some countries. Heretofore, there has not been strong support for the establishment of a system of statutory performers' rights in the United States. Historically, this has been because of the opposition of producers who are concerned that the establishment of performers' rights could upset the balance of power among producers and performers in contractual negotiations and collective bargaining. Also, broadcasters have concerns over the possible implications that such a course of harmonization might have for the establishment of performance rights in sound recordings.

In addition to the traditional WIPO forum, other international bodies now have a significant role in intellectual property policy formulation. The recently-concluded Trade-Related Aspects of Intellectual Property Agreement (hereinafter "TRIPs Agreement") under the Uruguay round of trade negotiations in the General Agreement on Tariffs and Trade (hereinafter "GATT") sets significant standards for the protection of copyright and related rights. And most importantly, it contains provisions to ensure that parties to the TRIPs Agreement fully implement its obligations.

d. NATIONAL TREATMENT

The principle of national treatment is the cornerstone of the great international intellectual property treaties -- Berne and Paris. It is also the keystone of international trade treaties, including, of course, the GATT. It is of enormous significance to our copyright industries. Generally, the principle of national treatment means that under a nation's laws, a foreigner enjoys no lesser rights and benefits than a citizen of that nation receives, subject to the specific terms of the relevant international conventions. In other words, a German work as to which copyright enforcement is sought in the United States would be treated under the law exactly as if it were a U.S. work for the purposes of the copyright law.

However, some argue that rights should be granted only on the basis of reciprocity. This concept, called "material reciprocity," means that we should grant a right to a foreigner only if his or her country grants our citizens the same right. Under this scenario, the German citizen would only be able to obtain protection under the U.S. law to the extent that German law provided the same, or at least equivalent, rights to a U.S. citizen.

THE BERNE CONVENTION

Article 5(1) and 5(2) of the Berne Convention establish the principle of national treatment for works protected by copyright.²⁸²

282 Article 5 provides:

- (1) Authors shall enjoy, in respect of works for which they are protected under this Convention, in countries of the Union other than the country of origin, the rights which their respective laws do now or may hereafter grant to their nationals, as well as the rights specially granted by this Convention.
- (2) The enjoyment and the exercise of these rights shall not be subject to any formality; such enjoyment and such exercise shall be independent of the existence of protection in the country of origin of the work. Consequently, apart from the provisions of this Convention, the extent of protection, as well as the means of redress afforded to the author to protect his rights, shall be governed exclusively by the laws of the country where protection is claimed.

Under Article 5(1), there is an obligation to grant to nationals of countries of the Berne Union national treatment in respect of the rights specifically covered by the Convention. This point is not disputed.²⁸³ However, with respect to any new rights which may be hereafter granted, some have taken the position that the national treatment obligation applies only to the minimum rights in the Convention.²⁸⁴

(3) Protection in the country of origin is governed by domestic law. However, when the author is not a national of the country of origin of the work for which he is protected under this Convention, he shall enjoy in that country the same rights as national authors.

(4) The country of origin shall be considered to be:

(a) in the case of works first published in a country of the Union, that country; in the case of works published simultaneously in several countries of the Union which grant different terms of protection, the country whose legislation grants the shortest term of protection;

(b) in the case of works published simultaneously in a country outside the Union and in a country of the Union, the latter country;

(c) in the case of unpublished works or of works first published in a country outside the Union, without simultaneous publication in a country of the Union, the country of the Union of which the author is a national, provided that:

(i) when these are cinematographic works the maker of which has his headquarters or his habitual residence in a country of the Union, the country of origin shall be that country, and

(ii) when these are works of architecture erected in a country of the Union or other artistic works incorporated in a building or other structure located in a country of the Union, the country of origin shall be that country.

283 See World Intellectual Property Organization, BCP/CE/III/3, Report of the Committee of Experts on a Possible Protocol to the Berne Convention. Third Session. June 21 to 25, 1993, 20-21 (June 25, 1993).

284 *Id.* at 21

THE ROME CONVENTION

The fundamental problem with the Rome Convention is that, while it generally imposes a national treatment obligation, it permits a number of reservations and exceptions that allow a Member to avoid that obligation for important rights otherwise provided for in the Convention. Article 3.1 of the TRIPs Agreement provides that "[i]n respect of performers, producers of phonograms and broadcasting organizations, this obligation [national treatment] only applies in respect of the rights provided under this Agreement."²⁸⁵ It also provides that a Member may avail itself of the "possibilities provided in . . . paragraph 1(b) of Article 16 of the Rome Convention . . ." relating to reciprocity for the broadcasting right in respect of phonograms.²⁸⁶

THE TRIPs AGREEMENT

Additionally, the TRIPs Agreement includes a national treatment obligation.²⁸⁷ In respect of copyright the TRIPs national

285 See Trade-Related Aspects of Intellectual Property, Final Act Embodying the Results of the Uruguay Round of the Multilateral Trade Negotiations, Office of the U.S. Trade Representative, Dec. 15, 1993.

286 *Id.*

287 Article 3 (National Treatment) provides:

1. Each Member shall accord to the nationals of other Members treatment no less favourable than that it accords to its own nationals with regard to the protection of intellectual property, subject to the exceptions already provided in, respectively, the Paris Convention (1967), the Berne Convention (1971), the Rome Convention and the Treaty on Intellectual Property in Respect of Integrated Circuits. In respect of performers, producers of phonograms and broadcasting organizations, this obligation only applies in respect of the rights provided under this Agreement. Any Member availing itself of the possibilities provided in Article 6 of the Berne Convention and paragraph 1(b) of Article 16 of the Rome Convention shall make a notification as foreseen in those provisions to the Council for Trade-Related Aspects of Intellectual Property Rights.

treatment provision incorporates the standards of the Berne Convention, but in respect of neighboring rights, it allows members to impose the exceptions to national treatment permitted by the Rome Convention.²⁸⁸ Permitting such exceptions can lead to problems in the implementation of a GII.

2. Members may avail themselves of the exceptions permitted under paragraph 1 above in relation to judicial and administrative procedures, including the designation of an address for service or the appointment of an agent within the jurisdiction of a Member, only where such exceptions are necessary to secure compliance with laws and regulations which are not inconsistent with the provisions of this Agreement and where such practices are not applied in a manner which would constitute a disguised restriction on trade.

288 Article 4 (Most-Favoured-Nation Treatment) provides:

With regard to the protection of intellectual property, any advantage, favour, privilege or immunity granted by a Member to the nationals of any other country shall be accorded immediately and unconditionally to the nationals of all other Members. Exempted from this obligation are any advantage, favour, privilege or immunity accorded by a Member:

- (a) deriving from international agreements on judicial assistance and law enforcement of a general nature and not particularly confined to the protection of intellectual property;
- (b) granted in accordance with the provisions of the Berne Convention (1971) or the Rome Convention authorizing that the treatment accorded be a function not of national treatment but of the treatment accorded in another country;
- (c) in respect of the rights of performers, producers of phonograms and broadcasting organizations not provided under this Agreement;
- (d) deriving from international agreements related to the protection of intellectual property which entered into force prior to the entry into force of the Agreement Establishing the MTO, provided that such agreements are notified to the Council for Trade-Related Aspects of Intellectual Property Rights and do not constitute an arbitrary or unjustifiable discrimination against nationals of other Members.

THE NAFTA

The NAFTA includes a very broad national treatment provision that does not include the possibility of making the broad exceptions provided for under the TRIPs agreement.²⁸⁹

e. PRIVATE COPYING ROYALTY SYSTEMS

The manner in which portions of the audio and video private copying royalties that are collected in some European countries are distributed to claimants may prove to be an impediment to future development of the GII if a similar approach is adopted in respect of digital information dissemination systems. As an example, France's Law of July 3, 1985 (1985 Law) establishes a system of neighboring rights protection for performers, audiovisual communication enterprises, producers of phonograms and producers of videograms. The 1985 Law, *inter alia*, grants specified right holders an entitlement to equitable remuneration in respect of the private copying of their works. Some of the 1985 law's provisions are based on reciprocity and thus discriminate against, for example, foreign motion picture interests. Consequently, those provisions may be inconsistent with France's obligations under the Berne Convention and the UCC. If this pattern is followed in implementing future legislation, serious impediments to the development of the GII may arise.

f. MORAL RIGHTS

The author's moral rights are provided for under Article 6*bis* of the Berne Convention.²⁹⁰ The nature and scope of moral rights

289 See North American Free Trade Agreement (hereinafter NAFTA), H.R. Doc. No. 159, 103d Cong., 1st Sess. (1993); 32 I.L.M. 289-456, 605-799 (1993).

290 Article 6*bis* provides:

(1) Independently of the author's economic rights, and even after the transfer of the said rights, the author shall have the right to claim authorship of the work and to object to any distortion, mutilation or other modification of, or other

varies considerably from country to country. The fact that these rights are non-transferable may create difficulties for the commercialization of works in the NII environment. A current draft report of the multimedia study committee of the Japanese Institute for Intellectual Property suggests that there may be a need to either permit the specific waiver of the right of integrity or to limit its application in the digital world.²⁹¹

B. PATENT

Development of the NII will depend upon, and stimulate innovation in, many fields of technology, especially computer software, computer hardware and telecommunications. An effectively functioning patent system that encourages and protects innovations in these fields of technology is, therefore, important for the overall success of the NII. The most significant issues related to the effects of the NII on the patent system include the impact the NII will have on the quantity and quality of information available from which to determine the patentability of inventions, as well as to judge the validity of patents.

derogatory action in relation to, the said work, which would be prejudicial to his honor or reputation.

(2) The rights granted to the author in accordance with the preceding paragraph shall, after his death, be maintained, at least until the expiry of the economic rights, and shall be exercisable by the persons or institutions authorized by the legislation of the country where protection is claimed. However, those countries whose legislation, at the moment of their ratification of or accession to this Act, does not provide for the protection after the death of the author of all the rights set out in the preceding paragraph may provide that some of these rights may, after his death, cease to be maintained.

(3) The means of redress for safeguarding the rights granted by this Article shall be governed by the legislation of the country where protection is claimed.

291 See "Exposure '94: A proposal for the new rule of intellectual property for multimedia," Institute of Intellectual Property 18 (Feb. 1994).

The goals of the patent system are to encourage innovation and public disclosure of advances in technology. To this end, the patent system offers an incentive to inventors to publicly disclose their inventions in exchange for the exclusive right to prevent others from making, using or selling the patented inventions for 17 years.

Patent protection is available in the United States for inventions without differentiation as to the field of technology: "... any new and useful process, machine, manufacture, or composition of matter ..." can be patented.²⁹² However, unlike copyright protection, an inventor must specifically request protection by filing a patent application and demonstrating that the invention meets all of the statutory requirements of patentability. Specifically, an invention must be new,²⁹³ useful²⁹⁴ and nonobvious.²⁹⁵ In addition, the inventor must fully describe and disclose the invention in the patent application.²⁹⁶

²⁹² See 35 U.S.C. § 101 (1988). This language has been interpreted broadly by the Supreme Court in Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980), wherein the Court held:

The subject matter provisions of the patent law have been cast in broad terms to fulfill the constitutional and statutory goal of promoting "the progress of science and the useful arts."

Congress employed broad language in drafting Section 101 precisely because such inventions are often unforeseeable.

Judicial precedent does exist denying patentability under Section 101 for claims directed to laws of nature and methods of doing business. See Donald S. Chisum, Patents § 1.01 (1992).

²⁹³ See discussion of 35 U.S.C. §102 infra notes 297-99 and accompanying text.

²⁹⁴ To be eligible for patent protection, an invention must be either a process, an article of manufacture, a composition or a machine. Discoveries, laws of nature, mathematical algorithms, methods of doing business and the like are not eligible for patent protection. See 35 U.S.C. § 101 (1988).

²⁹⁵ See discussion of 35 U.S.C. § 103 infra note 300 and accompanying text.

²⁹⁶ See 35 U.S.C. § 112 (1988).

Once a patent application has been filed with the Patent and Trademark Office (PTO), the application is reviewed by an Examiner against the "prior art" to determine whether the patentability requirements of novelty ("new") and nonobviousness have been met. While there are instances where non-public information constitutes prior art, generally speaking, prior art includes information that is publicly available prior to the filing date of a patent application.²⁹⁷ An invention satisfies the novelty requirement if it has not been publicly disclosed prior to the filing date of the patent application.²⁹⁸ Novelty exists unless the prior art completely discloses the invention that is claimed by the patent applicant.²⁹⁹ An invention satisfies the

²⁹⁷ Specifically, "prior art" is defined in 35 U.S.C. § 102 (1988):

A person shall be entitled to a patent unless —

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

* * *

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

²⁹⁸ Under U.S. law, an inventor has a one-year "grace period" to file a patent application. This grace period is invoked by inventors to avoid being barred from obtaining a U.S. patent when the invention has been publicly disclosed by another during the one year period before the inventor has filed a patent application. This grace period is not available in all countries. As a result, applicants must exercise care before disclosing their invention to avoid forfeiting patent rights in countries without a one year grace period.

²⁹⁹ For example, if a patent application is filed after an article is published in a technical journal which completely discloses the invention claimed in the

nonobviousness requirement if a "person of ordinary skill in the art" would not have viewed the invention as obvious in view of the prior art at the time the patent application was filed.³⁰⁰

The specific categories of prior art that are defined in Section 102 of the Patent Act can be used to deny the grant of a patent, or to invalidate a patent, on the grounds that the invention lacks novelty or is obvious.³⁰¹ These include, generally speaking, patents issued by the United States or by other countries; printed publications distributed in the United States or abroad; evidence of public use or public disclosure of an invention in the United States; and evidence of a sale or offer to sell an invention in the United States.³⁰² The NII will significantly improve the amount and availability of prior art. This, in turn, will have an impact on patentability determinations, whether made during the patent examination process or during challenges to patent validity through litigation in the Federal courts.

For example, a patent grants the owner the exclusive right to prevent others from making, using or selling the invention as it is

patent application, the application will be rejected by the PTO on the grounds that the claimed invention lacks novelty.

³⁰⁰ Section 103 sets forth the nonobviousness requirement, in pertinent part, as follows:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35 U.S.C. § 103 (1988).

³⁰¹ The definition of prior art information in Section 102 also governs what information can be used in Section 103 non-obviousness determinations.

³⁰² The specific requirements of these patent-defeating publications and public disclosures are set forth in detail in 35 U.S.C. § 102, discussed *infra* pp. 99-100.

defined in the patent.³⁰³ A patent owner must exercise these patent rights against alleged infringers or run the risk of not being able to do so if found to have waited too long.³⁰⁴ The patent owner has the burden of establishing patent infringement. Patent infringement is established by demonstrating that the accused product or process falls within the scope of the patent claims.³⁰⁵ A party accused of infringement can avoid liability by asserting that the patent does not cover, either literally or under the doctrine of equivalents, the accused product or process.³⁰⁶ The accused infringer can also assert that the patent is either invalid or unenforceable, or both.

Parties can challenge the validity of a patent in the Federal district courts or before the PTO. By statute, a patent is presumed valid.³⁰⁷ Thus, in district court, the party challenging patent validity

303 See 35 U.S.C. § 154 (1988) ("Every patent shall contain . . . a grant to the patentee . . . for the term of seventeen years . . . of the right to exclude others from making, using, or selling the invention throughout the United States and, if the invention is a process, of the rights to exclude others from using or selling throughout the United States, products made by that process, referring to the specification for the particulars thereof.")

304 See 35 U.S.C. § 271(a) (1988) ("Except as otherwise provided in this title, whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent.")

305 The claims of a patent define the metes and bounds of the invention by specifically defining the features of an invention which are protected.

306 Literal infringement is established when the accused product or process contains each and every element set forth in the patent claims. However, in certain circumstances, a patent owner can establish infringement even if the accused product or process does not have each of the elements set forth in the claims. This type of infringement is known as infringement under the doctrine of equivalents, an equitable remedy designed to prevent misappropriation of the essence of the patented invention. Under the doctrine of equivalents, infringement is established by proving that the accused product or process "performs substantially the same function in substantially the same way to obtain the same result as the patented invention." See Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 607 (1950).

307 See 35 U.S.C. § 282 (1988):

must demonstrate through clear and convincing evidence that the patent fails to satisfy one or more of the statutory criteria of patentability (e.g., novelty, utility, obviousness, or adequate disclosure).³⁰⁸ This is most often accomplished by submitting new prior art which was not considered by the PTO Examiner. The accused infringer then argues that this new prior art anticipates the claimed invention (i.e. the invention is not new because someone else had done it before the inventor) or that the claimed invention would have been obvious to one of ordinary skill in the art based on this new "prior art."

Likewise, prior art impacts the enforceability of a patent. For example, parties can preclude the enforcement of a patent, without specifically addressing the patent's validity. This is accomplished by establishing that the patent owner either misused its patent rights, or committed a fraud on the PTO incident to obtaining patent protection. For example, if it can be shown that the inventor withheld material prior art from the patent office so as to commit fraud on the PTO, the patent may be found to be unenforceable against infringers, even if the patent satisfies all patentability requirements.

In each of these scenarios, prior art plays an important role both in defining the state of the art at the time a patent application is filed and in justifying conclusions on the patentability of an invention or the validity of a patent. Because of this, it is imperative that all sources of information that relate to an invention be integrated into patentability determinations.

A patent shall be presumed valid. Each claim of a patent (whether in dependent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

³⁰⁸ A party can also challenge the validity of a patent in a reexamination proceeding before the PTO. In such a proceeding, however, the basis for challenge is limited to novelty and obviousness in view of only certain types of prior art, namely, printed publications and patents.

Access to these sources of information, particularly patents and printed publications, has been vastly improved through the use of electronic or on-line database services. These services document the existence and content of patents and printed publications, and in some instances, provide access to the complete text and electronic images of such documents. It is important to recognize that the information that can be retrieved through these services invariably exists as an original, paper document disseminated through traditional publication channels (e.g., technical journals or publications, domestic and foreign patent documents).

The NII will dramatically change the way information is prepared and disseminated. It will improve the number, accessibility and quality of traditional on-line services. It will also foster creation of new forms of "electronic publications" that are different in character from traditional paper-based publications. Examples of such electronic publications could include electronic versions of traditional paper-based publications that supplement or reorganize presentation of the content of the paper-based publication; informally prepared information such as postings on electronic information forums and dissemination of news articles with technical content; and formally designed and developed electronic publications that are not printed on paper, but are entirely electronically disseminated.

Electronic publications such as these will supplement the wealth of publicly accessible information that is used in patentability determinations and validity challenges to issued patents. However, these new types of electronically disseminated documents are different in character from traditionally printed and indexed patents and publications. For example, the information contained in the disclosure of electronic documents may not be printed originally on paper, and as such, may have no tangible evidence regarding the date the information was first publicly disclosed or even as to its existence. No guidelines or industry standards presently govern the memorialization of either the contents or the date of public disclosure of information in such documents. The degree of distribution of, or public accessibility to electronic documents is not presently measured and may prove unmeasurable. Yet, these are key factors used to determine whether a document is in the prior art. In addition, the content of such documents, particularly informally

created documents, may not be subject to any form of peer review or content screening. This, in turn, could influence the evaluation of information in electronic documents that could affect patentability. Likewise, these factors may also have a direct impact on the challenges made to the validity of an issued patent based on prior art.

C. TRADEMARK

A trademark is quite different from either a copyright or a patent. A trademark is any word, name, symbol or device, or any combination thereof, that serves to identify and distinguish the source of one party's goods or services from those of another party. A service mark is the same as a trademark, except that it identifies and distinguishes the source of services rather than goods. In this report, the terms "trademark" and "mark" are intended to refer to all types of marks.

The purpose of a trademark is twofold – to identify the source of products or services and to distinguish the trademark owner's goods and services from those of others. As long as a trademark fulfills these functions, it remains valid. Trademark ownership rights in the United States arise through use of a mark. Continued use of a mark is necessary to maintain trademark rights. The owner of a trademark is entitled to the exclusive right to use the mark. This entitlement includes the ability to prevent the use, by unauthorized third parties, of a confusingly similar mark. Marks used by unrelated parties are confusingly similar if, by their use on the same, similar, or related goods or services, the relevant consumer population would think the goods or services come from the same source.

Unlike patent and copyright law, Federal trademark law coexists with state and common-law trademark rights. Therefore, registration at either the Federal or state level is not necessary to create or maintain ownership rights in a mark. For example, priority of trademark rights between owners of confusingly similar marks, regardless of whether the marks are Federally registered, is based upon first use of the mark.³⁰⁹

³⁰⁹ Priority may also be established by the filing date of a Federal registration based upon an intent to use a mark (15 U.S.C. § 1051(b) (1988)) or a foreign filing (15 U.S.C. § 1126 (1988)).

Federal trademark law is embodied in the Lanham Act³¹⁰ and is based upon the commerce clause of the Constitution.³¹¹ Therefore, to obtain a Federal trademark registration, in most cases³¹² the owner of a mark must demonstrate that the mark is used in a type of commerce that may be regulated by Congress.³¹³ Additionally, the Trademark Law Reform Act of 1988³¹⁴ amended the Lanham Act to establish trademark rights, which vest upon registration following use of the mark in commerce, as of the filing date of a trademark application indicating a bona fide intent to use the mark in commerce.³¹⁵

Remedies against trademark infringement and unfair competition are available to trademark owners under both state and Federal law.³¹⁶ In this regard, the owner of a Federal trademark registration has certain benefits. In a court proceeding, registration on the Principal Register constitutes prima facie evidence of the registrant's ownership of the

310 15 U.S.C. § 1051 *et seq.* (1988 & Supp. V 1993). The Lanham Act, as amended, forms Chapter 22 of Title 15 of the U.S. Code.

311 The first Federal trademark law in the United States was found unconstitutional because it was premised on the patent clause of the Constitution.

312 Certain foreign-based applications may register without a showing of use in commerce. 15 U.S.C. § 1126(e) (1988).

313 15 U.S.C. § 1127 (1988 & Supp. V 1993). "The word 'commerce' means all commerce which may lawfully be regulated by Congress." This includes interstate commerce, commerce between the United States and a foreign country, and territorial commerce.

314 P.L. 100-667, 1988 U.S.C.C.A.N. (102 Stat.) 3935.

315 15 U.S.C. § 1051(b) (1988).

316 *See* 15 U.S.C. §§ 1114 - 1121, 1125(a) (1988 & Supp. V 1993) for relevant Federal law provisions. State and common law unfair competition provisions include such torts as passing off and dilution.

mark.³¹⁷ Registration on the Principal Register may also be used as a basis to block importation of infringing goods³¹⁸ or to obtain remedies against a counterfeiter.³¹⁹ The Lanham Act provides that under certain conditions the right to use a registered mark may become incontestable.³²⁰ Additionally, the Lanham Act provides for cancellation of registrations on certain grounds.³²¹

Existing legal precedent accepts electronic transmission of data as a service and, thus, as a valid trademark use for the purpose of creating and maintaining a trademark.³²² Additionally, existing legal precedent applies the available remedies for infringement and unfair competition to such acts occurring through the unauthorized use of trademarks electronically.³²³ However, in the future, with widespread access to and

317 15 U.S.C. § 1057(b) (1988).

318 15 U.S.C. § 1124 (1988).

319 15 U.S.C. § 1116(d) (1988); 18 U.S.C. § 2320 (1988).

320 15 U.S.C. § 1065 (1988).

321 15 U.S.C. § 1064 (1988).

322 See In re Metriplex Inc., 23 U.S.P.Q.2d 1315 (TTAB 1992), where the PTO's Trademark Trial and Appeal Board authorized registration of a mark identifying "data transmission services accessed via computer terminal" and accepted, as evidence of use of the mark, a print-out of the mark as it appeared on the computer screen during transmission.

323 In the recent case Playboy Enters. v. Frena, *supra* note 115, the operator of a subscription computer bulletin board system (Frena) transmitted as part of its bulletin board system photographs owned by Playboy Enterprises Inc. (PEI). PEI's trademarks were obliterated on some photographs transmitted by Frena and PEI's "Playboy" and "Playmate" marks appeared on other photographs transmitted by Frena. These transmissions were without authorization from PEI. The court found, in part, that Frena infringed PEI's registered trademarks when it used PEI's "Playboy" and "Playmate" marks in unauthorized transmissions of PEI's photographs as part of its computer bulletin board system. The court also found Frena to have committed acts of unfair competition, in violation of Section 43(a) of the Lanham Act (15 U.S.C. § 1125(a) (Supp. V 1993)), both by obliterating PEI trademarks from photographs and by placing its own advertisement on PEI photographs. Such

use of the NII, both the legitimate and infringing electronic uses of trademarks may increase. Further, unfair competition may increase in the context of the NII to the extent that it may be easier to copy or remove trademarks from electronically transmitted information than from labeled products or from services identified in print media.

The first opportunity for a court to define the legal relationship between trademarks and the registration and use of site names on the Internet is presented in a recently filed action in Federal district court in the Southern District of New York. The owners of the MTV cable network ("MTV") have filed an action seeking injunctive relief and monetary damages from a former employee who is offering a daily report about the rock music industry on the Internet using the site name "mtv.com." MTV is alleging, *inter alia*, trademark infringement and unfair competition.³²⁴

acts made it appear as if PEI authorized Frena's use of the images on the bulletin board; see also Showtime/The Movie Channel, Inc. v. Covered Bridge Condominium Ass'n, 693 F. Supp. 1080 (S.D. Fla. 1988), in which the court found that interception of cable television programming broadcast via satellite which appropriates trademarks and trade names in a manner likely to cause confusion is unfair competition in violation of Section 43(a) of the Lanham Act (15 U.S.C. § 1125(a) (Supp. V 1993)).

In California, a U.S. District Court has entered a preliminary injunction against the owner of a computer bulletin board system based upon claims of copyright and trademark infringement and unfair competition. In Sega Enters. Ltd. v. MAPHIA, *supra* note 119, Sega demonstrated that the bulletin board system knowingly solicited the uploading and downloading of unauthorized copies of Sega's video games, and that whenever such a copy is played, Sega's trademark appears on the screen. Further, Sega's trademark appeared, with the BBS operator's knowledge, on file descriptors on the bulletin board. With regard to the trademark and unfair competition claims, the court concluded that there is support for the conclusion that the transferred games are counterfeit under the Lanham Act, and that confusion, if not on the part of the bulletin board users, is inevitable on the part of third parties who may see the copied games after they enter the stream of commerce.

324 To send and receive information on the Internet, various organizations connected to the Internet must register their domains, networks and autonomous systems numbers ("site names") with the Internet National Information Center (InterNIC). InterNIC performs this function under a cooperative agreement with the National Science Foundation. Within the

D. TRADE SECRET

Unlike many of the other forms of intellectual property protection previously mentioned, trade secrets are protected solely through state law, not Federal law. Trade secret protection is very limited. A trade secret holder is only protected from unauthorized disclosure and use of the trade secret by others and from another person obtaining the trade secret by some improper means.³²⁵

There are several factors used to determine if subject matter qualifies as a trade secret. Among the factors considered are the extent of measures taken by the trade secret owner to guard the secrecy of the information and the ease or difficulty with which the information could be properly acquired or duplicated by others.³²⁶ Based on these considerations, the general rule is that subject matter cannot be successfully protected as a trade secret if it is widely distributed. However, if adequate security precautions are taken to ensure that access to the subject matter being distributed is treated as secret, the subject matter may still be considered a trade secret.

context of a prescribed format, the Internet user may register any site name as long as the identical site name has not been previously registered with InterNIC by another party. According to InterNIC, there is no state or Federal statutory or regulatory authority under which InterNIC performs this registration function. Thus, InterNIC has no authority to refuse to register site names for a reason such as likelihood of confusion with a trademark. Furthermore, InterNIC does not conduct an examination of trademark or other records before registering a site name.

325 "A trade secret is commonly defined as any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it." Restatement of Torts § 757, Comment b (1939).

326 *Id.* The trade secret owner may communicate the trade secret to others provided that those to whom the trade secret is communicated to pledge not to reveal the trade secret to others. *Id.*

Whether trade secret owners distribute their trade secrets through the NII will largely depend on the extent that they believe that the secrecy of the trade secret will not be compromised by such a distribution. Consequently, if the NII is going to be used as a tool for disseminating trade secret information the NII must be equipped with adequate security measures to ensure that trade secrets distributed through the NII will remain secret.³²⁷

In addition to the concerns regarding security precautions, issues of jurisdiction may also arise in the context of using the NII as a vehicle to transmit trade secrets. Because trade secret protection is protected by state law, not Federal law, which state law controls the resolution of a trade secrecy issue -- the place where the information is downloaded off the NII or the place where the trade secret owner first distributes the information via the NII for distribution -- may become an issue in trade secret disputes. These jurisdictional issues, however, are no more problematic than present jurisdictional issues associated with the distribution of trade secrets and can be adequately resolved by the choice of law rules presently codified in state law.

To some degree whether trade secret owners distribute their trade secrets through the NII may also depend on the type of information products and services being disseminated. For instance, it has been suggested that the most common way to protect software is through trade secret protection.³²⁸ Unlike most trade secret information, computer programs can be copied and used without the copier ever understanding or viewing the information in a comprehensible form. Although the trade secrecy problems associated with computer programs are not unique to the NII, the capabilities of the NII may cause these problems to become more prevalent.

327 See discussion of methods of protection for material distributed through the NII *infra* pp. 108-113.

328 See CONTU Final Report at 127.

II. TECHNOLOGY

Technology can be used to help protect copyrighted works against unauthorized access, reproduction, manipulation, distribution, performance or display. It can also be useful in the authentication of the integrity of copyrighted works and in the management and licensing of the rights in such works. Protection and management schemes based strictly on specific technologies may have limited usefulness due to the rapidly evolving nature of these technologies. Furthermore, if the systems developed are too cumbersome or complicated, consumers may reject works protected under such systems. However, to the extent that the marketplace will tolerate such measures, they can be useful in protecting copyrighted works.³²⁹

Technology-based protection of digital works can be implemented through hardware, software or a combination thereof. It can be implemented at the level of the copyrighted work or at other, more distant levels. It can be used to prevent or restrict access to a work, as well as reproduction, adaptation, distribution, performance or display of the work.

A. CONTROLLING ACCESS TO PROTECTED WORKS

Unauthorized access to copyrighted works can be denied in two general ways: by restricting access to the source of the work, and by restricting manipulation of the electronic file containing the work.

329 For a detailed discussion of these and other applications of technology that may be used to provide protection for copyrighted works, see Symposium, Technological Strategies for Protecting Intellectual Property in the Networked Multimedia Environment, cosponsored by the Coalition for Networked Information, Harvard University, Interactive Multimedia Association, and the Massachusetts Institute of Technology (April 2-3, 1993); see also Morton D. Goldberg, Copyright and Technology: The Analog, the Digital, and the Analogy, Symposium, WIPO Worldwide Symposium on the Impact of Digital Technology on Copyright and Neighboring Rights, 37 (March 31 - April 2, 1993).

1. CONTROLLING ACCESS AT THE SERVER LEVEL

Distribution of digital works can be controlled by controlling access to the source of the works -- information or data servers. Access to these servers can vary from completely uncontrolled access (e.g., the full contents of the server are accessible without restriction) to partially controlled access (e.g., unrestricted access is granted to only certain data on the server) to completely controlled access (e.g., no uncontrolled access in any form is permitted). Access control is affected through user identification and authentication procedures (e.g., log-in name and password) that deny access to unauthorized users to a server or to particular information on a server.³³⁰

Nearly all information providers, including commercial on-line services such as CompuServe and America Online and dial-up private bulletin boards, not only control access to their systems but also vary the nature of that access depending on the information a user wishes to access (e.g., access to certain data is conditioned on paying a higher fee, having greater access rights, etc.). On the Internet, users can connect to public servers through protocols such as gopher, file transfer protocol (ftp), telnet or the world wide web (www). Some information providers on the Internet grant full unrestricted access to all the information contained on their servers. This means that anyone can access any data stored on the servers. Other information providers restrict access to users with accounts or grant only limited access to unregistered users. For example, using ftp a user can often log on as an "anonymous" user (e.g., a user for which no account has been created in advance), but access through anonymous ftp is limited to certain data. Of course, an information provider can elect not to provide uncontrolled access (e.g., permit only those with accounts to access the server), provided appropriate security measures are implemented.

330 Protection of works by means of access control mechanisms assumes that the system is not vulnerable to external means to circumvent access control. Existing systems may be vulnerable, for example, through passive monitoring during the exchange of unencrypted passwords. As a consequence, much current effort is directed to improving security at the access control level.

Thus, control over access to a server may be used as one of the first levels of protection for the works found on it.

2. CONTROLLING ACCESS AT THE FILE LEVEL

A second level of control over protected works can be exerted through control measures tied to the electronic file containing the work. One type of restriction can be implemented through "rendering" or "viewing" software. Such systems require (1) a proprietary or unique file format that can only be read by certain software and that is developed or controlled by the information provider and (2) software that incorporates both a "control" measure to prevent viewing or use of a work without authorization from the information provider and "manipulation" functions to permit the user to view or use the work. Rendering or viewing software can be written to deny access if the user enters unauthorized identification or an improper password. Rendering software can also be written to deny access if the work is not an authorized copy (provided that sufficient information regarding authorized use is included in header information and it is sealed with a digital signature).³³¹

Another type of restriction is encryption. In its most basic form, encryption amounts to a "scrambling" of data using mathematical principles that can be followed in reverse to "unscramble" the data. Encryption technologies can be used to deny access to the work in a usable form. File encryption simply converts a file from a manipulatable file format (e.g., a word processor document or a picture file that can be opened or viewed by appropriate general purpose software packages) to a scrambled format.³³² Authorization in the form of possession of an appropriate

331 For example, the software may deny access to a work if the electronic file containing the work has been altered or information stored in the file does not match data supplied by a user necessary to open and use the file. See discussion of digital signatures *infra* pp. 113-14.

332 Rendering or viewing software may integrate encryption and file manipulation into a single software package. In other words, the rendering software, after getting a password, will decode the file and permit the user to

password or "key" is required to "decrypt" the file and restore it to its manipulatable format.

Encryption techniques use "keys" to control access to data that has been "encrypted." Encryption keys are actually numbers that are plugged into a mathematical algorithm and used to scramble data using that algorithm. Scrambling simply means that the original sequence of binary digits (i.e., the 1s and 0s that make up a digital file) is transformed using a mathematical algorithm into a new sequence of binary digits (i.e., a new string of 1s and 0s). The result is a new sequence of digital data that represents the "encrypted" work.³³³ Anyone with the key (i.e., the number used to scramble the data according to the specified mathematical algorithm) can decrypt the work by plugging the number into a program that applies the mathematical algorithm in reverse to yield the original sequence of digital signals.³³⁴ Although perhaps most commonly thought of as a tool for works transmitted via computer networks, encryption can be and is used with virtually all information delivery technologies, including telephone, satellite and cable communications. Of course, once the work is decrypted by someone with the key, there may be no technological protection for the work if it is stored and subsequently distributed in its "decrypted" or original format.

manipulate the work (e.g., view it or listen to it), but only with the provided rendering software.

333 An algorithm is a set of logical rules or mathematical specification of a process which may be implemented in a computer.

334 A widely publicized encryption technique is referred to as "public key" encryption. Public key encryption transforms the work using an algorithm requiring two particular keys -- a "public" key and a "private" key. The keys have complementary roles. Data encrypted using a public key can only be decrypted using a secret, private key. For instance, a copyright owner could encrypt a work using the public key of the intended recipient; then, only the intended recipient could decrypt a copy of the work with his private key. No secret (private) keys need to be exchanged in this transaction. Without the private key of the intended recipient, the work cannot be read, manipulated or otherwise deciphered by other parties. Of course, if a decrypted copy is made and shared, then others could manipulate the work unless other means are used to protect it.

Requests for the export of cryptographic technologies are reviewed by the U.S. State Department. Although some cryptographic technologies used to encrypt communications are restricted from export, technologies used to identify and authenticate users and files are generally not restricted. There is an ongoing review of policies governing the export of computer and networking technologies, and there has been some relaxation of prior controls.

B. CONTROLLING USE OF THE WORK

Hardware and/or software can provide protection against unauthorized uses of copyrighted works. For instance, the Audio Home Recording Act requires circuitry in digital audio recording devices and digital audio interface devices that controls serial copying.³³⁵ The circuitry in the hardware is programmed to read certain coding information contained in the "digital subcode channel" of digital sound recordings and broadcasts. Based on the information it reads, the hardware circuitry will either permit unrestricted copying, permit copying but label the copies it makes with codes to restrict further copying, or disallow copying. The serial copy management system implemented by this circuitry allows unlimited first generation copying -- digital reproduction of originals (such as CDs distributed by record companies), but prevents further digital copying using those reproductions.³³⁶

Systems such as these can be implemented through hardware, software or both, using the concepts discussed above (e.g., rendering software and encryption technology). For example, files containing works can include instructions used solely to govern or control distribution of the work. This information might be placed in the "header" section of a file³³⁷ or another part of the file. In conjunction

³³⁵ See 17 U.S.C. § 1002 (Supp. V 1993).

³³⁶ See H.R. Rep. No. 102-873(I), 102d Cong., 2d Sess., reprinted in 1992 U.S.C.C.A.N. 3578, 3579-80, 3583 n15.

³³⁷ A "header" is a section of a digital work where information, data, codes and instructions may be embedded. Such information may actually be

with receiving hardware or software, the information, whether in the header or elsewhere, can be used to limit what can be done with the original or a copy of the file containing the work. It can limit the use of the file to read-, view-, or listen-only. It can also limit the number of times the work can be retrieved, opened, duplicated or printed.

C. AUTHENTICATING THE WORK

Mathematical algorithms can be used to create digital signatures that, in effect, place a "seal" on a digitally represented work. These algorithms can be implemented through software or hardware, or both. Digital signatures can play an important role in ensuring data integrity.

A digital signature is a unique sequence of digits that is computed based on (1) the work being protected, (2) the digital signature algorithm being used, and (3) the key used in digital signature generation.³³⁸ Generating a digital signature uses cryptographic techniques, but is not encryption of the work; the work may remain unencrypted so it can be accessed and used without decryption. In fact, digital signatures and encryption can be used simultaneously to protect works. Generally, a signature is computed for a copyrighted work first and then the work (including the seal) is encrypted. When the work is to be used, the work is decrypted, then the signature (i.e., the seal) is verified to be sure the work has not been modified (either in its original or encrypted form). If the work is never changed, the seal need never be removed or

embedded anywhere in the work, but for ease of reference, this Report refers to such information as embedded in a header. Terms such as "label" and "wrapper" are also used to refer to what this Report refers to as a "header."

338 The signature is generated using the binary digits of the work plus the value of the private key as inputs to the computation defined by the algorithm. Thus, the digital signature for an information object is a unique sequence of digits for that work. Specifically, a signature is not the same for different works using the same private key.

changed. If the work is changed, a new seal must be computed on the revised information.

Generating a digital signature is called "signing" the work. Both the digital signature and the public key are often appended to signed copyrighted works (or they may be stored in a header). The signature serves as a "seal" for the work because the seal enables the information to be independently checked for unauthorized modification.³³⁹ If the seal is verified (independently computed signature matches the original signature), then the copyrighted work is a bona fide copy of the original work -- i.e., nothing has been changed in either the header or the work itself.

D. MANAGING RIGHTS IN THE WORK

Software-based systems for tracking and monitoring uses of copyrighted works are contemplated in the development of the NII. Software-based systems may also be used to implement licensing of rights and metering of use. A combination of access controls, encryption technologies and digital signatures can be used by copyright owners to protect, license and authenticate their works on the NII. These security measures must be carefully designed and implemented to ensure that they protect the copyrighted works and are not defeated.

Information included in files can be used to inform the user about ownership of rights in a work and authorized uses of it. For instance, information can be stored in the header of a file regarding authorship, copyright ownership, date of creation or last modification, and terms and conditions of authorized uses. It can also support search and retrieval based on bibliographic records.

³³⁹ Anyone who has access to an information object, also has access to the digital signature for the object and the public key of the rightsholder. Consequently, the digital signature for the object may be recomputed and used to independently confirm the integrity of the object by comparing it to the digital signature appended to the object.

Electronic licenses may be used in connection with works offered via the NII. Electronic contracts may be analogous to the "shrink wrapped" licenses used for prepackaged software.³⁴⁰ Providers may inform the user that a certain action -- the entering of a password, for instance, to gain access to the service or a particular work, or merely the use of the service -- will be considered acceptance of the specified terms and conditions of the electronic license. Payments for such licenses also may be made via the NII.³⁴¹

The Library of Congress' Electronic Copyright Management System may be instrumental in rights management. The proposed system, which is under development, has three distinct components: (1) a registration and recordation system, (2) a digital library system with affiliated repositories of copyrighted works, and (3) a rights management system.³⁴² The system will serve as a testbed to gain experience with the technology, identify issues, prototype

340 "Shrink wrapped" is a term used to describe licenses and contracts which are enclosed with prepackaged software and which contain a notice whose operative message is: "Opening this package constitutes agreement to the terms and conditions of a legally binding agreement stated below. If you do not agree to these terms and conditions, then do not open the package."

341 The IITF Committee on Applications and Technology is addressing electronic commerce issues, including the electronic transfer of funds through the NII.

342 See R.E. Kahn, "Deposit, Registration and Recordation in an Electronic Copyright Management System," Proceedings of Technical Strategies for Protecting Intellectual Property in the Networked Multimedia Environment, Interactive Multimedia Assoc., Annapolis, MD, 21401-1933, Jan. 1994. The registration and recordation system will be operated by the Library of Congress and will enable electronic filing of documents, automated registration and recordation of transfers of ownership and other copyright-related documents. The digital library system will be composed of a set of distributed repositories for copyrighted works, and will support search and retrieval based upon an electronic bibliographic record. The rights management system will be a distributed system which will permit use of selected copyrighted materials on the Internet, and will have some on-line rights-granting services. Electronic mail will be used to license nonexclusive rights, with or without recordation of the transactions.

appropriate standards, and serve as a working prototype if full deployment is pursued later.

E. DEVELOPMENT OF STANDARDS

Some level of interconnection, interoperability and standardization of telecommunications, computer, wireless, satellite, broadcast and cable TV technologies and networks may be essential to achieve the Administration's vision of the NII. Government, industry or the marketplace may desire or require certain technological standards related to the NII. There has been much discussion of standardization of encryption technology, protocols, interfaces, headers and electronic licenses for purposes such as interoperability, interconnectivity and ease of information management or use.

III. EDUCATION

Effective education of the public about intellectual property rights is crucial to the successful development of the NII. There seems to be an attitude by some on the Internet, for instance, that you check your copyrights at the door when you enter that domain. There is a general lack of awareness by the public about intellectual property rights in their own works, as well as in the works of others. The task of education, however, is not without difficulty.

Perhaps the best places to start will be the schools, where millions of children will be connected to the NII. There is, however, no "national curriculum" to which a special section on NII-related intellectual property rights could be added. However, a development and distribution process for wide-spread intellectual property education can be established, by working with, among others, those responsible for defining the role the advanced information infrastructure will play in schools, as well as the state and national educational organizations involved in setting the educational principles and standards utilized in the curricula of more than 17,000 school districts throughout the United States.

A brief review of the major organizations involved in education technology for schools is set forth below. This list is not intended to be exhaustive. Efforts to effectively distribute an intellectual property education program will involve national, state and local organizations.

In addition to local school district officials, there are numerous educational organizations actively involved in devising plans and recommendations on how services available via the NII should be delivered and used by schools. The school audience to be reached includes students of all ages, as well as administrators, teachers and professors. Both public and private school systems must be involved.

The kindergarten to twelfth-grade (K-12) school audience to be educated about intellectual property and the NII can be broadly classified into three segments: learners, pre-service, and in-service or professional development. The "learners" segment consists of children who are in the school system. The "pre-service" segment

includes students currently in the school system who will go on to become teachers. The "in-service" or "professional development" segment consists of those professionals who are currently teachers or education administrators. Each group must be reached. The teachers who are educated about intellectual property rights today will be replaced in the future by the children moving through the school systems now. A similar approach can be taken in defining the audience to be reached on the university and graduate school level.

An intellectual property education program could be developed by individual state school officials, or distributed to them for their consideration. The Council of the Chief State School Officers (CCSSO) could be helpful in that regard.

Other educational organizations could also be useful in the promotion of intellectual property education. These organizations include the National Education Association, the American Federation of Teachers, the National Board for Professional Teaching Standards, the National Association of Teachers Colleges, the American Association of Community Colleges, the National School Board Association, the National Association of Elementary School Principals, the National Association of Secondary School Principals, the National Association of Independent Schools, the National Council of Teachers of Mathematics, the National Council of Teachers of English, and the National Science Teachers Association. Contact with the National Parent Teachers Association may also prove useful in reaching the parents of school-age children.

Intellectual property education can also be incorporated into the plans and recommendations that are currently being developed by educational organizations on how educators can best utilize the NII. The National Education Goals Panel and the recently created National Educational Standards and Improvement Council ("NESIC") are both involved in the mission of promoting national education goals, including educational standards. As part of this effort, for example, the National Education Goals Panel is working on a set of principles for technology and how technology can be used in promoting education. Intellectual property education materials could be included as part of the Panel's principles under development in the area of staff and child development. Educational technology specialists in the Department of Education and other educational

organizations, who share the objective of bringing the NII to schools, are also great resources.

The public library is another ideal place for intellectual property education. National library organizations, such as the American Library Association, the American Association of Law Libraries and the Special Libraries Association, could provide invaluable assistance. The nationwide network of 78 Patent and Trademark Depository Libraries could also be instrumental in the dissemination of intellectual property information to the public. Many of these depository libraries are affiliated with universities and colleges throughout the country.

Additional means of education, particularly those that use the NII itself, will also be explored and developed.

IV. PRELIMINARY FINDINGS AND RECOMMENDATIONS

These findings and recommendations represent the result of the Working Group's examination and analysis to date. While the findings and recommendations are preliminary, specific language is offered with any proposals for legislative change to elicit and facilitate more detailed public comment.

A. LAW

It is difficult for intellectual property laws to keep pace with technology. When technological advances cause ambiguity in the law, courts rely on the law's purposes to resolve that ambiguity. However, when technology gets too far ahead of the law, and it becomes difficult and awkward to apply the old principles, it is time for reevaluation and change. "Even though the 1976 Copyright Act was carefully drafted to be flexible enough to be applied to future innovations, technology has a habit of outstripping even the most flexible statutes."³⁴³

The coat is getting a little tight.³⁴⁴ There is no need for a new one, but the old one needs a few alterations.

1. DISTRIBUTION BY TRANSMISSION

a. THE DISTRIBUTION RIGHT

The Copyright Act gives a copyright owner the exclusive right "to distribute copies or phonorecords of the copyrighted work" to the public. A copy or phonorecord is a material object in which a copyrighted work is fixed, such as a compact disc, a videocassette or a paperback book. It is not clear under the current law that a

³⁴³ H.R. Rep. No. 101-735, 101st Cong., 2d Sess. 7 (1990), reprinted in 1990 U.S.C.C.A.N. 6935, 6938 (report accompanying legislation granting copyright owners of computer software an exclusive rental right).

³⁴⁴ See supra p. 9.

transmission can constitute a distribution of copies or phonorecords of a work. Yet, in the world of high-speed, communications systems, it is possible to transmit a copy of a work from one location to another. This may be the case, for instance, when a computer program is transmitted from one computer to ten other computers. When the transmission is complete, the original copy remains in the transmitting computer and a copy resides in the memory of, or in storage devices associated with, each of the other computers.³⁴⁵ The transmission results essentially in the distribution of ten copies of the work. Therefore, the Working Group recommends that the Copyright Act be amended to reflect that copies of works can be distributed to the public by transmission, and such transmissions fall within the exclusive distribution right of the copyright owner.

The Working Group recommends that the Copyright Act be amended to recognize that copies or phonorecords of works can be distributed to the public by transmission, and that such transmissions fall within the exclusive distribution right of the copyright owner. The Working Group recommends that Section 106(3) be amended to read as follows:³⁴⁶

(3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, ~~or by rental, lease, or lending, or by~~ transmission.

The Working Group also recommends other related amendments to the definition of "transmit" and the importation prohibitions.

A transmission is not necessarily a transmission of a performance or display of a work.³⁴⁷ A transmission may be a

345 In contrast to "standard" distributions, in the case of a distribution by transmission, the distributor also retains a copy of the work.

346 Any language added by a proposed amendment is underscored. Proposed deletions are indicated by ~~strike-throughs~~.

347 See 17 U.S.C. § 101 (1988) (definition of transmissions of performances or displays, not of all transmissions).

transmission of a reproduction of a work. Therefore, the Working Group recommends that the definition of "transmit" in Section 101 of the Copyright Act be amended to clarify that reproductions, as well as performances and displays, can be transmitted, and to delineate between those transmissions that are communications of performances or displays and those that are distributions of reproductions.

How to delineate between these types of transmissions is a difficult, but necessary, issue to resolve. The transmissions themselves hold no clues; one type often looks the same as the other during the transmission. To delineate between those transmissions that are communications of performances or displays and those that are distributions of reproductions, then, one must look at both ends of the transmission. Did the transmitter intend to communicate a performance or display of the work or, rather, to distribute a reproduction of the work? Did the receiver simply hear or see the work or, rather, receive a copy of it? If the transmitter intends to both communicate a performance or display and distribute a reproduction – or if the receiver hears or sees a performance or display of the work and receives a copy of it, what is the transmission? The resolution of these issues should rest upon a "primary purpose or effect" analysis of the transmission.

The Working Group, therefore, recommends that the definition of "transmit" be amended to read as follows:

To "transmit" a performance or display is to communicate it by any device or process whereby images or sounds are received beyond the place from which they are sent.
To "transmit" a reproduction is to distribute it by any device or process whereby a copy or phonorecord of the work is fixed beyond the place from which it was sent.
In the case when a transmission may constitute both a communication of a performance or display and a distribution of a reproduction, such transmission shall be considered a distribution of a reproduction if the primary purpose or effect of the transmission is to distribute a copy or phonorecord of the work to the recipient of the transmission.

The Working Group also recommends that the prohibitions on importation be amended to reflect the fact that, just as copies of copyrighted works can be distributed by transmission in the United States, they can also be imported into the United States by transmission. Although we recognize that the U.S. Customs Service cannot, for all practical purposes, enforce a prohibition on importation by transmission, given the global dimensions of the information infrastructure of the future, it is important that copyright owners have the other remedies for infringements of this type available to them. Therefore, the Working Group recommends that Section 602 of the Copyright Act be amended to read as follows:

(a) Importation into the United States, whether by carriage of tangible goods or by transmission, without the authority of the owner of copyright under this title, of copies or phonorecords of a work that have been acquired outside the United States is an infringement of the exclusive right to distribute copies or phonorecords under section 106, actionable under section 501.

b. PUBLICATION

The legislative history to the Copyright Act makes clear that "any form of dissemination in which a material object does not change hands . . . is not a publication no matter how many people are exposed to the work."³⁴⁸ Thus, a transmission of a performance or display via the NII would not constitute publication, because, technically, a material object does not change hands.³⁴⁹ However, in the case of a transmission of a reproduction, the recipient of the transmission ends up with a copy of the work. Therefore, the Working Group recommends that the definition of "publication" in Section 101 of the Copyright Act be amended to include the concept of distribution by transmission:

³⁴⁸ See House Report at 138 (emphasis added), reprinted in 1976 U.S.C.C.A.N. 5754.

³⁴⁹ See discussion supra notes 34-35 and accompanying text.

"Publication" is the distribution of copies or phonorecords of a work to the public by sale or other transfer of ownership, ~~or~~ by rental, lease, lending, or by transmission. The offering to distribute copies or phonorecords to a group of persons for purposes of further distribution, public performance, or public display, constitutes publication. A public performance or display of a work does not of itself constitute publication.³⁵⁰

c. FIRST SALE DOCTRINE

The first sale doctrine allows the owner of a particular, lawfully-made copy of a work to dispose of it in any manner, with certain exceptions,³⁵¹ without infringing the copyright owner's exclusive right of distribution. It seems clear that the first sale model -- in which the copyright owner parts company with a tangible copy -- should not apply with respect to distribution by transmission, because under current applications of technology, a transmission involves both the reproduction of the work and the distribution of the reproduction. In the case of transmissions, the owner of a particular copy of a work does not "dispose of the possession of that copy or phonorecord." A copy of the work remains with the first owner and the recipient of the transmission receives a reproduction of the work. Therefore, to make clear that the first sale doctrine does not apply to transmissions, the Working Group recommends that Section 109 of the Copyright Act be amended to read as follows:

- (a) (1) Notwithstanding the provisions of section 106(3), the owner of a particular copy or phonorecord

350 The second sentence of the definition -- adopted originally to ensure that theatrically distributed movies were "published" and thus eligible for copyright protection under prior law -- would appear to apply often to works made available by display on bulletin board systems or similar services.

351 See discussion of rental rights with regard to phonorecords and copies of computer programs supra notes 167-69 and accompanying text.

lawfully made under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord.

(2) This subsection does not apply to the sale or other disposal of the possession of that copy or phonorecord by transmission.

d. OTHER RELATED AMENDMENTS

The legislative changes outlined above give rise to some difficult issues. The term "distribute" (or a variant form of the term), which is not defined, is used more than 90 times in the Copyright Act.³⁵² Moreover, the term is used in the definition of "publication," which, in its variant forms, is used more than 100 times. Therefore, care must be taken to identify and analyze all of the ramifications of a change in the Section 106 right to distribute.

The Working Group is in the process of completing that process and welcomes public comment in this regard. The Working Group is analyzing whether each of the limitations of the copyright owner's distribution right should apply with respect to distribution by transmission.³⁵³

2. TECHNOLOGICAL PROTECTION

The ease of infringement and the difficulty of detection and enforcement will cause copyright owners to look to technology, as

³⁵² This number does not include the use of the term in Chapters 9 and 10, which have separate definitions of the term for the purposes of those chapters. It also does not include the 30 some times the Act refers to the distribution of royalties collected under the compulsory licensing systems.

³⁵³ These limitations include the limitation with regard to distribution by libraries (§ 108), the limitation with regard to ephemeral recordings (§ 112(c)), and the mechanical compulsory license (§ 115).

well as the law, for protection of their works. However, it is clear that technology can be used to defeat any protection technology provides. The Working Group finds that legal protection alone may not be adequate to provide incentive to authors to create and to disseminate works to the public, unless the law also provides some protection for the technological processes and systems used to prevent unauthorized uses of copyrighted works.

Sufficient protection cannot be gained through suits for contributory infringement. Under the Sony decision, a manufacturer is not liable for contributory infringement if the device is capable of a "substantial noninfringing use," even if the device is rarely or never put to those uses, and even if the use to which it is primarily put is infringing.

The Working Group finds that prohibition of devices, products, components and services that defeat technological methods of preventing unauthorized use is in the public interest. Consumers of copyrighted works pay for the acts of infringers. The price of copyrighted works for legitimate users is higher due to infringement losses suffered by copyright owners. The public will also have access to more works via the NII if copyright owners can more effectively protect their works from infringement.

Therefore, the Working Group recommends that the Copyright Act be amended to prohibit the importation, manufacture and distribution of devices, as well as the provision of services, that defeat anti-copying systems.

Legislation of this type is not unprecedented. The Copyright Act already protects sound recordings and musical works by prohibiting the circumvention of any program or circuit that implements a serial copy management system or similar system included in digital audio recording devices and digital audio interface devices. Section 1002 provides:

No person shall import, manufacture, or distribute any device, or offer or perform any service, the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent any program or

circuit which implements, in whole or in part, a [serial copy management system or similar system].³⁵⁴

The Communications Act includes a similar provision:

Any person who manufactures, assembles, modifies, imports, exports, sells, or distributes any electronic, mechanical, or other device or equipment, knowing or having reason to know that the device or equipment is primarily of assistance in the unauthorized decryption of satellite cable programming, or is intended for any other activity prohibited by [Section 605(a)] shall be fined not more than \$500,000 for each violation, or imprisoned for not more than 5 years for each violation, or both. For purposes of all penalties and remedies established for violations of this paragraph, the prohibited activity established herein as it applies to each such device shall be deemed a separate violation.³⁵⁵

Precedent for this type of legislation is also found in the international arena. The North American Free Trade Agreement requires each party to make it a criminal offense to "manufacture, import, sell, lease or otherwise make available a device or system that is primarily of assistance in decoding an encrypted program-carrying satellite signal without the authorization of the lawful distributor of such signal" ³⁵⁶ In 1988, the United Kingdom enacted legislation prohibiting the manufacture, distribution or sale of a device designed or adapted to circumvent copy-protection systems.³⁵⁷

354 17 U.S.C. § 1002(c) (Supp. V 1993).

355 47 U.S.C. § 605(e)(4) (1988).

356 See NAFTA, *supra* note 289, at art. 1707(a). The NAFTA also requires parties to make it a civil offense to "receive, in connection with commercial activities, or further distribute, an encrypted program-carrying satellite signal that has been decoded without the authorization of the lawful distributor of the signal or to engage in any activity prohibited under [the criminal provisions]." See NAFTA, *supra* note 289, at art. 1707(b).

357 See Copyright, Designs and Patents Act of 1988, Part VII, § 296.

The Working Group recommends that Chapter 5 of the Copyright Act be amended to include the following new section 512:

No person shall import, manufacture or distribute any device, product, or component incorporated into a device or product, or offer or perform any service, the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent, without authority of the copyright owner or the law, any process, treatment, mechanism or system which prevents or inhibits the exercise of any of the exclusive rights under Section 106.

The Working Group recommends other related amendments to provide civil causes of action and remedies for violations of the proposed prohibition. The Working Group recommends that Section 501 of the Copyright Act be amended to read as follows:

- (a) Anyone who violates any of the exclusive rights of the copyright owner as provided by sections 106 through 118 or of the author as provided in section 106A(a), or who imports copies or phonorecords into the United States in violation of section 602, is an infringer of the copyright or right of the author, as the case may be. Anyone who violates section 512 is an infringer of the copyright in a work that utilizes the process, treatment, mechanism or system which the violator's device, product, component or service circumvents.

The Working Group recommends that Section 503 of the Copyright Act be amended to read as follows:

- (a) At any time while an action under this title is pending, the court may order the impounding, on such terms as it may deem reasonable, of all copies or phonorecords claimed to have been made or used in violation of the copyright owner's exclusive rights, ~~and of~~ all plates, molds, matrices, masters, tapes, film negatives, or other articles by means of which such copies or
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phonorecords may be reproduced, and of all devices, products or components claimed to have been imported, manufactured or distributed in violation of section 512.

(b) As part of a final judgment or decree, the court may order the destruction or other reasonable disposition of all copies or phonorecords found to have been made or used in violation of the copyright owner's exclusive rights, and of all plates, molds, matrices, masters, tapes, film negatives, or other articles by means of which such copies or phonorecords may be reproduced, and of all devices, products or components found to have been imported, manufactured or distributed in violation of section 512.

The Working Group also recommends that Section 506 of the Copyright be amended to read as follows:

(a) Criminal Infringement. -- Any person who infringes a copyright willfully and for purposes of commercial advantage or private financial gain shall be punished as provided in section 2319 of title 18.

(b) Forfeiture and Destruction. -- When any person is convicted of any violation of subsection (a), the court in its judgment of conviction shall, in addition to the penalty therein prescribed, order the forfeiture and destruction or other disposition of all infringing copies or phonorecords and all implements, devices, products, components or equipment used in the ~~manufacture of such infringing copies or phonorecords~~ infringement.

The proposed prohibition on the importation, manufacture and distribution of devices, products and components, and the provision of services, that circumvent anti-copying systems is intended to assist copyright owners in the protection of their works.³⁵⁸

358 Legislation of a similar type has been introduced with respect to technological protection of audiovisual works. See, e.g., S. 1096, 102d Cong., 1st Sess., 137 Cong. Rec. S. 6034 (1991); H.R. 3568, 101st Cong., 1st Sess., 135 Cong. Rec. H. 7924 (1989).

Copyright owners who use anti-copying systems to protect their works may bring actions for infringement against persons who, inter alia, manufacture or distribute devices whose primary purpose or effect is circumvention of those systems. The Working Group recognizes, however, that copyright owners may wish to use such systems to prevent the unauthorized reproduction, for instance, of their works, but may also wish to allow some users to deactivate the systems. Therefore, the proposed legislation prohibits only those devices or products, the primary purpose or effect of which is to circumvent such systems without authority. That authority may be granted by the copyright owner or by limitations on the copyright owner's rights under the Copyright Act.

Standing to bring actions for violations of the proposed legislation is granted only to copyright owners whose works are protected by the system that the violator's device, product, component or service circumvents; the manufacturers of anti-copying systems defeated by violators may not bring actions for the defeat of such systems.

The Working Group is not without some concerns regarding this proposal, particularly with regard to works whose term of copyright protection expires but are still protected by anti-copying systems, and works in the public domain. However, the Working Group believes the "primary purpose or effect" standard will allow for the distribution of devices that deactivate the anti-copying systems used in such works, and that the benefits of the proposed legislation outweigh the possible problems.

3. COPYRIGHT MANAGEMENT INFORMATION

In the future, the copyright management information associated with a work -- such as the name of the copyright owner and the terms and conditions for uses of the work -- may be critical to the efficient operation and success of the NII. The public should be protected from fraud in the creation or alteration of such information. Therefore, the Working Group recommends that the Copyright Act be amended to prohibit fraudulent inclusion of

copyright management information and fraudulent removal or alteration of such information. The Working Group recommends that Section 101 of the Copyright Act be amended to include the following definition:

"Copyright management information" means information associated with a copyrighted work, including, but not limited to, the name and other identifying information of the copyright owner, the terms and conditions for uses of the work, and identification codes such as an ISBN number.

The Working Group also recommends that Section 506 of the Copyright Act, which contains the prohibitions against fraudulent copyright notices and fraudulent removal of copyright notices, be amended to include the following new subsections (g) and (h):

(g) Fraudulent Copyright Management Information. -- Any person who, with fraudulent intent, digitally links with a copy of a copyrighted work copyright management information that such person knows to be false, or who, with fraudulent intent, publicly distributes or imports for public distribution any work with which copyright management information that such person knows to be false is linked, shall be fined not more than \$2,500.

(h) Fraudulent Removal of Copyright Management Information. -- Any person who, with fraudulent intent, removes or alters any copyright management information digitally linked with a copy of a copyrighted work shall be fined not more than \$2,500.

4. PUBLIC PERFORMANCE RIGHT

Transmissions of sound recordings may eventually replace the current forms of distribution of phonorecords. In the very near future, consumers will be able to receive digital transmissions of sound recordings on demand -- for performance in the home or for downloading -- from the so-called celestial jukebox. The legal nature of such transmissions -- whether they are performances or

distributions -- has been widely debated. As discussed above, the Working Group recommends that Section 106 of the Copyright Act be amended to make clear that copies or phonorecords can be distributed by transmission. The Working Group also recommends that a "primary purpose or effect" test be used to determine whether a transmission is a performance (or display) or a distribution. However, many of these transmissions will clearly constitute exercise of the public performance right -- a right which the Copyright Act fails to grant to copyright owners of sound recordings.³⁵⁹

The lack of a public performance right in sound recordings under U.S. law is an historical anomaly that does not have a strong policy justification -- and certainly not a legal one. Sound recordings are the only copyrighted works that are capable of being performed that are not granted that right. Therefore, to play a record on the radio without infringement liability, a radio station must get a license from, and pay a royalty to, the copyright owner of the underlying musical work (i.e., the person or entity who owns the rights in the notes and the lyrics), but it does not have to obtain permission from, or pay a license fee to, the copyright owner of the sound recording or the performer on the record. The Working Group believes that it is time to rectify this inequity.

The Working Group notes that the Administration supports two bills introduced in Congress that would grant a limited performance right to sound recordings. The bills, H.R. 2576 and S. 1421, would add to the exclusive rights of a copyright owner in a sound recording the right to perform or authorize the performance of the sound recording by "digital transmission." The right granted in the bill is not the full performance right granted to other copyrighted works. For instance, the legislation would not change the law with respect to live public performances. It would also not touch analog transmissions -- the transmissions currently received over the radio.

359 Some transmissions that clearly constitute public performances may, in effect, substitute for distributions in the future. If consumers are offered a service through which they can receive a performance of any sound recording at any time, they may stop buying phonorecords. The market for distributed phonorecords may shrink to include only the providers of that service to consumers.

It would only grant a right with respect to transmissions in a digital format -- those that pose the greatest threat to the copyright owners of sound recordings.

5. FAIR USE

The Working Group has significant concerns regarding the ability of the limitations on copyright owners' exclusive rights -- particularly those limitations found in Sections 107 (fair use), 108 (library exemptions) and 110(1) and (2) (educational uses) -- to provide the public with adequate access to copyrighted works transmitted via the NII. As more and more works are available primarily or exclusively on-line, it is critical that researchers, students and other members of the public have opportunities on-line equivalent to their current opportunities off-line to browse through copyrighted works in their schools and public libraries.

The Copyright Act exists for the benefit of the public. To fulfill its constitutional purpose, the law should strive to make the information contained in protected works of authorship freely available to the public. "Freely available," of course, does not necessarily mean "available free." The Working Group does not believe that authors should be required to donate access time to their works on-line, but some reasonable approach must be adopted to ensure that the economically disadvantaged in this country are not further disadvantaged or disenfranchised by the information revolution. Public libraries and schools, and the access to information that they provide, have been important safeguards against this nation becoming a nation of information "haves" and "have nots." We must ensure that they continue to be able to assume that role.

Guidelines for library and educational use of printed matter and music were voluntarily adopted by diverse parties and set out in the House and Conference reports accompanying the 1976 revisions to the Copyright Act.³⁶⁰ While the principles should still be

³⁶⁰ See House Report at 68-79, reprinted in 1976 U.S.C.C.A.N. 5659, 5681-92; Conference Report at 72-73, reprinted in 1976 U.S.C.C.A.N. 5810, 5813-14.

applicable, it is difficult and, perhaps, inappropriate, to apply the specific language of some of those guidelines in the context of digital works and on-line services.

Therefore, the Working Group will sponsor a conference to bring together copyright owner and user interests to develop guidelines for fair uses of copyrighted works by and in public libraries and schools. To increase the productivity of the conference, the number of participants will be limited. However, attendance at the conference will be open to the public. Those wishing to participate in the conference should send a one-page request to Terri A. Southwick, Attorney-Advisor, Office of Legislative and International Affairs, U.S. Patent and Trademark Office, Box 4, Washington, D.C. 20231. Requests must be received by July 25, 1994, and should include a brief description of the interests that would be represented at the conference by the requestor.

The location and date of the conference will be announced in the press, on the IITF Bulletin Board, and in the Federal Register.

6. LICENSING

With limited exceptions, intellectual property law leaves the licensing of rights to the marketplace. In certain circumstances, particularly where transaction costs are believed to dwarf per-transaction royalties, Congress has found it necessary to provide for compulsory licenses.³⁶¹ The Working Group finds that under current conditions, additional compulsory licensing of intellectual property rights is neither necessary nor desirable. Transaction costs -- and the attendant savings from compulsory licensing -- can be minimized in a digital environment. The marketplace should be allowed to develop whatever legal licensing systems may be appropriate for the NII.

361 See, e.g., 17 U.S.C. § 111 (1988 & Supp. V 1993). The cable compulsory license was enacted to reduce the need for negotiations among thousands of program copyright owners and hundreds of cable systems for the right to retransmit the copyrighted works programs that are included in the broadcast signals retransmitted by cable systems.

7. INTERNATIONAL

There is little dispute that worldwide high-speed digital communications networks will have an enormous effect on the way in which works of authorship will be created, stored, communicated to the public, distributed and paid for. This communication revolution is now bringing new opportunities and new challenges to creators and users of intellectual property. The full implementation of the NII and the GII will have an immense effect on our economy, and implementation of such systems internationally will have an equally broad impact on world-wide commerce. We must be committed to finding the means to preserve the integrity of intellectual property rights in the materials that will flow in the commerce created in this environment. This is a daunting challenge in the context of the U.S. domestic market. Today we are faced with an even greater challenge, to lay the groundwork for an international basis which ensures that the digital revolution will not disadvantage those whom we seek to protect.

As we move toward a world where dissemination of entertainment and information products through on-demand delivery services operating through interactive digital information communications networks is the norm, it may be necessary to harmonize levels of protection under disparate systems of copyright, authors' rights and neighboring rights, and consideration should be given to ways to bridge the gaps among these systems.

If the GII as well as national NIIs are to flourish, then the intellectual property rights that will undergird the economic structure supporting these infrastructures must unequivocally be granted in national legislation fully on the basis of national treatment for all rights and benefits. However, there is some controversy over the scope of the national treatment obligation under the Berne Convention and its application to what some may regard as newly created rights and subject matter. Similar questions arise under other international copyright and neighboring rights conventions as will be later discussed.

U.S. copyright legislation has granted rights that some may regard as new rights -- rental rights in computer programs, sound recordings, and musical works embodied in sound recordings -- exclusively on the basis of national treatment. The United States has instituted a system of royalties on blank digital audio recording media and digital audio recorders. Benefits from these rights have all been granted on the basis of full national treatment. We believe that this is consistent with our obligations under the Berne Convention and other international intellectual property and trade treaties and agreements.

The author or rights holder should be able to realize fully the economic benefits flowing from the free exercise of his or her rights in any country participating in a GII. This is required by Article 5 of the Berne Convention. To do otherwise in either a Berne Protocol or another agreement on copyright protection would be contrary to Article 20 because it would be a derogation of rights existing under Berne and not be an Agreement to "grant to authors more extensive rights than those granted by the Convention, or contain other provisions not contrary to this Convention" as provided for under Article 20.³⁶² To protect new works or to grant new rights in respect of those or presently protected works on the basis of reciprocity, would be contrary to the letter and the spirit of the Convention.

As the GII continues to develop through the international interconnection of NIIs, rules must be formulated to protect the economic rights of providers of entertainment and information products. Such rules should be based on principles of national treatment along the lines of the following:

362 Article 20 states:

The Governments of the countries of the Union reserve the right to enter into special agreements among themselves, in so far as such agreements grant to authors more extensive rights than those granted by the Convention, or contain other provisions not contrary to this Convention. The provisions of existing agreements which satisfy these conditions shall remain applicable.

1. Each country participating in the GII shall accord to nationals of another country participating in the GII no less favorable treatment than it accords to its own nationals with regard to all rights and benefits now, or hereafter, granted under its domestic laws in respect of literary and artistic works or fixations³⁶³ embodying such works.

2. Benefits shall include the same possibility to exploit and enjoy rights in the national territory of a country participating in the GII as the respective country grants to its own nationals.

3. No country participating in the GII shall, as a condition of according national treatment, require rights holders to comply with any formalities in order to acquire rights in respect of literary and artistic works or fixations embodying such works.

One of the most important issues will be what is the nature of a dissemination of a work or a fixation of a work in digital format? Is it a public performance of the work or fixation, an act of reproduction, or a distribution? How do rules concerning the right of importation apply in a digital environment? Just as these questions are critical in the domestic context, they are equally acute in the context of international treaties and harmonization of laws.

Additionally, the issue of multimedia works will take on an important international dimension. If these are regarded at the international level as works in a new, separate category, the issue of their coverage under the existing conventions and the rule of national treatment will be open to debate. If, however, they are subsumed into the existing categories of works, establishing meaningful rules internationally will be simplified.

Further study to determine what other rights may need to be adapted to the emerging digital environment are underway both in domestic and international fora. However some issues merit

³⁶³ This reference to fixations includes the subject matter of neighboring rights related to works and their performance.

identification here, and one of those is the level of protection to be accorded to sound recordings.

Many believe that the time has come to bring protection for performers and producers of sound recordings into line with the protection afforded to the creators of other works protected under the Berne Convention. This includes providing high-level standards for rights and benefits granted on the basis of national treatment. This is necessary for a number of reasons. First, there is no just reason to accord a lower level of protection to one special class of creative artists. Second, the extent of international trade in sound recordings makes it imperative that standards of protection be harmonized at a high level. Third, and perhaps most importantly, the digital communications revolution -- the creation of advanced information infrastructures -- is erasing the distinctions among different categories of protected works and sound recordings and the uses made of them.

Concerns have been raised over the extent and scope of moral rights in the world of digital communications. Some believe that the ability to modify and restructure existing works make moral rights more important than ever before. Others take the view that moral rights must be rethought in the digital world. We agree with this view. New thought must be given to the scope, extent and waivability of moral rights in digitized information.

The harmonization issues most relevant to the NII arise in the context of WIPO efforts to establish a Possible Protocol to the Berne Convention (Berne Protocol) and a Possible New Instrument for the Protection of Performers and Producers of Phonograms (New Instrument). In the Berne Protocol, the relevant activities concern the protection of computer programs as literary works, protection for databases as compilations of information other than works, the possible elimination of compulsory licensing for broadcasting, and special provisions for the use of materials in digital distribution systems. In the New Instrument, the most relevant issues are the possible establishment of a public performance right for sound recordings (possibly limited to digital broadcasting) and the possibility of a digital distribution or dissemination right for sound recordings.

To attain the needed level of protection internationally, we must find ways to span the differences between the continental droit d'auteur and neighboring rights systems and the Anglo-American copyright systems. An essential element of this effort will be to harmonize levels of protection by establishing standards that can be implemented through either system.

B. TECHNOLOGY

Interoperability and interconnectivity of networks, systems, services and products operating within the NII will enhance its development and success. Standardization of copyright management (standardized header information and format, for instance) as well as technological protection methods (such as encryption) may also be useful. The question of whether any standards should be established, either through government regulation or industry consensus, however, is not within the purview of this Working Group. The issue of what those standards should be, if established, is similarly outside the scope of the area of inquiry of the Working Group.³⁶⁴ If a standard is established, however, protection of intellectual property rights used in that standard is of concern to this Group.

The intellectual property rights implications of the standards-setting process are not new with the development of the NII. The Federal Communications Commission, for instance, has established standards in related areas without interfering with the legitimate rights of intellectual property rights owners.³⁶⁵

³⁶⁴ The IITF Committee on Applications and Technology has responsibility for addressing the issue of standards.

³⁶⁵ Recently, the FCC adopted technical standards that define a patented system as the A.M. radio stereophonic transmitting standard in the United States. See 58 Fed. Reg. 66300 (daily ed. Dec. 20, 1993). The FCC conditioned the selection of the patented system as the standard on the agreement of the patent owner to license its patents to other parties "under fair and reasonable terms." Id. at 66301.

The Working Group finds that in the case of standards to be established, by the government or the private sector, the owner of any intellectual property rights involved must be able to decline to have its property used in the standard, if such use would result in the unauthorized exercise of those rights. If the rights holder wishes to have its intellectual property as part of the standard, an agreement to license the necessary rights on a nondiscriminatory basis and on reasonable terms may be required. In the case of de facto standards, arising out of market domination by an intellectual property rights holder, unfair licensing practices can be dealt with through the antitrust laws.

C. EDUCATION

Effective education of the public about intellectual property rights is crucial to the successful development of the NII. Therefore, the principles of intellectual property law must be taught in our schools and libraries. Educational efforts to increase the public's awareness of their own intellectual property rights, as well as those of others, will increase respect for those rights. Clearer guidelines with respect to the exclusive rights of copyright and other intellectual property rights holders, as well as the limitations on those rights, will make compliance with the law easier.

Following its conference on fair use, the Working Group will sponsor a second conference on intellectual property education. The purpose of that conference will be to develop curricula that may be used in schools and libraries. Additional means of education, particularly those that use the NII itself, will also be explored and developed. To increase the productivity of the conference, the number of participants will be limited. However, attendance at the conference will be open to the public. Those wishing to participate in the conference should send a one-page request to Terri A. Southwick, Attorney-Advisor, Office of Legislative and International Affairs, U.S. Patent and Trademark Office, Box 4, Washington, D.C. 20231. Requests must be received by July 25, 1994, and should include a brief description of the interests that would be represented at the intellectual property education conference by the requestor.

The location and date of the conference will be announced in the press, on the IITF Bulletin Board, and in the Federal Register.