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## Iv. Copyright, Patent & Trademark Law

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## IV. COPYRIGHT, PATENT &amp; TRADEMARK LAW

A. M. Kramer Manufacturing Co. v. Andrews: *Extending Copyright Protection for a Video Game's Audiovisual Work to the Underlying Computer Program\**

In 1980 Congress amended the Copyright Act of 1976<sup>1</sup> (the "1976 Act") to include copyright protection for computer

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\* A version of this article was submitted in the Nathan Burkan Memorial Competition.

1. 17 U.S.C. §§ 101-914 (1982 & Supp. III 1985). Under the United States Constitution, Congress has the power to promote the progress of science by granting an author exclusive rights in the author's writings for a limited time. See U.S. CONST. art. I, § 8, cl. 8 (giving Congress power to create author's right to establish exclusive rights over writings). In 1790 Congress enacted the first copyright act in the United States. Act of May 31, 1790, ch. 15, 1 Stat. 124 (repealed 1831); see FINAL REPORT OF THE NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS 35 (1978) [hereinafter CONTU REPORT] (final report of committee that Congress established to recommend new copyright provisions) (describing Congressional enactment of 1790 Act). Since enacting the first copyright act, Congress continuously has expanded the scope of copyright protection. See, e.g., Act of Feb. 3, 1831, ch. 16, 4 Stat. 436 (extending copyright protection to musical compositions) (amended 1870); Act of Aug. 18, 1856, ch. 169, 11 Stat. 138 (extending copyright protection to dramatic compositions) (amended 1870); Act of July 8, 1870, ch. 230, 16 Stat. 198 (extending copyright protection to paintings and designs) (amended 1909); Copyright Act of 1909, ch. 320, 35 Stat. 1075 (extending copyright protection to all writings of any author) (repealed 1976); see also CONTU REPORT, *supra*, at 36-37 (describing Congress' progression in extending copyrightability to different types of works). The Constitution provides that all writings of an author constitute copyrightable subject matter. U.S. CONST. art. I, § 8, cl. 8. Judicial decisions interpreting the copyright power have construed the term "writings" very broadly. See, e.g., *Goldstein v. California*, 412 U.S. 546, 563 n.17 (1973) (sound recording meets requirements of "writing"); *Kalem Co. v. Harper Bros.*, 222 U.S. 55, 63 (1911) (motion pictures meet requirements of "writing"); *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 57-58 (1884) (photographs meet statutory definition of "writing"). Congress, however, enacted the 1976 Copyright Act (the "1976 Act") to provide protection for new forms of creative expression that future scientific discoveries and technological developments might generate. See 17 U.S.C. §§ 101-914 (1982 & Supp. III 1985) (1976 Act); see also H.R. REP. No. 1476, 94th Cong., 2d Sess. 51 (1976) [hereinafter 1976 HOUSE REPORT] (describing Congressional intent to protect developing technologies), reprinted in 1976 U.S. CODE CONG. & ADMIN. NEWS 5659, 5664.

In revising the Copyright Act of 1909 (1909 Act), Congress intended to allow the courts to provide copyright protection for works developed in the future without requiring that Congress revise the copyright law. See 1976 HOUSE REPORT, *supra*, at 51 (describing Congress' intent not to freeze subject matter of copyright). When Congress enacted the 1976 Act, however, Congress did not intend to alter the basic principle of the 1909 Act that copyright protection extends only to the expression of an idea and not to the actual idea. See 17 U.S.C. § 102(b) (1982) (copyright protection does not extend to any idea or concept); Copyright Act of 1909, ch. 320, § 4, 35 Stat. 1075, 1076 (1909) (limiting copyright protection to author's writings) (repealed by 17 U.S.C. § 102(b) (1982)); see also 1976 HOUSE REPORT, *supra*, at 56-57 (evidencing Congressional intent to limit scope of copyright protection to expressions of ideas). An author cannot stop a second author from creating a work that the second author has based on the same idea as the original author's work if the second author expresses the

programs.<sup>2</sup> Although Congress intended the 1976 Act to extend copyright

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work's idea in a different manner than the original author. See *Atari, Inc. v. Amusement World, Inc.*, 547 F. Supp. 222, 226 (D. Md. 1981) (finding no infringement when author copied idea but not expression). For example, in *Mazer v. Stein* the United States Supreme Court considered whether a utilitarian object could receive copyright protection. See *Mazer v. Stein*, 347 U.S. 201, 204-05 (1954) (questioning whether utilitarian object can receive copyright protection). In *Mazer* the creator of a statuette that businesses had sold as a lamp base brought an action for copyright infringement against a party who copied the original creator's entire lamp, including the design and artwork of the statuette lamp base. *Id.* at 202-04. The *Mazer* court stated that a piece of work serving a utilitarian function also could constitute a work of art. *Id.* at 218. The *Mazer* court reasoned that the design aspects of the statuette could serve as one author's way of expressing the idea of a base of a table lamp. *Id.* The *Mazer* court concluded, therefore, that the particular design of a lamp base could be copyrightable as a work of art. *Id.* The Supreme Court warned, however, that the lamp base could receive copyright protection only in the lamp base's form, and not in the lamp base's mechanical or utilitarian aspects. *Id.* The Supreme Court reasoned that a copyright protects a work only to the extent that the work expresses an idea, and that protecting the expression of an idea promotes progress by rewarding an author for that author's creative input while allowing others to work and improve on the original idea. See *id.* at 217-18 (protecting expression rather than idea promotes progress); *Baker v. Selden*, 101 U.S. 99, 102-03 (1879) (same); *Sid & Marty Krofft Television Prod., Inc. v. McDonald's Corp.*, 562 F.2d 1157, 1168 (7th Cir. 1977) (same). When the idea of a work and the expression of a work's idea become indistinguishable, no copyright protection can exist for the work. See *Krofft Television*, 562 F.2d at 1168 (no copyright protection exists for work when idea and expression inseparable because such protection would give copyright holder monopoly on idea).

In considering the copyrightability of computer programs, courts have maintained the *Mazer* rule by determining that a computer program copyright protects only the expression of a program's idea. See *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1252-53 (3d Cir. 1983) (computer program copyright only protects expression of program's idea), *cert. dismissed*, 464 U.S. 1033 (1984); *Atari, Inc. v. North Am. Philips Consumer Elecs. Corp.*, 672 F.2d 607, 615 (7th Cir.) (copyright protection for computer program extends only to expression of program's idea), *cert. denied*, 459 U.S. 880 (1982); *Williams Elecs., Inc. v. Bally Mfg. Corp.*, 568 F. Supp. 1274, 1277 (N.D. Ill. 1983) (only video game's form, rather than video game itself, is copyrightable).

Although the 1976 Act allows courts to determine whether copyright protection should exist for newly developed types of works, the 1976 Act requires that an author attempt to register the work with the Copyright Office. See 17 U.S.C. § 411(a) (1982) (requiring registration of copyrights). Although copyright protection can exist for a work prior to registration with the Copyright Office, an author cannot sue another party for copyright infringement until the author has attempted to register the work. See *id.* § 408(a) (requiring attempt at registration before beginning legal proceedings); *cf. id.* § 405(a) (voiding copyright protection of unregistered work when author fails to take specific precautions to protect work). To register a work with the Copyright Office under the 1976 Act, an author must deposit with the Copyright Office certain copies of the work for which the author seeks copyright registration. See *id.* § 408(b) (detailing specific depository requirements for registering various types of works). The Register of Copyrights, who serves as head of the Copyright Office, can establish additional regulations that supplement the requirements of the 1976 Act to divide different types of works into different classes for purposes of deposit and registration. See *id.* § 408(c) (describing powers of Register of Copyrights to establish regulations regarding registration procedures).

2. See 17 U.S.C. § 101 (1982) (amending 1976 Act by adding definition of "computer program"). The 1980 Amendment expressly included computer programs as copyrightable subject matter by adding a definition of "computer program" to the definitional section of the 1976 Act. See *id.* (defining "computer program"). Congress defined a computer program

protection to computer programs, the 1976 Act did not provide suffi-

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as a set of instructions that a person has designed to accomplish a certain result through direct or indirect use in a computer. *Id.*; see *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1247-48 (3d Cir. 1983) (describing legislative history leading to Congressional definition of computer program), *cert. dismissed*, 464 U.S. 1033 (1984); *Midway Mfg. Co. v. Strohon*, 564 F. Supp. 741, 749 (N.D. Ill. 1983) (defining "computer program").

Congress' definition of a computer program in the 1980 Amendment, however, did not end legal disputes over the copyrightability of computer programs. See *Apple*, 714 F.2d at 1246-49 (involving dispute over extent of protection given to computer programs). Arguments against the copyrightability of computer programs have focused criticisms in two principal areas. First, opponents of the copyrightability of computer programs have argued that the programs act as mechanical or utilitarian devices, which are uncopyrightable. See *id.* at 1249-54 (discussing argument that computer programs are utilitarian devices). Generally, two main classes of computer programs exist. See Brett and Perry, *Introduction to THE LEGAL PROTECTION OF COMPUTER SOFTWARE* 2, 2 (1981). The two classes of computer programs are the source code or application program, and the object code or control program. *Id.* Source code programs allow computer users to receive specific output data after entering specific input data. *Id.* Object code programs, however, are translations of the source code that operate the specific mechanizations of the computer. *Id.* Object code programs appear in a binary number form so that the machine can read the program. See Brooks, *Object Code in ROM: Is It Really a Problem?*, in *PLI, COMPUTER LAW INSTITUTE* 335, 340 (1983) (PLI Patents, Copyrights, Trademarks and Literary Property Handbook Series No. 166) (explaining object code form). While some authorities initially argued that copyright protection should never extend to either source code or object code computer programs, others argued that at a minimum, object code programs should not receive copyright protection because object code programs act solely as utilitarian, mechanical devices. See Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281, 346-50 (1970) (arguing that copyright protection should not extend to computer programs); Brooks, *supra*, at 346 (explaining rationale for arguments that object code programs should not receive copyright protection because memory devices are utilitarian devices); *infra* note 20 (defining memory device). The 1976 Act extends copyright protection only to an expression of an idea rather than the idea itself. 17 U.S.C. § 102(b) (1982) (copyright protects only expression of idea); see also *supra* note 1 and accompanying text (discussing idea-expression dichotomy). Authorities arguing against the copyrightability of machine-readable object code computer programs have stated that because of the utilitarian nature of object code programs, such programs could not express an idea. See Brooks, *supra*, at 346, 350-51 (discussing argument that object code in memory device is machine part and therefore not copyrightable). Rather, the authorities argued, object code programs constitute an actual idea, and thus are uncopyrightable. See *id.* (discussing argument that memory device is not copyrightable). In recent decisions, however, courts have extended copyright protection only to the program, and not to the underlying utilitarian devices. See *Williams Elecs., Inc. v. Artic Int'l, Inc.*, 685 F.2d 870, 875-76 (3d Cir. 1982) (utilitarian devices cannot receive copyright protection). Copyright protection, therefore, still may extend to object code programs because the actual program arguably does not function as a utilitarian device. *Id.*; see Brooks, *supra*, at 363-66 (supporting copyrightability of object code in memory device).

Advocates of the second argument against the copyrightability of object code programs assume that a copyrightable work must be in a human readable form. See *White-Smith Music Publishing Co. v. Apollo Co.*, 209 U.S. 1, 12, 18 (1908) (denying copyright protection for perforated roll of music that ordinary person could not read); see also Brooks, *supra*, at 346-47 (describing *White-Smith* argument that copyrightable works must be in human readable form). In *White-Smith Music Publishing Co. v. Apollo Co.* the United States Supreme Court considered whether a copyright protected a work that was in a form that an ordinary person could not read. *White-Smith Music Publishing Co. v. Apollo Co.*, 209 U.S. 1, 9 (1908). The

ciently for such protection.<sup>3</sup> The 1980 amendment to the 1976 Act (the "1980 Amendment"), however, codified Congress' intent to validate the copyrightability of computer programs by expressly defining computer

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*White-Smith* case involved a musical composition that the plaintiff had published in the form of sheet music. *Id.* The defendant had reproduced the notes of the sheet music on a perforated roll of music for a player piano. *Id.* The Supreme Court decided that the perforated roll could not act as a "copy" of the musical composition because the perforated roll did not constitute a human-readable medium. *Id.* at 12, 18; see also *Data Cash Sys., Inc. v. JS&A Group, Inc.*, 480 F. Supp. 1063, 1068 (N.D. Ill. 1979) (copyright protection on computer program does not extend to machine-readable object code program), *aff'd on other grounds*, 628 F.2d 1038 (7th Cir. 1980). By enacting the 1976 Act, however, Congress specifically intended to terminate the artificial rule that *White-Smith* expounded. See 17 U.S.C. § 102(a) (1982) (allowing copyright protection for any work which is original expression in fixed medium that person can reproduce with aid of machine); 1976 HOUSE REPORT, *supra* note 1, at 54 (discussing Congress' intent to abrogate *White-Smith* rule). Subsequent to the 1980 Amendment, courts have upheld the copyright protection of an object code program as a copy of the source code program. See *Tandy Corp. v. Personal Micro Computers, Inc.*, 524 F. Supp. 171, 175 (N.D. Cal. 1981) (translating source code into another computer language should not create loophole in copyright protection); see also *Apple*, 714 F.2d at 1248 (copyright on computer program protects object code); *Williams Elecs., Inc. v. Artic Int'l, Inc.*, 685 F.2d 870, 877 (3d Cir. 1983) (copyright on computer program protects source code and object code). See generally *Brooks, supra*, at 356-63 (denouncing argument that inability of humans to read object code defeats copyrightability of object code programs); *Kindermann, A Review of Suggested Systems for the Protection of Computer Software*, in *THE LEGAL PROTECTION OF COMPUTER SOFTWARE* 139, 140-41 (1981) (supporting copyright protection for object code programs).

3. See 1976 HOUSE REPORT, *supra* note 1, at 51, 54 (evidencing Congress' intent to protect computer programs through copyrights as literary works). The legislative history of the 1976 Act illustrates that by enacting the 1976 Act, Congress intended to allow courts to apply copyright protection to new forms of works that technological advances created. See *id.* at 51 (1976 Act does not limit scope of copyrightable subject matter to existing forms of copyrightable works). The National Commission on New Technological Uses of Copyrighted Works (CONTU), which Congress established in 1974 to study the problems of adequately protecting new technological creations, found that the 1976 Act allowed copyright protection for computer programs. CONTU REPORT, *supra* note 1, at 8, 40. In 1964, before Congress validated copyrights on computer programs, the Register of Copyrights (the "Register") announced that authors of computer programs could register computer programs with the Register's office. *Id.* at 38; see *supra* note 1 (describing function of Register of Copyrights and Copyright Office). Because pre-1976 judicial precedent required that copyrightable works appear in a human-readable form, the Register acknowledged some doubt about the copyrightability of machine-readable computer programs. CONTU REPORT, *supra* note 1, at 38; see *supra* note 2 (discussing rule under *White-Smith* and 1909 Act that copyright protection extended only to works in human-readable form). The Register, however, allowed copyright registration for programs when authors had deposited human-readable copies of the program with the Register's office and published the program under the 1909 Copyright Act. See CONTU REPORT, *supra* note 1, at 38; Copyright Act of 1909, ch. 320, 35 Stat. 1075, 1078-79 (1909) (describing 1909 Act's deposit requirements) (repealed 1976). The 1976 Act, however, abandoned the copyright requirements of prior publication and human readability. See 17 U.S.C. § 102(a) (1982) (establishing copyright protection for original work that author has fixed in tangible material); CONTU REPORT, *supra* note 1, at 38 (recognizing that 1976 Act does not require prior publication or human readability to establish copyright's validity); see also *infra* notes 13-19 and accompanying text (discussing requirements for copyright protection).

programs as copyrightable subject matter.<sup>4</sup> Copyrights on computer programs, however, generally do not protect the computer program's audiovisual, or audiovisual display.<sup>5</sup> Copying the audiovisual display that a computer program creates has caused particular problems for authors of video games<sup>6</sup> because new authors successfully can copy a video game audiovisual without infringing the computer program copyright by writing an entirely new program that will recreate the same audiovisual that the original computer program created.<sup>7</sup> Although the 1976 Act establishes

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4. 17 U.S.C. § 101 (1982) (including computer programs as copyrightable subject matter); see H.R. REP. NO. 1307, 96th Cong., 2d Sess., pt. 1, at 23 (1980) [hereinafter 1980 HOUSE REPORT] (describing Congress' intent to clarify copyright law with respect to computer software), reprinted in 1980 U.S. CODE CONG. & AD. NEWS 6460, 6482. CONTU recommended that Congress amend the 1976 Act to clarify Congress' intent to protect computer programs through copyrights. CONTU REPORT, *supra* note 1, at 2. After Congress enacted the 1976 Act, confusion continued to exist over the copyrightability of computer programs. See Note, *Copyright Protection for Video Games: The Courts in the Pac-Man Maze*, 32 CLEV. ST. L. REV. 531, 538 n.46 (1983) (describing conflict in Congress' stated intentions in passing 1976 Act). In enacting the 1976 Act, Congress expressed an intent to preserve the copyright protection standards that existed in the 1909 Act and copyright common law. 1976 HOUSE REPORT, *supra* note 1, at 57; see *supra* note 1 (discussing requirement that copyright protects expression of idea). Congress, however, also had expressed an intent to dispose of the human readability requirement that *White-Smith Music Publishing Co. v. Apollo Co.* imposed on copyrightable works. See *White-Smith*, 209 U.S. at 1 (requiring human readability in any copyrightable work); 1976 HOUSE REPORT, *supra* note 1, at 54 (describing Congress' intent to dispose of human readability requirement); *supra* note 2 (discussing *White-Smith* case). Although the 1976 Act removed the human readability requirement, CONTU recommended that Congress clarify Congress' intent regarding the copyrightability of computer programs. CONTU REPORT, *supra* note 1, at 2; see 17 U.S.C. § 102(a) (1982) (requiring only originality and fixation for work to qualify for copyright protection). *Compare* *Data Cash Sys., Inc. v. JS&A Group, Inc.*, 480 F. Supp. 1063, 1066-67 n.4 (N.D. Ill. 1979) (finding no copyright protection for computer program in machine-readable object code), *aff'd on other grounds*, 628 F.2d 1038 (7th Cir 1980) with *Tandy Corp. v. Personal Micro Computers, Inc.*, 524 F. Supp. 171, 175 (N.D. Cal. 1981) (copyright protection extends to machine-readable object code).

5. See *Digital Communications Assoc., Inc. v. Softklone Dist. Corp.*, No. 86-128-A, slip op. at \_\_\_\_ (N.D. Ga. March 31, 1987) (computer program copyright does not protect audiovisual); *Midway Mfg. Co. v. Strohon*, 564 F. Supp. 741, 749 (N.D. Ill. 1983) (limiting protection of computer program copyright); *infra* note 6 (defining video game audiovisual); *infra* notes 111-22 and accompanying text (discussing protection that computer program copyright and audiovisual copyright provide). *But see* *Broderbund Software, Inc. v. Unison World, Inc.*, 648 F. Supp. 1127, 1133 (N.D. Cal. 1986) (computer program copyright protects audiovisual).

6. See *Stern Elecs., Inc. v. Kaufman*, 669 F.2d 852, 853 (2d Cir. 1982) (defining "video games"). In *Stern Electronics, Inc. v. Kaufman* the United States Court of Appeals for the Second Circuit defined "video games" as computers that a person can program to create cartoons on a television screen. *Id.* A video game player can control the movement of the cartoons on the television screen. *Id.* The pictures or sequences of pictures that appear during the play of video games plus the sounds that emanate from the video game console constitute a video game's audiovisual. *Id.* at 854.

7. See *Stern Elecs., Inc. v. Kaufman*, 669 F.2d 852, 855 (2d Cir. 1982) (person can recreate video game audiovisual by writing new and independent program); *Strohon*, 564 F. Supp. at 749 (describing possibility of infringing audiovisual copyright but not computer

that audiovisual works<sup>8</sup> are proper subjects for copyright,<sup>9</sup> neither the 1976 Act nor the 1980 Amendment specifically provides for individual copyright protection of the video game audiovisual.<sup>10</sup>

Before courts first interpreted the meaning of "audiovisual works"

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program copyright). Computer program copyright holders seeking to protect video games have not found protection for the audiovisual portion of the games in the computer program copyright. *Strohon*, 564 F. Supp. at 749. When infringing authors create a new computer program which replicates an existing computer audiovisual without copying the audiovisual's original underlying program, the problem of "knock-off" exists. *Stern*, 669 F.2d at 855; see *Strohon*, 564 F. Supp. at 749 (duplicating video screens creates "knock-off").

8. See 17 U.S.C. § 101 (1982) (defining audiovisual work). The 1976 Act defines audiovisual works as "works that consist of a series of related images which are intrinsically intended to be shown by the use of machines or devices . . . , together with accompanying sounds, if any. . . ." *Id.*

9. 17 U.S.C. § 102(a)(6) (1982) (including audiovisual works as copyrightable subject matter); see *supra* note 8 (defining audiovisual works).

10. 17 U.S.C. §§ 101, 102(a) (1982 & Supp. III 1985); see Jones, *Video Game Litigation and the 1976 Copyright Act: The Ideas of Games, the Expression of Aliens and the Underlying Computer Software*, in 1 PLI, SOFTWARE PROTECTION AND MARKETING: COMPUTER PROGRAMS AND DATA BASES; VIDEO GAMES AND MOTION PICTURES 223, 230 (M. Goldberg ed. 1983) (PLI Patents, Copyrights, Trademarks and Literary Property Handbook Series No. 159) (current copyright statutes do not address specifically issue of video game audiovisual copyrightability).

Courts have determined that the appearance and the sounds that persons associate with a video game audiovisual display constitute an audiovisual work under the statutory definition of the 1976 Act. See *Atari, Inc. v. North Am. Philips Consumer Elecs. Corp.*, 672 F.2d 607, 615 (7th Cir.) (protecting sights and sounds of video game audiovisual as audiovisual work), *cert. denied*, 459 U.S. 880 (1982); *Stern*, 669 F.2d at 855 (sights and sounds of video game registered with Copyright Office are audiovisual work); *Williams Elecs., Inc. v. Bally Mfg. Co.*, 568 F. Supp. 1274, 1278 (N.D. Ill. 1983) (definition of audiovisual work includes shapes, sizes, colors, sequences, arrangements, and sounds); *Atari, Inc. v. Amusement World, Inc.*, 547 F. Supp. 222, 226 (D. Md. 1981) (defining video game as audiovisual work); see *infra* note 20 (listing decisions that uphold copyrightability of video game audiovisual).

Although courts have determined that video game audiovisu-als meet the 1976 Act's definition of "audiovisual work," video game audiovisu-als do not appear immediately to fall within the statutory definition of "audiovisual works." See 17 U.S.C. § 101 (1982) (defining "audiovisual work"); *Midway Mfg. Co. v. Artic Int'l, Inc.*, 704 F.2d 1009, 1011 (7th Cir.) (describing initial problems with finding that video game audiovisu-als meet 1976 Act's definition of audiovisual work), *cert. denied*, 464 U.S. 823 (1983); *supra* note 8 (defining audiovisual work); *infra* notes 12-20 and accompanying text (discussing problems that courts had in finding that video game audiovisu-als meet definition of "audiovisual works"). The phrase "series of related images" in the 1976 Act's definition of an audiovisual work could refer to a requirement that an audiovisual must display a set of images in a definite fixed sequence. See *Midway Mfg. Co. v. Artic Int'l, Inc.*, 704 F.2d 1009, 1011 (7th Cir.) (describing argument that video game fails to qualify as "series of related images" under 1976 Act's definition of audiovisual work), *cert. denied*, 464 U.S. 823 (1983). Because player input varies the recalled sequences, video game screens do not appear immediately to meet the 1976 Act's requirement that a set of images of an audiovisual work appear in a fixed sequence. See *Kramsky, The Video Game: Our Legal System Grapples with a Social Phenomenon*, 64 J. PAT. OFF. SOC'Y 335, 343 (1982) (describing argument that player input defeats fixation). Courts, however, have construed the definition of "audiovisual work" more broadly to refer to any set of images that an author has displayed as some kind of unit, and, therefore, have determined that a video game audiovisual is an "audiovisual work" under the 1976 Act. See, e.g., *Midway*, 704 F.2d at 1011 (finding copyrightability despite player input); *Williams*, 685 F.2d at 874 (finding repetitive

under the 1976 Act, the issue of whether video game audiovisuals could receive copyright protection was unclear.<sup>11</sup> Like the Copyright Act of 1909,<sup>12</sup> the 1976 Act provides copyright protection for the expression of an idea, but not for the actual idea.<sup>13</sup> Although courts have found that certain design aspects of video game audiovisual displays are copyrightable as an expression of a game's idea,<sup>14</sup> the 1976 Act also requires that audiovisual works satisfy tests for originality<sup>15</sup> and fixation<sup>16</sup> to qualify for copyright

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sequence copyrightable despite player participation); *Stern*, 669 F.2d at 856 (dismissing argument that player input defeats fixation); see also 17 U.S.C. § 101 (1982) (defining "audiovisual work"); Note, *supra* note 4, at 559-61 (describing courts' reasoning in decisions over player participation issue). Congress intended to construe liberally the definition of audiovisual works. 1976 HOUSE REPORT, *supra* note 1, at 51; see *supra* note 6 (discussing early questions about copyrightability of video game audiovisuals); *infra* notes 12-21 and accompanying text (discussing requirements that video game audiovisuals must meet for copyrightability); see also *WGN Continental Broadcasting Co. v. United Video, Inc.*, 693 F.2d 622, 627-28 (7th Cir. 1982) (giving historical background of expansive interpretation of term "audiovisual work").

11. See *infra* notes 12-21 and accompanying text (discussing initial legal obstacles to providing copyright protection for video game audiovisuals).

12. Copyright Act of 1909, ch. 320, 35 Stat. 1075 (repealed 1976).

13. See 17 U.S.C. § 102(b) (1982) (providing no copyright protection for ideas); *supra* note 1 (discussing requirement that copyrights protect expressions of ideas rather than actual ideas).

14. See, e.g., *Atari*, 672 F.2d at 615 (pattern and design of video game audiovisual copyrightable as expression of game's idea); *Bally*, 568 F. Supp. at 1278 (particular form of game's audiovisual copyrightable as expression of game's idea); *Midway Mfg. Co. v. Bandai-America, Inc.*, 546 F. Supp. 125, 148 (D. N.J. 1982) (same). See generally *supra* note 1 (explaining that copyrights protect only expressions of ideas).

Although the 1976 Act establishes that copyrights protect expressions of ideas rather than actual ideas, courts have not delineated a precise standard for determining the degree of expression necessary to receive copyright protection. See 17 U.S.C. § 102(b) (1982) (protecting expression rather than idea); *Stern*, 669 F.2d at 857 (leaving open question of when expression may be too minimal to be copyrightable). Courts have applied different standards in determining whether a particular expression in a video game audiovisual display is copyrightable. Compare *Atari*, 672 F.2d at 618 (finding that copyrightable expression existed after examining overall similarities between two video game audiovisuals) with *Amusement World*, 547 F. Supp. at 229-30 (finding that uncopyrightable idea existed after analyzing overall dissimilarities between two video game audiovisuals).

15. See 17 U.S.C. § 102(a) (1982) (requiring originality in copyrighted works). Like the 1909 Act, the 1976 Act's requirement that an audiovisual be original to qualify for copyright protection does not demand that a work exhibit strikingly unique or novel characteristics. See *id.* (requiring originality in copyrighted works); Copyright Act of 1909, ch. 320, 35 Stat. 1075 (1909) (repealed 1976); see also *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99, 103 (2d Cir. 1951) (describing standards for originality). In finding originality in a work under the 1976 Act, courts rarely prohibit more than actual copying of another party's expression. *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99, 103 (2d Cir. 1951); see Note, *Federal Copyright Law in the Computer Era: Protection for Authors of Video Games*, 7 U. PUGET SOUND L. REV. 425, 429 (1984) (video games easily can meet requirement for originality because of 1976 Act's low standard for originality). Two different works with identical expressions both can receive copyright protection if different authors independently created each work and did not copy one work from the other work. See *Alfred Bell*, 191 F.2d at 103 (allowing copyright protection for independently created, uncopied works); *Knickerbocker Toy Co. v. Winterbrook Corp.*, 554 F. Supp. 1309, 1317 (D. N.H. 1982) (same).

16. See 17 U.S.C. § 101 (1982) (defining "fixed" element). The 1976 Act requires that



protection.<sup>17</sup> Specifically, the 1976 Act provides copyright protection only for original works of authorship that constitute "fixed" elements in a tangible material.<sup>18</sup> Initially, experts questioned whether video game audiovisuals could meet the fixation requirement because of the transitory, intangible nature of video game audiovisual displays.<sup>19</sup> Recent court decisions, however, have upheld the validity of video game audiovisual copyrights by finding that a video game audiovisual meets the 1976 Act's fixation requirement in the video game's memory device (the "ROM").<sup>20</sup> Courts upholding the validity of

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an audiovisual establish fixation in a tangible medium of expression from which a person can reproduce or perceive the audiovisual either directly or with the aid of a machine. *Id.* § 102(a). Fixation in a tangible medium of expression results when the embodiment of the work in a copy is sufficiently permanent to allow a person to perceive or reproduce the work for a period of more than transitory duration. *Id.* § 101. Although Congress established that a work's embodiment must occur in a tangible medium of expression to satisfy the 1976 Act's fixation requirement, a person does not have to reproduce the work directly from the tangible medium, but may reproduce the work with the aid of a machine. *See id.* (defining "copy" as object from which person can reproduce original work either directly or with machine's aid). The 1976 Act also allows courts to protect newly developed types of works by allowing courts to extend copyright protection to works that an author has embodied in a tangible medium. *See id.* (extending copyrightability to works meeting fixation and originality requirements).

17. *See* 17 U.S.C. § 102(a)(6) (1982) (requiring fixation and originality for audiovisual to receive copyright protection). Prior to the 1976 Act, copyright law did not require clearly that a copyrightable work constitute a fixed element in a tangible medium. *See* CONTU REPORT, *supra* note 1, at 17-18 (discussing requirements of 1909 Act). Under the 1909 Act Congress required that an author publish a work in a human-readable medium to establish copyrightability. *See White-Smith*, 209 U.S. at 16-18 (human readability of work necessary for valid copyright); Copyright Act of 1909, ch. 320, § 12, 35 Stat. 1075, 1078 (describing 1909 Act's copyright deposit requirements) (repealed 1976). The 1976 Act, however, eliminated the requirements of prior publication and human readability. *See* 17 U.S.C. § 102(a) (1982) (requiring only fixation and originality in copyrightable works).

18. 17 U.S.C. § 102(a) (1982); *see supra* notes 15-17 and accompanying text (describing fixation and originality requirements of 1976 Act).

19. *See* Jones, *supra* note 10, at 230-31 (describing courts' early reluctance to find fixation in video game audiovisuals because of transiency of video game audiovisuals). The legislative history of the 1976 Act mandates exclusion from copyrightability of purely transient or evanescent reproductions. *See* 1976 HOUSE REPORT, *supra* note 1, at 53 (discussing Congress' intent to exclude evanescent images from copyrightability). *But see infra* note 20 and accompanying text (discussing validity of audiovisual copyrights).

20. *See Williams*, 685 F.2d at 874-75 (video game audiovisual copyrights valid because audiovisual's permanent embodiment in game's memory devices satisfies statutory definition of fixation); *Stern*, 669 F.2d at 855-56 (establishing that video game audiovisual can receive copyright protection because of fixation in memory device); *Midway Mfg. Co. v. Dirkschneider*, 543 F. Supp. 466, 479-80 (D. Neb. 1981) (memory device meets fixation requirement because 1976 Act contains no restrictions on type of object necessary for fixation); *see also* *United States v. O'Reilly*, 794 F.2d 613, 614 (11th Cir. 1986) (finding that courts consistently hold video game audiovisual subject to copyright); *Atari*, 672 F.2d at 615 (finding repetitive sequence of video game's sights and sounds copyrightable); *Bally*, 568 F. Supp. at 1277 (finding registration of audiovisual copyright evidence of copyright's validity); *Strohon*, 564 F. Supp. at 746 (video game images copyrightable); *Midway Mfg. Co. v. Bandai-America, Inc.*, 546 F. Supp. 125, 139 (D. N.J. 1982) (video game authors have unquestionable right to copyright

the video game audiovisual copyright, however, have found difficulty in determining the extent to which the audiovisual copyright protects the video game.<sup>21</sup> In *M. Kramer Manufacturing Co. v. Andrews*<sup>22</sup> the United States Court of Appeals for the Fourth Circuit considered whether the copyright protection that the 1976 Act affords to the owner of an audiovisual copyright for a video game extended beyond the audiovisual image to the underlying computer program.<sup>23</sup>

*Kramer* involved a dispute over the production and marketing rights for a computerized video game called "Hi-Lo Double Up Joker Poker" (Hi-

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audiovisuals); *Amusement World*, 547 F. Supp. at 226 (audiovisual work copyrightable). Although numerous types of memory devices exist, most all video games utilize read-only memory devices (the "ROM") or variations of the ROM. See *Stern*, 669 F.2d at 854 n. 1 (describing ROM); Brooks, *supra* note 2, at 339 (most video games use ROMs). The ROM consists of a semiconductor chip that a manufacturer has incorporated into the circuitry of a computer. See *Apple*, 714 F.2d at 1243 (explaining ROM). In the ROM's early development, manufacturers placed a computer program into the ROM during the manufacturing process. See Brooks, *supra* note 2, at 339 (tracing development of ROMs). Once the ROM contained information, programmers could not alter any information in the ROM. *Id.* Although recent developments allow programmers to change the information that the ROM contains, the slow speed of altering the ROM's information makes changing the embedded information impractical. *Id.* As a result, the ROM is a virtually permanent storage device. See *Apple*, 714 F.2d at 1243 (describing permanence of information in ROM). See generally A. LIPPETT, *THE ARCHITECTURE OF SMALL COMPUTER SYSTEMS* § 1.4.6, at 12-13 (1979) (providing descriptions of ROM and other types of computer memory devices).

Although courts have upheld copyright protection for video game audiovisuals because of a video game audiovisual's fixation in the ROM, copyright protection does not extend to the ROM. See Brooks, *supra* note 2, at 364-65 (ROM is machine part that is not copyrightable). *But see Strohon*, 564 F. Supp. at 749 (conceding copyright protection to ROM as computer program). The ROM is a piece of "firmware" that embodies mechanical attributes of computer hardware and instruction attributes of computer software. See *Strohon*, 564 F. Supp. at 751 (describing ROM). Programmers use ROMs to perform mechanical, utilitarian functions. See *Williams*, 685 F.2d at 875 (ROMs are utilitarian devices). No copyright protection extends from a video game audiovisual copyright to ROMs because a utilitarian device cannot express the video game's idea. See *id.* (finding that audiovisual copyright does not restrict use of ROM); 1 M. NIMMER, *NIMMER ON COPYRIGHT* § 2.18[F], at 2-208 (1986) (no copyright protection for mechanical devices). *But see* Semiconductor Chip Protection Act of 1984, 17 U.S.C. §§ 901-914 (Supp. III 1985) (providing limited semicopyright protection to form of semiconductor chips); R. NIMMER, *THE LAW OF COMPUTER TECHNOLOGY* § 1.05 (1985) (discussing requirements for semiconductor chip protection and scope of protection for semiconductor chips under Semiconductor Chip Act of 1984). The uncopyrightable nature of ROMs, however, has not affected the copyrightability of video game audiovisuals. See *Williams*, 685 F.2d at 875 (finding that ROM embodies audiovisual only for fixation purposes). The 1976 Act does not establish requirements regarding the type of material that must embody a copyrightable work for fixation purposes. See 17 U.S.C. § 102(a) (1982) (requiring only that fixation occur in tangible medium of expression).

21. See *Atari*, 672 F.2d at 616 (finding difficulty in defining scope of audiovisual copyright protection); *infra* notes 132-53 (discussing problems in demarcating scope of video game audiovisual copyright protection).

22. 783 F.2d 421 (4th Cir. 1986).

23. *Id.* at 442.

Lo).<sup>24</sup> The plaintiff, M. Kramer Manufacturing Company (Kramer), acquired rights to an electronic card game based on draw poker (Draw Poker I).<sup>25</sup> Kramer began selling a modified version of Draw Poker I in November 1981.<sup>26</sup> One of Kramer's employees continued modifying the game until the game evolved into Hi-Lo.<sup>27</sup>

The defendant, Andrews, purchased numerous Hi-Lo games from Kramer through Andrews' video game distribution business.<sup>28</sup> By copying the ROM<sup>29</sup> of a copy of Kramer's Hi-Lo game, Andrews' employee developed a game substantially identical to Hi-Lo.<sup>30</sup> The ROM from which Andrews copied the Hi-Lo game contained the program that created Kramer's Hi-Lo game audiovisual.<sup>31</sup> Andrews specifically chose to copy a ROM that did not contain Kramer's copyright notice.<sup>32</sup> Additionally, the cabinet containing

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24. *Id.* at 425.

25. *Id.* at 426. In *Kramer* the president of M. Kramer Manufacturing Co. (Kramer), Michael Kramer, had helped to create the original version of the Hi-Lo game, Draw Poker I, as an employee of LGF Corporation (LGF). *Id.* at 425. Embodying a variation of the card game blackjack, the audiovisual of Draw Poker I displayed five cards. *Id.* LGF owned all rights to the original production model, Draw Poker I. *Id.* at 426. Mr. Kramer continued to help modify the electronic poker game as an employee of LGF and ultimately created Draw Poker II. *Id.* Draw Poker II differed from Draw Poker I because Draw Poker II contained a different circuit board than Draw Poker I, a new "attract mode" audiovisual to entice customers to play the game, and a new "play mode" audiovisual that placed jokers on the screen during the game's play. *Id.* Draw Poker II did not constitute a new, independently created work, but evolved from changes in Draw Poker I. *Id.* LGF transferred all rights in Draw Poker II to the plaintiff, Kramer, during the transformation of Draw Poker I into Draw Poker II. *Id.* Kramer, however, did not register LGF's transfer of rights in Draw Poker II with the Copyright Office at that time. *See id.* at 429 (discussing Kramer's later registration of letter transferring rights in Draw Poker II to Kramer); *infra* notes 34, 37-38 (same).

26. *Kramer*, 783 F.2d at 426.

27. *Id.* at 427. In *Kramer* the Kramer employee who modified the Draw Poker II game to create Hi-Lo was Robert Battaglia. *Id.* at 426. Battaglia also assisted in creating Draw Poker I, the original production model of the poker game from which both Draw Poker II and Hi-Lo evolved. *Id.* The additions evident in the Hi-Lo audiovisual, which neither Draw Poker I nor Draw Poker II possessed, included a "hi-lo double up feature" in attract mode and a "flashing card feature" in play mode. *See id.* at 426-27 (describing concept of Hi-Lo game).

28. *Id.* at 427.

29. *See supra* note 20 (defining ROM).

30. *Kramer*, 783 F.2d at 428. In *Kramer* the defendant Andrews employed an electronics engineer to copy Kramer's Hi-Lo game. *Id.* The engineer refused to copy a printed circuit board from Kramer's Hi-Lo game, which Kramer had marked with the words "Copyright Applied for M. Kramer Manufacturing." *Id.* The electronics engineer, however, copied a printed circuit board and memory devices from a copy of Kramer's Hi-Lo game that a different company had distributed. *Id.*; *see infra* note 34 and accompanying text (discussing another company's distribution of Kramer's Hi-Lo game). The engineer modified parts of the copied Hi-Lo game by changing some words in the audiovisual display and the design on some of the cards. *Kramer*, 783 F.2d at 428.

31. *Kramer*, 783 F.2d at 428; *see supra* note 20 (discussing function of ROM).

32. *Kramer*, 783 F.2d at 428; *see supra* note 30 and accompanying text (discussing Andrews' knowledge of faulty copyright notice on original Hi-Lo ROM). In *Kramer* Andrews'

the Hi-Lo game displayed the same name as Kramer's game.<sup>33</sup>

When Kramer began selling Hi-Lo in November 1981, another company, SMS Manufacturing Corporation (SMS), also began selling and distributing the same Hi-Lo game.<sup>34</sup> In March 1983 Kramer registered a copyright on the audiovisual of Hi-Lo.<sup>35</sup> Prior to Kramer's copyright application, however, SMS already had registered copyrights on Hi-Lo's underlying computer program.<sup>36</sup> As a result, SMS and Kramer held separate copyright registrations on Hi-Lo's computer program and audiovisual display.<sup>37</sup> In February 1983 SMS sued Kramer for copyright infringement of SMS' copyright in the Hi-Lo computer program.<sup>38</sup> Kramer and SMS subsequently reached a settlement agreement in which SMS gave Kramer the right to sue Andrews for infringement of SMS' copyright in the computer program.<sup>39</sup> Additionally, the

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employee initially refused to copy a ROM from Kramer's game, which carried a defective but visible notice of copyright. *Kramer*, 783 F.2d at 428. Andrews' employee agreed to copy the ROM only when Andrews presented a copy of Kramer's game that did not display a copyright notice. *Id.*

33. *Kramer*, 783 F.2d at 429.

34. *Id.* at 427. In *Kramer* Kramer's president once had formed another distribution company with the president of SMS. *Id.* at 426. Both Kramer's president and SMS' president had access to Hi-Lo. *Id.* Both Kramer and SMS sold Hi-Lo to consumers. *Id.* Although LGF had transferred all copyright rights in Draw Poker II to Kramer by letter, neither Kramer nor SMS had registered Hi-Lo with the Copyright Office prior to marketing Hi-Lo. *Id.*; see *supra* note 25 and accompanying text (discussing LGF's transfer of rights in Draw Poker II to Kramer).

35. *Kramer*, 783 F.2d at 428.

36. *Id.*

37. *Id.* at 429. In *Kramer* SMS obtained copyright registrations in the computer programs underlying Hi-Lo in October 1982. *Id.* at 428. Kramer applied for copyright registration of Hi-Lo's audiovisual work in March 1983. *Id.* Although the Copyright Office registered a later version of Hi-Lo (Model III) as a derivative work, the Copyright Office initially rejected Kramer's application to register the Hi-Lo audiovisual. *Id.*; see *infra* note 90 (defining derivative work). The Copyright Office initially found that the Hi-Lo audiovisual was too similar to Model III's audiovisual to receive additional copyright protection. *Kramer*, 783 F.2d at 429. After Kramer's attorney certified that the Hi-Lo audiovisual acted as a new compilation, the Copyright Office registered Model III as a compilation of Hi-Lo and an early version of Hi-Lo. *Id.*; see *infra* note 90 (defining compilation). The Copyright Office then registered the Hi-Lo audiovisual as a compilation of earlier works. *Kramer*, 783 F.2d at 428.

38. *SMS Mfg. Corp. v. M. Kramer Mfg. Co.*, No. 83-554 (D.N.J. filed February 16, 1983). After SMS filed suit against Kramer in February 1983, Kramer filed with the Copyright Office LGF's contract transferring to Kramer all rights to Draw Poker II. *Kramer*, 783 F.2d at 429; see *supra* note 37 and accompanying text (discussing process of Kramer's copyright registration). In March 1983, Kramer obtained copyright registration on the Hi-Lo audiovisual. *Kramer*, 783 F.2d at 429. After March 1983, Kramer and SMS separately held copyright registrations on different components of Hi-Lo. See *id.* (Kramer owned copyright registration on Hi-Lo audiovisual while SMS owned copyright registration on Hi-Lo computer program).

39. *Kramer*, 783 F.2d at 429. In *Kramer* Kramer and SMS executed a settlement agreement in May 1983. *Id.* The agreement provided that Kramer and SMS would cross-license each other to use the copyrights of all the versions of the draw poker video games existing at the time of the agreement. *Id.* Additionally, Kramer and SMS agreed not to authorize any third party to manufacture a version of the draw poker games or to distribute any draw poker games that neither Kramer nor SMS had manufactured. *Id.* Finally, SMS agreed to give

settlement agreement maintained Kramer's right to sue for infringement of Kramer's copyright in the Hi-Lo audiovisual work.<sup>40</sup>

After reaching the settlement agreement with SMS, Kramer brought suit in the United States District Court for the District of South Carolina, alleging that Andrews had infringed Kramer's copyrights in Hi-Lo's computer program and audiovisual.<sup>41</sup> In addition to the copyright infringement claim, Kramer asserted a claim of trade dress infringement against Andrews under section 43(a) of the Federal Trademark Act.<sup>42</sup> Finally, Kramer charged Andrews with unfair competition in violation of the common law.<sup>43</sup> The district court found for the defendant Andrews on several alternative holdings.<sup>44</sup> In considering whether Andrews had infringed the Hi-Lo audiovisual copyright, the district court found that Hi-Lo's audiovisual could not hold a valid copyright.<sup>45</sup> The district court then concluded that even if the Hi-

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Kramer the exclusive right to bring suit against Andrews for copyright infringement of the Hi-Lo computer program. *Id.*

40. *Id.* at 429; *see supra* note 39 (discussing settlement agreement between Kramer and SMS).

41. *Kramer*, 783 F.2d at 429. In *Kramer* Kramer claimed that Andrews had infringed the copyrights of Hi-Lo's computer program and audiovisual. *Id.* Kramer, however, attached to Kramer's complaint a copy of the copyright registration covering only the audiovisual. *Id.* Two days after Kramer filed suit against Andrews, the United States District Court for the District of South Carolina entered a temporary restraining order preventing Andrews from manufacturing or distributing any video card game that embodied Hi-Lo's computer program or audiovisual, contained Hi-Lo's features, or used artwork and console configurations similar to Hi-Lo's artwork and console configuration. *Id.* at 430. After a subsequent hearing, however, the district court dissolved the restraining order. *Id.* After a trial without a jury, the district court issued an unpublished opinion finding for Andrews on all counts. *Id.*

42. *Kramer*, 783 F.2d at 429-30; *see* Federal Trademark Act of 1946 § 43(a), 15 U.S.C. § 1125(a) (1983) (prohibiting infringement of work's trade dress); *infra* note 84-88 (discussing trade dress). In *Kramer*, as a part of Kramer's trade dress infringement claim, Kramer alleged that Andrews had copied the "distinctive art work" on the front glass panel of Hi-Lo and the "configuration of the console" embodying Hi-Lo. *Kramer*, 783 F.2d at 429-30. Additionally, Kramer alleged that Andrews used the name "Hi-Lo Double Up Joker Poker" on Andrews' copy of the Hi-Lo game. *Id.*

43. *Kramer*, 783 F.2d at 429-30. The *Kramer* court did not address the district court's treatment of Kramer's unfair competition claim. *See id.* at 431 (omitting unfair competition claim from discussion of district court's findings).

44. *See id.* at 430-31 (discussing district court opinion); *infra* notes 45-50 and accompanying text (discussing district court's decision and reasoning concerning Kramer's claims).

45. *Kramer*, 783 F.2d at 430. In finding that no copyrightable material existed in the Hi-Lo audiovisual work, the district court in *Kramer* first reasoned that only previously nonpublic material could hold a valid copyright. *Id.* The court excluded from copyright protection all material that Kramer had published in prior works, and limited any possible copyright protection to previously unpublished elements that Kramer added to Hi-Lo. *Id.* The court determined that in previous versions of the draw poker games, Kramer had released publicly all but one aspect of the material that Hi-Lo contained, which was the "flashing card" feature. *Id.* The "flashing card" feature involved a series of cards that flash in rapid succession. *See id.* (describing "flashing card" feature). The court found, however, that the Hi-Lo "flashing card" feature constituted merely an idea rather than an expression of an idea. *Id.* The court found that the flashing card feature alone could not receive copyright protection because the flashing card feature was an uncopyrightable idea. *Id.*; *see supra* note 1 (discussing requirement that copyright protects only expressions of ideas).

Lo audiovisual display possessed a valid copyright, Kramer's failure to affix proper copyright notice on the Hi-Lo games that Kramer had distributed to the public forfeited the audiovisual copyright's validity.<sup>46</sup> The district court concluded further that even if no forfeiture occurred, no infringement of Kramer's Hi-Lo audiovisual copyright resulted from Andrews' copying of the Hi-Lo video game.<sup>47</sup> After finding that no infringement resulted, the district court held that even if Andrews had infringed Kramer's audiovisual copyright, liability for infringement did not extend to Andrews because Andrews did not receive proper notice of Kramer's copyright on the Hi-Lo audiovisual work.<sup>48</sup> Finally, after rejecting Kramer's arguments that Andrews had infringed Kramer's Hi-Lo audiovisual copyright, the district court also rejected Kramer's claim of trade dress infringement.<sup>49</sup> Relying on its findings that Andrews had not infringed Kramer's copyright or trade dress, the district court dismissed Kramer's claims.<sup>50</sup>

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46. *Kramer*, 783 F.2d at 430. The district court in *Kramer* found that the owner of a copyright forfeits the copyright by failing to affix proper copyright notice on a copyrighted work. *Id.* at 431. The court maintained that because Kramer had added notice only to new Hi-Lo games, Kramer had not made reasonable efforts to correct the omission of proper copyright notice. *Id.* The court found that reasonable efforts would have included affixing notice to distributors' copies of Hi-Lo games when Kramer discovered the omission of notice. *Id.* Kramer, however, had not affixed notice to Hi-Lo games in the possession of distributors. *Id.*

47. *Id.* at 431. The district court in *Kramer* concluded that Andrews did not infringe Kramer's Hi-Lo audiovisual copyright because no substantial similarity existed between Kramer's and Andrews' Hi-Lo games. *Id.* The court held that because Andrews had modified the Hi-Lo audiovisual, insufficient similarity existed between the two video games to establish copyright infringement. *Id.*

48. *Id.* In *Kramer* the district court concluded that if Andrews had infringed the Hi-Lo audiovisual copyright, the infringement was an innocent infringement. *Id.* The court found that an innocent infringement results when the infringing author has no notice of the existence of a copyright that protects the infringed work. *See id.* (innocent infringement exists because Kramer failed to place proper notice on audiovisual and computer copyrights on games). The court found that an innocent infringement is not actionable. *Id.*; see 17 U.S.C. § 405(b) (1982) (innocent infringement provides no cause of action).

49. *Kramer*, 783 F.2d at 447. The district court in *Kramer* found that because no secondary meaning had attached to the design of Hi-Lo's console, Andrews did not infringe Hi-Lo's trade dress. *Id.* The court determined that under the Federal Trademark Act (the "Lanham Act"), Kramer could establish that Andrews had infringed Hi-Lo's trade dress only if Kramer could show that a secondary meaning had attached to Hi-Lo. *Id.*; see Federal Trademark Act of 1946 § 43(a), 15 U.S.C. § 1125 (1983) (providing requirements for trade dress infringement). The court found that secondary meaning in a video game console means that the public recognizes that a particular console houses a particular video game that a particular party creates. *Kramer*, 783 F.2d at 447. The court determined that secondary meaning acts as a prerequisite to proof of proprietary rights in a work. *Id.* Additionally, the district court applied the secondary meaning rationale to Hi-Lo's name and glasswork. *Id.* The district court found that because no secondary meaning had attached to Hi-Lo's name or glasswork, no trade dress infringement of Hi-Lo's name or glasswork occurred. *Id.*

50. *Kramer*, 783 F.2d at 431. In addition to dismissing Kramer's claims of copyright and trade dress infringement, the district court in *Kramer* held that Andrews had not breached a distributorship agreement that Kramer and Andrews previously had created. *Id.* at 425 n.1.

On appeal the Fourth Circuit considered whether Kramer possessed a valid audiovisual copyright, whether Kramer had forfeited Hi-Lo's audiovisual copyright, whether Andrews had infringed Kramer's audiovisual copyright, whether Andrews innocently had infringed Kramer's audiovisual copyright, and whether Andrews had infringed Hi-Lo's trade dress.<sup>51</sup> In considering whether Kramer possessed a valid copyright in the Hi-Lo audiovisual, the Fourth Circuit first addressed the copyrightability of audiovisuals.<sup>52</sup> After determining that audiovisuals constituted copyrightable subject matter under the 1976 Act, the Fourth Circuit questioned whether video game audiovisuals were copyrightable under the statutory definition of audiovisual works.<sup>53</sup> The Fourth Circuit determined that the 1976 Act requires that video game audiovisuals meet the requirements of fixation and originality to qualify for copyright protection.<sup>54</sup> Focusing first on the originality requirement, the Fourth Circuit required only a minimal degree of originality before a work could receive copyright protection.<sup>55</sup> The Fourth Circuit determined, however, that Hi-Lo was a derivative work of previous Draw Poker video games because Hi-Lo had evolved from changes made in those video games.<sup>56</sup> The Fourth Circuit found that because Kramer publicly had released the previous versions of Hi-Lo, only the new material that Kramer added to create Hi-Lo constituted original material.<sup>57</sup> The

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51. *Id.* at 432. On appeal to the Fourth Circuit in *Kramer*, Kramer abandoned its claims that Andrews had competed unfairly in violation of the common law and that Andrews had breached a distributorship agreement with Kramer. *Id.* at 425 n.1.

52. *Id.* at 432-43.

53. *Id.* at 435-36; see 17 U.S.C. § 101 (1982) (defining "audiovisual works"); *supra* note 8 (defining "audiovisual works").

54. *Kramer*, 783 F.2d at 433; see 17 U.S.C. § 102(a)(6) (1982) (requiring fixation and originality to establish valid audiovisual copyright); *supra* notes 15-16 and accompanying text (discussing 1976 Act's requirements of originality and fixation).

55. *Kramer*, 783 F.2d at 438. The Fourth Circuit in *Kramer* reasoned that demanding more than a minimal degree of originality to establish the copyrightability of a work would require a court to assume the function of artistic critics. *Id.*

56. *Id.* at 437-38. In *Kramer*, the Fourth Circuit relied on the district court's finding that Hi-Lo constituted a derivative work. *Id.* at 437. The *Kramer* court defined a derivative work under the 1976 Act as a work that results from transforming or adapting a pre-existing, copyrightable work. *Id.*; see 17 U.S.C. § 101 (1982) (defining "derivative work"). In discussing the copyrightability of a derivative work, the *Kramer* court required that a derivative work meet the originality requirement of the 1976 Act. *Kramer*, 783 F.2d at 437; see 17 U.S.C. § 102(a) (1982) (requiring originality in all copyrightable works). The court found that because Hi-Lo was a derivative work, only the new material that Kramer had added to the underlying audiovisual work to create the Hi-Lo audiovisual constituted original material. *Kramer*, 783 F.2d at 437; see M. NIMMER, *supra* note 20, § 3.04, at 3-15 (copyright in derivative work protects against copying of that work's original material). The *Kramer* court also discussed the copyrightability of a compilation and concluded that the particular combination and arrangement of previously copyrighted works could constitute the original material in a work. *Kramer*, 783 F.2d at 438-40. The Fourth Circuit, however, did not conclude expressly that Kramer's work constituted a compilation of previous works. See *id.* at 440 (determining that pictures' arrangement in Kramer's audiovisual is copyrightable).

57. *Kramer*, 783 F.2d at 437; see *supra* note 56 (discussing *Kramer* court's finding that originality exists in derivative works).

*Kramer* court determined that under the court's low standard of originality, the new material in Hi-Lo satisfied the 1976 Act's originality requirement.<sup>58</sup> Regarding fixation, the Fourth Circuit determined that a work satisfied the 1976 Act's fixation requirement if a tangible object embodied the work.<sup>59</sup> The Fourth Circuit reasoned that because a video game's memory device, or computer program, allowed a person to view video game audiovisuals, the video game's memory device, or computer program, permanently embodied the audiovisual.<sup>60</sup> The Fourth Circuit concluded, therefore, that the Hi-Lo audiovisual also satisfied the fixation requirement of the 1976 Act.<sup>61</sup>

In addition to finding that the Hi-Lo audiovisual satisfied the fixation and originality requirements of the 1976 Act, the Fourth Circuit required that the Hi-Lo audiovisual embody an expression of an idea, rather than an actual idea, to receive copyright protection.<sup>62</sup> The *Kramer* court emphasized that an audiovisual embodied an expression of an idea if a person could express the idea of the work in numerous ways.<sup>63</sup> By finding that numerous programs conceivably could recreate the Hi-Lo audiovisual display, the Fourth Circuit reasoned that the Hi-Lo audiovisual display constituted an expression of an idea.<sup>64</sup> The Fourth Circuit, therefore, upheld the validity of the Hi-Lo audiovisual copyright.<sup>65</sup>

After determining the validity of *Kramer's* copyright on the Hi-Lo audiovisual, the Fourth Circuit considered the scope of the protection that Hi-Lo's audiovisual copyright afforded *Kramer*.<sup>66</sup> The *Kramer* court rea-

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58. *Kramer*, 783 F.2d at 439. In *Kramer* the Fourth Circuit failed to resolve *Kramer's* argument that the court should consider *Kramer's* rights in Draw Poker II, which was the original audiovisual work from which *Kramer* derived the Hi-Lo audiovisual, when determining the scope of originality in Hi-Lo. *Id.* at 437 n.17.

59. *Id.* at 441.

60. *Id.* The Fourth Circuit in *Kramer* found that a person could not view video game audiovisuals until electric impulses travelled through the video game's memory device, or computer program. *Id.* As a result, the Fourth Circuit concluded that the video game's memory device, or computer program, constituted the tangible medium of expression embodying an audiovisual under the 1976 Act. *Id.*; see 17 U.S.C. § 102(a) (1982) (requiring fixation in tangible medium of expression for work to receive copyright protection).

61. *Kramer*, 783 F.2d at 442-43.

62. *Id.* at 435; *supra* note 1 (discussing 1976 Act's requirement that copyright protects expression of idea rather than idea).

63. *Kramer*, 783 F.2d at 436. The *Kramer* court relied on *Apple Computer, Inc. v. Franklin Computer Corp.* to distinguish between an idea and an expression of an idea. *Id.*; see *Apple*, 714 F.2d at 1253 (establishing test for distinguishing between idea and expression). The *Apple* court determined that if only one way existed to express an idea, the expression of the idea merged with the idea to provide an author with no copyrightable material. *Apple*, 714 F.2d at 1253. The *Apple* court also found, however, that when numerous ways existed to express an idea, a court could separate idea from expression to provide an author with copyrightable material. *Id.*; see *infra* note 110 and accompanying text (discussing facts and reasoning of *Apple* decision).

64. *Kramer*, 783 F.2d at 436; see *supra* note 63 (discussing test to distinguish idea from expression of idea).

65. *Kramer*, 783 F.2d at 436.

66. *Id.* at 441-43.



soned that because the video game met the fixation requirement of the 1976 Act, a copyright could protect the video game audiovisual.<sup>67</sup> Using the terms "memory device" and "computer program" interchangeably, the Fourth Circuit found that the Hi-Lo audiovisual display met the fixation requirement because the video game's memory device, or computer program, embodied the Hi-Lo audiovisual.<sup>68</sup> The Fourth Circuit reasoned that because the computer program embodied the audiovisual for fixation purposes,<sup>69</sup> the computer program satisfied the statutory definition of a "copy" of the Hi-Lo audiovisual under the 1976 Act.<sup>70</sup> The *Kramer* court found that copyrights protected both the original work and copies of that work.<sup>71</sup> The Fourth Circuit concluded that because the computer program underlying the Hi-Lo audiovisual embodied the audiovisual, the protection that the video game audiovisual copyright afforded the audiovisual copyright holder extended to the audiovisual display and to the underlying computer program embodying the expression of that display.<sup>72</sup>

After finding that the copyright on the audiovisual display protected the video game audiovisual display and the computer program to the extent that the computer program embodied the expression of the audiovisual, the Fourth Circuit considered whether *Kramer* had forfeited *Kramer's* copyright by failing to affix proper copyright notice on Hi-Lo.<sup>73</sup> The *Kramer* court

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67. See *infra* notes 68-72 and accompanying text (discussing *Kramer* court's finding that video game audiovisuals are copyrightable because ROM or computer program embodied audiovisual); see also *supra* note 16 (discussing fixation requirement of 1976 Act).

68. *Kramer*, 783 F.2d at 441; see *supra* note 60 and accompanying text (discussing video game audiovisual's embodiment in memory device); *infra* note 69 (same).

69. *Kramer*, 783 F.2d at 441. The *Kramer* court determined that the memory device or computer program embodies the video game audiovisual. *Id.*; see *supra* text accompanying note 68 (discussing *Kramer* court's interchangeable use of terms "memory device" and "computer program"). The Fourth Circuit reasoned that the memory device or computer program acted as an essential element of the video game audiovisual. *Kramer*, 783 F.2d at 441.

70. *Kramer*, 783 F.2d at 441-42; see 17 U.S.C. § 101 (1982) (defining "copy").

71. *Kramer*, 783 F.2d at 442. The *Kramer* court determined that the 1976 Act grants a copyright holder the exclusive right to reproduce copies of a copyrighted work. *Id.*; see 17 U.S.C. § 106(1) (1982) (giving copyright holder protection for copies of copyrighted work).

72. *Kramer*, 783 F.2d at 442. The *Kramer* court reasoned that because the memory device or computer program constituted an essential element of the video game audiovisual, the audiovisual copyright should protect the underlying computer program from infringement. *Id.* The Fourth Circuit cited *Stern Electronics, Inc. v. Kaufman* in finding that the video game audiovisual copyright protected the underlying computer program. *Id.* at 441; see *Stern*, 669 F.2d at 856 (finding audiovisual's fixation in computer). The *Kramer* court cited the *Stern* court as defining "video games" as computers that a person had programmed to create images on a screen. *Kramer*, 783 F.2d at 435 n.13; *Stern*, 669 F.2d at 853 (defining "video games"). As a result, the Fourth Circuit determined that video game audiovisuals are computer programs. *Kramer*, 783 F.2d at 435 n.12; see *Stern*, 669 F.2d at 855 (defining "video game audiovisual works"). See generally *infra* notes 96-102 and accompanying text (discussing facts and reasoning of *Stern*).

73. *Kramer*, 783 F.2d at 443-44; see 17 U.S.C. § 401(a) (1982) (requiring affixation of copyright notice).

determined that although Kramer originally had failed to affix proper copyright notice to Hi-Lo games, Kramer could have rectified the omission under the 1976 Act by making a reasonable effort to add notice to Hi-Lo games upon discovering the omission.<sup>74</sup> The Fourth Circuit found that Kramer had made reasonable efforts to rectify the initial mistaken omission because upon discovering the omission, Kramer tried to affix proper copyright notice to the Hi-Lo games that Kramer had not distributed to the public.<sup>75</sup> The Fourth Circuit concluded, therefore, that Kramer had not forfeited the validity of the Hi-Lo audiovisual copyright.<sup>76</sup>

After concluding that Kramer had not forfeited Kramer's copyright on the Hi-Lo audiovisual, the Fourth Circuit considered Kramer's claim that Andrews had infringed Kramer's copyright in the audiovisual display.<sup>77</sup> The Fourth Circuit reasoned that because an audiovisual copyright protects an underlying computer program, proof of audiovisual infringement can result from a finding that a defendant copied either the computer program or the audiovisual display.<sup>78</sup> The Fourth Circuit concluded that because Andrews admitted to copying the underlying computer program, Andrews had infringed the copyright on Kramer's Hi-Lo audiovisual.<sup>79</sup>

After determining that Andrews had infringed Kramer's copyright on the Hi-Lo audiovisual, the Fourth Circuit considered whether Andrews' infringement was innocent under the 1976 Act.<sup>80</sup> The Fourth Circuit found that under the 1976 Act, a copyright infringer can escape liability for

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74. *Kramer*, 783 F.2d at 443-44; see 17 U.S.C. § 405(a) (1982) (establishing methods to excuse omission of copyright notice). The Fourth Circuit in *Kramer* relied on the 1976 Act to find that courts will excuse the initial omission of proper copyright notice in at least two situations. *Kramer*, 783 F.2d at 443. The *Kramer* court determined that courts will excuse the initial omission of proper copyright notice if the author has distributed only a few copies of the work to the public, or if the author registered the work with the Copyright Office within five years of the work's first distribution and made a reasonable effort after discovering the omission to affix proper copyright notice to publicly distributed copies of the work. *Kramer*, 783 F.2d at 443; see 17 U.S.C. § 405(a) (1982) (establishing methods to excuse omission of copyright notice).

75. *Kramer*, 783 F.2d at 444.

76. *Id.*; see 2 M. NIMMER, *supra* note 20, § 7.13[B][2], at 7-93 (discussing reasonableness of author's effort to rectify omission of copyright notice).

77. *Kramer*, 783 F.2d at 444-46.

78. *Id.* at 444-45.

79. *Id.* at 445. In *Kramer* the Fourth Circuit determined that because direct proof of copying existed, Kramer did not have to prove that a substantial similarity existed between Kramer's and Andrews' Hi-Lo audiovisual displays. *Id.* at 445-46. The *Kramer* court determined that when direct evidence of copying did not exist, a plaintiff could prove copyright infringement by showing that a defendant had access to the original audiovisual and that a substantial similarity existed between two video game audiovisuals. *Id.* at 445; see 3 M. NIMMER, *supra* note 20, § 13.01[B], at 13-6 (access and substantial similarity prove copyright infringement). The Fourth Circuit found that although substantial similarity could suffice to prove copyright infringement when no direct evidence of copying existed, direct evidence of copying satisfied the proof requirement for copyright infringement. *Kramer*, 783 F.2d at 445.

80. *Kramer*, 783 F.2d at 446-47; see 17 U.S.C. § 405(b) (1982) (listing valid excuses for copyright infringement).

infringement if the infringer, because of an omission of copyright notice, innocently believed that no copyright protection existed for the work.<sup>81</sup> The Fourth Circuit determined, however, that the innocent infringer must prove reliance on the omission of notice.<sup>82</sup> The *Kramer* court concluded that because Andrews had reason to believe that Kramer held a valid interest in Hi-Lo when Andrews copied Hi-Lo, Andrews' infringement was not innocent.<sup>83</sup>

After concluding that Andrews had infringed Kramer's audiovisual copyright, the Fourth Circuit addressed Kramer's claim that Andrews had infringed the trade dress<sup>84</sup> of the Hi-Lo game.<sup>85</sup> The *Kramer* court determined that Andrews could infringe Kramer's trade dress in Hi-Lo only if Hi-Lo had acquired a secondary meaning.<sup>86</sup> The Fourth Circuit found, however, that if evidence of deliberate copying existed, courts could assume that secondary meaning existed because of the infringer's deliberate act of copying.<sup>87</sup> The Fourth Circuit concluded that because Andrews deliberately copied Hi-Lo's console, infringement of Hi-Lo's trade dress existed without proof of secondary meaning.<sup>88</sup>

The Fourth Circuit correctly recognized that images in video games meet the statutory definition of "audiovisual works."<sup>89</sup> The Fourth Circuit,

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81. *Kramer*, 783 F.2d at 447; see 17 U.S.C. § 405(b) (1982) (discussing "innocent infringer").

82. *Kramer*, 783 F.2d at 447.

83. *Id.* at 446-47. In *Kramer* the Fourth Circuit determined that a defendant cannot escape liability for infringing a copyright unless the defendant proves that infringement was innocent. *Id.*

84. *See id.* at 448 n.25. In *Kramer* the Fourth Circuit found that trade dress concerns the total image of a person's product, packaging, and advertising. *Id.* The Fourth Circuit determined that the trade dress of Hi-Lo included the design of Hi-Lo's console, the artwork on Hi-Lo's glass frontpiece, and the Hi-Lo name. *Id.*

85. *Id.* at 447-50.

86. *Id.* at 448. The Fourth Circuit in *Kramer* determined that the term "secondary meaning" meant that the consuming public first must associate the infringed product with a particular producer, and then must associate the product's trade dress with the product. *Id.* at 449. The Fourth Circuit found that secondary meaning existed only when the public associated a particular feature of a product with the product's producer. *Id.* The *Kramer* court determined that to establish infringement of a work's trade dress, a plaintiff must establish not only that a secondary meaning had attached to the work's trade dress, but also that a likelihood of confusion resulted from copying the work's trade dress. *Id.* at 448-49. The *Kramer* court, however, failed to decide whether a likelihood of confusion resulted from Andrews' copying the Hi-Lo trade dress because the district court had not addressed the issue. *See id.* at 448 n.24 (refusing to decide likelihood of confusion issue in *Kramer*).

87. *Id.* at 449-50. In *Kramer* the Fourth Circuit maintained that although evidence of intentional, direct copying established a presumption that secondary meaning existed, a trade dress infringer could rebut the presumption. *Id.* at 448.

88. *Id.* *See generally* 2 J. MCCARTHY, TRADEMARKS AND UNFAIR COMPETITION §§ 27.1-27.9 (2d ed. 1984) (discussing rules and case law regarding trade dress issue); Note, *The Problem of Functional Features: Trade Dress Infringement Under Section 43(a) of the Lanham Act*, 82 COLUM. L. REV. 77, 77-85 (1982) (discussing trade dress infringement).

89. *Kramer*, 783 F.2d at 436; *see supra* note 8 (defining "audiovisual work"); *supra* note 10 and accompanying text (describing courts' reasoning in finding that video game audiovisuals meet statutory definition of audiovisual work under 1976 Act).

therefore, properly concluded that the audiovisual of Hi-Lo qualified for copyright protection.<sup>90</sup> The Fourth Circuit's decision upholding the copyrightability of the Hi-Lo audiovisual is consistent with numerous decisions

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90. *Kramer*, 783 F.2d at 443; see *supra* notes 10, 20, 21 and accompanying text (discussing copyrightability of video game audiovisuals). In determining that the Hi-Lo audiovisual qualified for copyright protection, the *Kramer* court recognized that video game audiovisuals can meet the copyright standard for originality. *Kramer*, 783 F.2d at 473; see *Bandai-America*, 546 F. Supp. at 139 (copyright certificate provides evidence of originality of video game audiovisuals). In discussing Hi-Lo's originality, the Fourth Circuit determined that the plaintiff's Hi-Lo game constituted a derivative work because the game evolved from changes that *Kramer* had made in *Kramer's* Draw Poker II game. *Kramer*, 783 F.2d at 437; see *supra* notes 37, 56 (discussing *Kramer's* facts and reasoning regarding derivative works). A "derivative work" evolves from a process of adapting or transforming one or more pre-existing works. 1976 HOUSE REPORT, *supra* note 1, at 57. A copyright in a derivative work protects against copying an author's original contribution to the original work. 1 M. NIMMER, *supra* note 20, § 3.04, at 3-15.

In discussing originality in derivative works, the Fourth Circuit cited a case from the Fifth Circuit to show that the copyright on a derivative work covers more than the new contribution. *Kramer*, 783 F.2d at 440; see *Apple Barrel Prod., Inc. v. Beard*, 730 F.2d 384, 387-88 (5th Cir. 1984) (discussing originality in compilation works). In *Apple Barrel*, however, the Fifth Circuit discussed only copyrights protecting compilation works, not derivative works. See *Apple Barrel Prod., Inc. v. Beard*, 730 F.2d 384, 384 (5th Cir. 1984) (discussing copyright protection of compilations). Although the Fifth Circuit in *Apple Barrel* only discussed copyrights protecting compilation works, the *Kramer* court's failure to distinguish between compilation and derivative works appears unimportant. See *Kramer*, 783 F.2d at 440 (discussing arrangement of audiovisuals); *Apple Barrel*, 730 F.2d at 387-88 (5th Cir. 1984) (discussing copyright protection of compilations). Although in passing the 1976 Act Congress determined that compilation and derivative works represented different concepts, the originality standards in a compilation work that contains pre-existing materials, a collective work, and in a derivative work generally do not receive different substantive treatment. See 1 M. NIMMER, *supra* note 20, § 3.02, at 3-8 (discussing similarity of originality standards between derivative works and collective works); see also 1976 HOUSE REPORT, *supra* note 1, at 57 (stating that compilation and derivative works represent different concepts).

Although the *Kramer* court continuously refers to the Hi-Lo audiovisual as a derivative work, the Fourth Circuit determined that copyright protection extended to the arrangement of designs in the Hi-Lo audiovisual, which suggests that the Fourth Circuit may have protected part of the Hi-Lo audiovisual as a compilation or collective work. See *Kramer*, 783 F.2d at 439 (providing copyright protection to arrangement of Hi-Lo audiovisual). Copyright protection of compilations and collective works attaches to the arrangement of previously existing materials in the compilation. 1 M. NIMMER, *supra* note 20, § 3.04, at 3-16. The copyright on the derivative work, however, protects only the new material that an author adds to a copyrightable, pre-existing work. *Id.* The precise differentiations between derivative and collective works remain unclear, however, because few courts or commentators have attempted to make exact distinctions between the two types of works. See *Mister B Textiles Inc. v. Woodcrest Fabrics, Inc.*, 523 F. Supp. 21, 26 (S.D.N.Y. 1981) (recognizing that no precedent exists to guide courts in distinguishing between derivative and collective works); 1 M. NIMMER, *supra* note 20, § 3.02, at 3-8 (recognizing resemblance of derivative work to collective work).

Although the distinction between derivative and compilation works remains vague, the protection of a portion of Hi-Lo as a compilation in *Kramer* appears accurate because the Copyright Office registered Hi-Lo as a compilation. See *Kramer*, 783 F.2d at 428 (discussing *Kramer's* copyright registration of Hi-Lo audiovisual). The Fourth Circuit, however, failed to recognize the distinction between a compilation and derivative work. See *id.* at 439.

in other circuits validating the copyrightability of video games.<sup>91</sup> The Fourth Circuit also correctly recognized that the temporary omission of proper copyright notice from Hi-Lo did not defeat the validity of the Hi-Lo audiovisual copyright.<sup>92</sup> Other circuits agree that a copyright holder need exert only a reasonable effort to affix notice to all copies of a work that an author has not distributed to the public at the time of the discovery of the omission of the copyright notice.<sup>93</sup> The Fourth Circuit's extension of the protection that the audiovisual copyright affords the computer program, however, substantially departs from decisions of other circuits.<sup>94</sup>

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91. See *supra* note 20 and accompanying text (listing decisions that uphold copyrightability of video game audiovisuals); see also *WGN Continental Broadcasting Co. v. United Video, Inc.*, 693 F.2d 622, 627-28 (7th Cir. 1982) (giving historical background behind expansive interpretation of term "audiovisual work").

92. *Kramer*, 783 F.2d at 444; see *supra* notes 73-76 and accompanying text (discussing *Kramer* court's decision regarding forfeiture of copyright protection because of notice omissions from Hi-Lo audiovisuals). The 1976 Act requires that notice of copyright appear on all copyrighted works. 17 U.S.C. § 401(a) (1982). The 1976 Act establishes a specific form of copyright notice that authors must attach to the authors' works to retain valid copyright protection over a work. See *id.* § 401(b) (form of notice must include specific symbol, year of first publication, and name of copyright owner). In *Kramer* *Kramer* initially sold Hi-Lo games without the proper form of notice. *Kramer*, 783 F.2d at 428. The *Kramer* court properly recognized, however, that the 1976 Act allows an author to cure the initial omission of copyright notice by making reasonable efforts to affix proper notice to the copyrighted work after discovering the copyright notice's omission. See *id.*; 17 U.S.C. § 405(a) (1982) (allowing author to cure initial omission of copyright notice). The *Kramer* court concluded that *Kramer* had not forfeited the validity of the copyright on Hi-Lo's audiovisual because *Kramer* had made reasonable efforts to affix proper notice to games that *Kramer* had not yet distributed to the public. *Kramer*, 783 F.2d at 428; see 17 U.S.C. § 405(a) (1982) (allowing author to cure initial omission of copyright notice).

93. See, e.g., *Shapiro & Son Bedspread Corp. v. Royal Mills Assocs.*, 764 F.2d 69, 72 (2d Cir. 1985) (author meets standard for reasonable effort when author affixes notice to undistributed works); *Hagendorf v. Brown*, 699 F.2d 478, 480 (9th Cir. 1983) (unintentional omission of notice does not affect copyright); *Original Appalachian Artworks, Inc. v. Toy Loft, Inc.*, 684 F.2d 821, 827 (11th Cir. 1982) (copyright holder must make reasonable effort to affix proper notice to undistributed games after discovering omission). Determining whether the copyright holder made a reasonable effort to affix proper notice is a question of fact. See *Shapiro & Son Bedspread Corp. v. Royal Mills Assocs.*, 764 F.2d 69, 75 (2d Cir. 1985) (court must view as issue of fact reasonableness of copyright holder's efforts). If the discovery of the copyright notice's omission does not occur within five years of the work's original publication, however, the copyright automatically becomes invalid. See 17 U.S.C. § 405(a)(2) (1982) (no forfeiture of copyright if discovery of omission made within five years after work's publication). Because the original author had published *Draw Poker I*, the original version of Hi-Lo, less than five years before *Kramer* discovered Hi-Lo's faulty copyright notice, the *Kramer* court correctly found that *Kramer* did not forfeit the Hi-Lo audiovisual copyright. See *Kramer*, 783 F.2d at 428.

94. See *Kramer*, 783 F.2d at 442 (describing *Kramer* court's extension of audiovisual copyright protection); *infra* notes 111-47 and accompanying text (discussing scope of video game audiovisual copyright protection). Compare *Kramer*, 783 F.2d at 442 (audiovisual copyright protects underlying computer program of video game) with *Midway Mfg. Co. v. Artic Int'l, Inc.*, 547 F. Supp. 999, 1006 (N.D. Ill. 1982) (audiovisual copyright protects design, movement, and sounds of characters), *aff'd*, 704 F.2d 1009 (7th Cir.), *cert. denied*, 464 U.S.

In justifying its position that the video game audiovisual copyright protected the underlying computer program, the Fourth Circuit held that both the video game computer program and the memory device acted as "copies" of the audiovisual.<sup>95</sup> Like the Fourth Circuit in *Kramer*, the United States Court of Appeals for the Second Circuit in *Stern Electronics, Inc. v. Kaufman*<sup>96</sup> concluded that the memory device of a video game satisfies the statutory definition of a "copy" of the video game audiovisual for the purpose of establishing the audiovisual's fixation.<sup>97</sup> In *Stern* the Second Circuit considered whether the audiovisual of the "Scramble" video game was eligible for copyright protection.<sup>98</sup> The Second Circuit recognized that an author of a video game audiovisual must establish that the audiovisual constitutes a fixed element in a tangible object to register a copyright in the audiovisual.<sup>99</sup> The *Stern* court found that under the 1976 Act an audiovisual can constitute a fixed element when a person can perceive or reproduce the audiovisual from an object with the aid of a machine.<sup>100</sup> The Second Circuit reasoned that because a person can reproduce a video game audiovisual from the game's memory device, the memory device meets the statutory definition of a "copy" of the audiovisual.<sup>101</sup> Unlike the Fourth Circuit, however, the *Stern* court stopped short of finding that the computer program underlying a video game audiovisual constituted a copy of the video game audiovisual.<sup>102</sup>

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823 (1983). *But see Atari*, 672 F.2d at 615 (failing to determine extent of protection of repetitive sequence of portion of sights and sounds of video games after finding sequence of portion copyrighted).

95. *Kramer*, 783 F.2d at 442.

96. 669 F.2d 852 (2d Cir. 1982).

97. *Stern*, 669 F.2d at 856; see 17 U.S.C. § 101 (1982) (defining "copies"); *supra* notes 16, 19, 20 and accompanying text (discussing 1976 Act's requirement of fixation for video game audiovisuals).

98. *Stern*, 669 F.2d at 853-54. In *Stern* *Stern Electronics, Inc. (Stern)*, an amusement equipment manufacturer, had procured an exclusive sub-license from a Japanese company to distribute the "Scramble" video game in the United States. *Id.* at 854. The defendant Omni Video Games, Inc. (Omni) began selling a copy of the "Scramble" video game simultaneously with *Stern*. *Id.* Omni had created the copy of *Stern's* "Scramble" game by writing a new computer program that replicated the "Scramble" audiovisual display. *Id.* at 854-55. Additionally, the Omni video game bore the same name as *Stern's* game. *Id.* at 854. Omni sold its copy of the "Scramble" video game for several hundred dollars less than *Stern's* game. *Id.* at 855.

99. *Id.* at 855 (only works fixed in tangible objects are copyrightable); see *supra* note 16 (discussing 1976 Act's fixation requirement).

100. *Stern*, 669 F.2d at 856; see 17 U.S.C. § 102(a) (1982) (requiring fixation in tangible object); *supra* note 16 (discussing 1976 Act's fixation requirement).

101. See *Stern*, 669 F.2d at 855 (memory devices of game satisfy statutory requirement of "copy" for fixation purposes); *supra* note 16 (defining "copy").

102. See *Kramer*, 783 F.2d at 442 (audiovisual copyright protects computer program); *Stern*, 669 F.2d at 855-56 (only memory device constitutes video game audiovisual's copy); see *supra* note 68-70 (discussing *Kramer* court's reasoning in finding that computer program constitutes copy of audiovisual).

Although the *Kramer* court interchangeably used the terms "memory device" and "program,"<sup>103</sup> decisions in other circuits suggest that the memory device and the program do not constitute the same item. For example, in *Williams Electronics, Inc. v. Artic International, Inc.*<sup>104</sup> the United States Court of Appeals for the Third Circuit quoted *Stern*<sup>105</sup> in finding that the memory device of the "Defender" video game constituted a copy of the video game audiovisual.<sup>106</sup> After finding video game audio-visuals copyrightable, however, the *Williams* court considered the relationship between the video game's memory device and the computer program.<sup>107</sup> In *Williams* Williams Electronics, Inc. (Williams) claimed that Artic International, Inc. (Artic) had infringed Williams' separate audiovisual and computer program copyrights by selling copies of Williams' "Defender" video game.<sup>108</sup> The Third Circuit distinguished the video game's memory device from the computer program by determining that the memory device acts as a utilitarian mechanism to "store" the computer program in the memory device circuitry.<sup>109</sup> The Third Circuit concluded, therefore, that the computer program and memory device did not constitute the same feature.<sup>110</sup>

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103. See *Kramer*, 783 F.2d at 441-42 (using terms "memory device" and "computer program" interchangeably).

104. 685 F.2d 870 (3d Cir. 1982).

105. 669 F.2d 852 (2d Cir. 1982); see *supra* notes 96-102 and accompanying text (discussing *Stern*).

106. *Williams*, 685 F.2d at 874. In *Williams* Williams Electronics, Inc. (Williams) had registered two copyrights on two different audiovisual displays in the electronic video game "Defender," and one copyright on the game's computer program. *Id.* at 872. The defendant, Artic International, Inc. (Artic), sold a video game called "Defense Command." *Id.* The district court in *Williams* had determined that the audiovisual displays in "Defense Command" and the text of the video game's computer program were virtually identical to the audio-visuals and computer program of Williams' game. See *id.* at 872-73 (discussing district court's findings). On appeal the Third Circuit in *Williams* considered the validity and scope of the copyright protection that Williams' copyrights provided. *Id.* at 873.

107. *Id.* at 876-77.

108. *Id.* at 873.

109. *Id.* at 876 (information that ROM contains is subject of copyright); see *Strohon*, 564 F. Supp. at 752 (program copyright protects information in ROM); *supra* note 20 (defining ROM).

110. See *Williams*, 685 F.2d at 876 (finding that ROM contains program); see also *Apple*, 714 F.2d at 1249 (distinguishing computer program from ROM). In *Apple Computer, Inc. v. Franklin Computer Corp.* the Third Circuit again considered the relationship between a video game's memory device and underlying computer program. *Apple*, 714 F.2d at 1249. In *Apple* Apple Computer, Inc. (Apple) claimed infringement of a computer program copyright that Apple held. *Id.* at 1244-45. The defendant in *Apple* had copied Apple's program after Apple had translated the program into a machine-readable object code and had embedded the object code into a ROM. *Id.* at 1243; see *supra* note 2 (defining and discussing object code). The *Apple* court distinguished the ROM, which stores the object code's information, from the object code, which is a copy of the original human-readable computer program. *Apple*, 714 F.2d at 1249. The Third Circuit determined that the "copy" of the original computer program was not the actual memory device, but the information that the programmer had embedded in the memory device. *Id.* at 1249 n.7. The *Apple* court determined that the information that the programmer embedded into a memory device was the machine-readable object code. *Id.*;

In addition to finding a distinction between the memory device and computer program, the Third Circuit in *Williams* considered the scope of protection that separate copyrights in a video game audiovisual and computer program afford a holder of those audiovisual and program copyrights.<sup>111</sup> The *Williams* court separated the protection that the audiovisual and program copyrights afford copyright holders<sup>112</sup> and recognized that the memory device acts as a copy of the audiovisual.<sup>113</sup> The *Williams* court, however, did not extend copyright protection from the audiovisual copyright to the information inside the memory device.<sup>114</sup> The Third Circuit found that copyrights on the computer program, rather than audiovisual copyrights, should protect the information in the memory device.<sup>115</sup> The *Williams* court reasoned that in video games, manufacturers loaded the computer programs into the memory device to control the video game machine's activities.<sup>116</sup> The Third Circuit held that because the computer program loads directly into the memory device, copying the information in the memory device would infringe the computer program copyright.<sup>117</sup>

Although the Third Circuit found that the memory device contained the computer program, the *Williams* court did not find that the computer program embodied the video game audiovisual.<sup>118</sup> The Third Circuit determined that the circuitry of the memory device embodied the video game audiovisual for fixation purposes, but not that the information in the memory device's circuitry embodied the audiovisual.<sup>119</sup> The *Williams* court found, however, that the mechanical nature of the video game's memory device precluded the memory device from receiving copyright protection.<sup>120</sup>

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*see supra* note 2 (discussing machine-readable object code). The Third Circuit reasoned that because the object code was a translation of the original source code program, the object code was a computer program. *Apple*, 714 F.2d at 1248-49; *see* 17 U.S.C. § 106 (1982) (providing copyright holder with exclusive rights over translations of copyrighted work); 17 U.S.C. § 101 (Supp. III 1985) (defining computer program as instructions that computer uses either directly or indirectly). The Third Circuit concluded, therefore, that the computer program copyright protected the object code, or the information which the programmer had embedded in the ROM. *Apple*, 714 F.2d at 1249.

111. *Williams*, 685 F.2d at 874-78; *see supra* note 106 and accompanying text (discussing facts of *Williams*).

112. *See Williams*, 685 F.2d at 874-78 (discussing separate protection of audiovisual and computer program copyrights).

113. *See id.* at 874 (recognizing that memory devices satisfy statutory definition of audiovisual's copy); 17 U.S.C. § 101 (1982) (1976 Act's definition of "copy").

114. *See Williams*, 685 F.2d at 874-75 (limiting audiovisual copyright protection to video game's audiovisual aspects).

115. *Id.* at 876-77.

116. *Id.* at 877.

117. *See id.* (copying object code that is embedded in ROM constitutes infringement of computer program copyright).

118. *See id.* at 874-75; *supra* notes 107-10 and accompanying text (discussing *Williams* court's separation of ROM and computer program).

119. *See Williams*, 685 F.2d at 874 (memory device embodies video game audiovisual).

120. *Id.* at 874-75.



As a result, the Third Circuit in *Williams* limited the protection that the video game audiovisual copyrights provide copyright holders to the audiovisual aspects of the video game appearing on the video screen.<sup>121</sup> The Third Circuit indicated, therefore, that the audiovisual copyright protection did not extend to the underlying computer program.<sup>122</sup>

In addition to the Third Circuit in *Williams*, the United States Court of Appeals for the Seventh Circuit has considered the scope of protection that a video game audiovisual copyright affords a copyright holder.<sup>123</sup> In *Atari, Inc. v. North American Philips Consumer Electronics Corp.*<sup>124</sup> the defendant had used Atari, Inc.'s (Atari) Pac-Man video game audiovisual as a basis for developing a home video game.<sup>125</sup> The alleged infringer in *Atari* had altered the shape of the audiovisual's maze and characters before selling the alleged copy of the Pac-Man game.<sup>126</sup> The Seventh Circuit did not compare the underlying computer programs in determining whether the defendant had infringed Atari's audiovisual copyright.<sup>127</sup> Rather, the *Atari* court maintained that copyright infringement depended on whether the alleged copy captured the "total concept and feel" of the copyrighted work.<sup>128</sup> In applying the "total concept and feel" test, the Seventh Circuit compared the visual appearance and design of Atari's and the defendant's video game audiovisuals.<sup>129</sup> Although the Seventh Circuit held that the

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121. *Id.*

122. *Id.*

123. *See Atari*, 672 F.2d at 612-13 (considering protection of video game audiovisual copyright).

124. 672 F.2d 607 (7th Cir.), *cert. denied*, 459 U.S. 880 (1982).

125. *Id.* at 613. In *Atari* an independent contractor created a video game called "K.C. Munchkin" as a home video game for North American Philips Consumer Electronics Corporation (Philips) for use in Philips' "Odyssey" line of home video games. *Id.* K.C. Munchkin resembled the Pac-Man video game in which plaintiffs Atari, Inc. (Atari) and Midway Manufacturing Company (Midway) owned audiovisual copyrights. *Id.* at 610, 613. Although Philips sought a license under Midway's Pac-Man copyright to use the Pac-Man name on Philips' games, Philips marketed its game under the K.C. Munchkin name after Midway refused to give Philips a license. *Id.* at 613. The independent contractor who developed the K.C. Munchkin game for Philips created the K.C. Munchkin video game after playing the Pac-Man video game. *Id.*

126. *Id.* at 613. The Third Circuit in *Atari* noted a number of differences between the K.C. Munchkin and Pac-Man audiovisual displays. *See id.* at 612-13. Additionally, the *Atari* court maintained that the K.C. Munchkin game had a distinctive set of sounds that differed from the sounds of Pac-Man. *Id.* at 613.

127. *See id.* at 614-15, 619-20 (comparing only visual aspects of video audiovisuals in considering infringement of audiovisual copyright).

128. *Id.* at 614. In examining the "total concept and feel" of the two audiovisual displays, the *Atari* court applied the "ordinary observer" test. *Id.* The "ordinary observer" test considers whether an ordinary, reasonable person would find that because the similarities between two works were so great, a copier must have appropriated improperly the original work. *Id.* The court maintained that the "ordinary observer" test does not involve analytical dissection, but merely depends on whether an ordinary, reasonable person would find that the "total concept and feel" of the original work exists in the copied work. *Id.*

129. *See id.* at 619 (comparing audiovisuals' appearance and design); *see supra* note 128 (discussing *Atari* court's application of "total concept and feel" theory).

defendant had infringed Atari's audiovisual copyright, the *Atari* court relied solely on the visual pattern and design of the video screens in ruling on the audiovisual copyright infringement issue.<sup>130</sup> The *Atari* case, therefore, appears to illustrate the proposition that audiovisual copyrights protect only the visual aspects of the video game and not the computer program that the memory device stores.<sup>131</sup>

Although the Third and Seventh Circuits determined that protection from a video game audiovisual copyright does not extend to the underlying computer program, courts have found difficulty in justifying the grounds for limiting the protection of an audiovisual copyright to the audiovisual.<sup>132</sup> For example, the Second Circuit in *Stern Electronics, Inc. v. Kaufman*<sup>133</sup> considered whether a video game audiovisual could sustain a copyright separately from the video game's underlying computer program.<sup>134</sup> The Second Circuit in *Stern* found that both the audiovisual and the computer program have completely separable features.<sup>135</sup> The *Stern* court compared the video game, which consists of an audiovisual and written program, to an audio tape, which embodies both a musical composition and a sound recording within one component.<sup>136</sup> The *Stern* court observed that although both the composition and the sound recording exist within one component, the musical composition can receive a separate copyright.<sup>137</sup> The *Stern* court determined that like the embodiment of a sound recording and musical composition in the same component, the embodiment of both the audiovisual and the computer program in the same components of a video game did not defeat the separability of the audiovisual and computer program copyrights.<sup>138</sup>

Although the *Stern* court emphasized the separable features of an audiovisual and computer program, the Second Circuit failed to recognize that each new sound recording of a musical composition reflects a new expression

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130. See *Atari*, 672 F.2d at 615, 619 (comparing visual patterns and designs to determine if copyright infringement existed).

131. See *id.* at 619 (relying solely on visual pattern and design of video screens in considering audiovisual copyright infringement).

132. See *id.* at 615 (recognizing lack of absolute boundaries between separate audiovisual and computer program copyrights); *Strohon*, 564 F. Supp. at 749 (failing to establish absolute boundaries between audiovisual and program copyrights); *supra* notes 109-31 and accompanying text (discussing Third and Seventh Circuit decisions regarding scope of audiovisual copyright protection); *infra* notes 133-43 and accompanying text (discussing *Stern*).

133. 669 F.2d 852 (2d Cir. 1982).

134. *Id.* at 856.

135. See *id.* at 856-57 (maintaining that audiovisual and program have separable features, but declining to decide how to separate).

136. *Id.* at 856.

137. *Id.*; see 1 M. NIMMER, *supra* note 20, § 2.10[A], at 2-140 (sound recording may receive separate copyright).

138. See *Stern*, 669 F.2d at 856 (visual and aural features of audiovisual copyrightable even though underlying written computer program separately copyrightable).

of that composition.<sup>139</sup> New actors, singers, and producers add distinctive contributions to a musical composition, making the originality of that new work separately copyrightable with each new sound recording.<sup>140</sup> In video games, however, computer instructions create the same audiovisual display each time the memory device utilizes the instructions.<sup>141</sup> Consequently, once a programmer embeds a set of computer instructions into a video game memory device, the programmer permanently restricts the creation of any new development of the expression of the video game's idea.<sup>142</sup> The *Stern* analogy between video games and sound recordings, therefore, illustrates the difficulty in rationalizing the need for separate copyrights in a video game audiovisual and underlying computer program.<sup>143</sup> Although most courts have separated the copyright protection of the video game audiovisual from the copyright protection of the computer program,<sup>144</sup> the rationale for requiring separate copyrights appears weak. Rationalizing the need for separate copyrights on the video game audiovisual and underlying computer program becomes even more difficult after realizing that the audiovisual and computer program are related integrally.<sup>145</sup> Because the audiovisual cannot exist without the computer program, the program is integral to the audiovisual's existence.<sup>146</sup> The idea that *Kramer* establishes of protecting

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139. See *id.* (comparing video game audiovisual to sound recording); Note, *Defining the Scope of Copyright Protection for Computer Software*, 38 STAN. L. REV. 497, 532-33 (1986) (each sound recording expresses sheet music differently because performers and conductor make additional contributions to expression of sheet music).

140. See Note, *supra* note 139, at 533 (each new sound recording is distinctive expression of musical composition).

141. See *id.* at 532-33 (no additional authorship necessary in video game once programmer writes computer instructions to produce specific screen displays).

142. *Id.*

143. See *Stern*, 669 F.2d at 856 (analogizing video games and sound recordings); Note, *supra* note 139, at 532-33 (discussing differences between originality in sound compositions and audiovisual works).

144. See *Stern*, 669 F.2d at 856 (underlying program exists independently and is capable of separate copyright); *Strohon*, 564 F. Supp. at 749 (considering independent and interrelated aspects of audiovisual and program).

145. See *infra* note 146 (discussing integral relationship between video game audiovisual and underlying computer program).

146. See Note, *supra* note 139, at 532 (finding audiovisual display and computer program integrally related). A musical composition is an example of a single copyrightable work that embodies separately copyrightable works that an author has integrated together. *Id.* Courts have found that because of the integral nature of the relationship of music and lyrics in a musical composition, an author of a musical composition integrates the separately copyrightable works into a single work. See *Standard Music Roll Co. v. F. A. Mills, Inc.*, 241 F. 360, 362 (3d Cir. 1917) (under 1909 Act, words and music combine to become integral parts of musical composition); *Stratchborneo v. Arc Music Corp.*, 357 F. Supp. 1393, 1397-98 (S.D.N.Y. 1973) (song's lyrics and music constitute "musical composition" because both music and words merged into single work). Similarly, the component parts of a video game act together as an integral work. See Note, *supra* note 139, at 532 (1986) (courts should treat computer instructions and associated screen displays as integral unit because instructions and screen displays are sold together and difficult to separate); see also *Stern*, 669 F.2d at 853 (video games need computer

both the audiovisual and the computer program with a single copyright appears to dispose of the problem of separating the copyright protection of the video game audiovisual from the underlying computer program.<sup>147</sup>

Although the *Kramer* court's extension of copyright protection from the audiovisual to the underlying computer program disposes of the need to rationalize the separate protection that individual copyrights in an audiovisual and a computer program afford copyright holders, the *Kramer* court's extension of audiovisual copyright protection to the computer program differs with the current practices of the Copyright Office and permits dual protection of the video game computer program.<sup>148</sup> The 1976 Act, in conjunction with the 1980 Amendment, provides for the separate copyright-

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program, which creates audiovisual, and audiovisual, which displays characters). Without the audiovisual, the video game's computer program is useless because the game can attract no customers. See Note, *supra* note 4, at 532 (success of video game depends on creativity in graphics). Without the underlying computer program, the video game audiovisual is nonexistent. See *id.* (discussing audiovisual's reliance on computer program). As a result, the program and audiovisual rely on each other to the extent that the two serve as interrelated, inseparable parts of the video game.

147. See *Kramer*, 783 F.2d at 442 (extending protection of video game audiovisual copyright to computer program). Requiring separate copyrights on the video game audiovisual and underlying computer program may present numerous difficulties. See Note, *supra* note 139, at 530-31 (describing possible difficulties that separate audiovisual and computer program copyrights create). For example, an author may not know that the author must copyright separately the audiovisual from the computer program, or that the computer program copyright does not protect the audiovisual. See *id.* (copyright holder, through accident or lack of knowledge, may fail to copyright individually all component parts of video game).

A number of courts have suggested copyrighting integral works as a unit. See, e.g., *Monogram Models, Inc. v. Industro Motive Corp.*, 492 F.2d 1281, 1284-85 (6th Cir.) (single copyright protects all parts of work when all parts integrally related), *cert. denied*, 419 U.S. 843 (1974); *Standard Music Roll Co. v. F. A. Mills, Inc.*, 241 F. 360, 362 (3d Cir. 1917) (because words and music act as integral parts of single musical composition, single copyright protects words, music, and musical composition); *Stratchborneo v. Arc Music Co.*, 357 F. Supp. 1393, 1405 (S.D.N.Y. 1973) (musical work copyright protects all parts of work). An item becomes an integral part of a work when that item constitutes an essential or necessary part of the overall work. *Royalty Designs, Inc. v. Thriftcheck Service Corp.*, 204 F. Supp. 702, 704 (S.D.N.Y. 1982); see also *Uneda Doll Co. v. Goldfard Novelty Co.*, 373 F.2d 851, 853-54 (2d Cir. 1967) (copyright on doll protects doll's display package because display package acts as integral part of product, constituting storage facility for doll); *Patterson v. Century Prod.*, 93 F.2d 489, 493 (2d Cir. 1937) (notice on first of eight reels of film is sufficient notice because all eight reels are integral elements of movie), *cert. denied*, 303 U.S. 655 (1938); *Goldman-Morgen, Inc. v. Dan Brecher & Co.*, 411 F. Supp. 382, 387 (S.D.N.Y. 1976) (copyright notice on detachable item sufficient if detachable item serves as integral part of total work). A recent Fourth Circuit decision, *Koontz v. Jaffarian*, introduced the term "unit publication" to describe the idea of protecting integral works under one copyright. See *Koontz v. Jaffarian*, 617 F. Supp. 1108, 1112 (E.D. Va. 1985) (introducing term "unit publication"), *aff'd*, 787 F.2d 906 (4th Cir. 1986). See generally Comment, *Unit Publication: The Evolution of a Doctrine*, 44 WASH. & LEE L. REV. 647 (1987).

148. See *Kramer*, 783 F.2d at 442 (extending protection of audiovisual copyright to computer program); see also *infra* note 150 (discussing practices of Copyright Office regarding copyright registration).

ability of the computer program and audiovisual aspects of video games.<sup>149</sup> The Copyright Office, which registers copyrights, generally requires separate copyright registration for a video game audiovisual and computer program.<sup>150</sup> Although *Kramer* extended copyright protection from an audiovisual to its underlying computer program, the Fourth Circuit did not require that authors register the authors' intent to protect both the video game audiovisual and computer program with one copyright.<sup>151</sup> Consequently, the *Kramer* decision conflicts with current practices of the Copyright Office because the Copyright Office generally requires separate registration of the two works.<sup>152</sup> Because *Kramer* protects a computer program with an audi-

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149. 17 U.S.C. § 101 (1982) (listing audiovisual works and computer programs as works capable of individual copyright protection); see *supra* note 2 and accompanying text (discussing copyrightability of computer programs). Although the 1980 Amendment allows for the separate copyright protection of computer programs, the 1980 Amendment does not preclude video game programs from receiving copyrights as part of a unit. 17 U.S.C. § 101 (1982) (defining computer program as copyrightable subject matter); see *Standard Music*, 241 F. at 362 (musical composition copyright extends only to previously uncopyrighted parts of musical composition).

150. Circular R49, *Registration for Video Games and Other Machine Readable Audiovisual Works 2*, Copyright Office (Library of Congress, May 1986) (establishing procedures for registering audiovisual copyright); Circular R61, *Copyright Registration for Computer Programs 1*, Copyright Office (Library of Congress, Nov. 1983) (establishing procedures for registering computer program copyrights); see Note, *supra* note 139, at 532-33 (Copyright Office practices conflict with unit copyrightability of video game program and audiovisual). But see Circular R55, *Copyright Registration for Multimedia Works 6*, Copyright Office (Library of Congress, Aug. 1986) (allowing unit registration of program and audiovisual in certain instances). The Copyright Office generally requires that an author separately register a video game audiovisual and computer program on different forms. See Circular R49, *supra*, at 2 (establishing procedures for registering video game audiovisual copyright); Circular R61, *supra*, at 1 (establishing procedures for registering computer program copyright). The Copyright Office has indicated that an author possibly could protect both the audiovisual display and computer program under one copyright if, after careful consideration, the Copyright Office gave its approval. Telephone interview with Dennis Evert, Copyright Information Specialist, Copyright Office (Oct. 23, 1986). To receive protection under one copyright registration, however, the author would have to indicate the author's intent to protect both the audiovisual display and the computer text under one copyright when filing the form that the Copyright Office requires for audiovisual registration. *Id.*; see Circular R55, *supra*, at 1, 6 (author must register intent to protect both audiovisual and program with one copyright by expressly stating intent on audiovisual registration form). Because a copyright registration on the computer program in *Kramer* existed before *Kramer* filed the registration on the Hi-Lo audiovisual, however, the Copyright Office would not have allowed *Kramer* to copyright the audiovisual and computer program as a unit because another party previously had registered the computer program. See *Kramer*, 783 F.2d at 428 (discussing registration of computer program copyright by SMS before *Kramer*'s registration of audiovisual copyright). As a result, the *Kramer* decision conflicts with the Copyright Office's practice of not protecting video game audiovisu-als and computer programs as a unit unless the author has indicated clearly at the time of registration the author's intent to register the two works under one copyright. Telephone interview with Dennis Evert, Copyright Information Specialist, Copyright Office (Oct. 23, 1986).

151. See *Kramer*, 783 F.2d at 442 (protecting video game audiovisual and computer program with audiovisual copyright).

152. *Id.*; see *supra* note 150 and accompanying text (discussing practices of Copyright Office regarding copyright registration).

ovisual copyright, but does not preclude the Copyright Office from issuing a copyright on the same computer program, the *Kramer* decision allows dual protection of the video game computer program.<sup>153</sup> Consequently, the *Kramer* court creates the possibility that a holder of a video game audiovisual copyright and a holder of a computer program copyright will claim the same copyright rights in a computer program.<sup>154</sup>

The *Kramer* decision not only fails to resolve the conflict that the Fourth Circuit established by protecting a computer program with two separate copyrights, but also creates a potential problem by easing proof requirements in copyright infringement cases.<sup>155</sup> The Fourth Circuit in *Kramer* found that a plaintiff could prove copying of a video game audiovisual by establishing that an infringer had copied either the audiovisual or the underlying computer program.<sup>156</sup> Although apparently no circuit court has considered expressly whether proof of copying a program could prove audiovisual copying, other circuits appear to disagree with the Fourth Circuit's contention that proof of copying the computer program proves copying the audiovisual.<sup>157</sup> For example, the United States Court of Appeals for the Eleventh Circuit in *United States v. O'Reilly*<sup>158</sup> considered whether a criminal defendant had infringed an audiovisual copyright by distributing counterfeited copies of the "Kung Fu Master" video game.<sup>159</sup> In *O'Reilly* the Federal Bureau of Investigation (FBI) arrested the defendant, O'Reilly, after an FBI special agent purchased counterfeited copies of the "Kung Fu Master" game from the defendant.<sup>160</sup> Although the defendant had sold the FBI agent printed circuit boards that contained the video game's underlying computer program, the Eleventh Circuit did not consider the computer programs in determining whether O'Reilly had infringed the audiovisual copyright.<sup>161</sup> The *O'Reilly* court recognized that the audiovisual copyright

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153. See *Kramer*, 783 F.2d at 442 (audiovisual copyright protects computer program); see also *supra* note 150 (discussing procedure for copyright registration). Compare *Kramer*, 783 F.2d at 442 (protecting computer program with audiovisual copyright even though separate copyright on computer program exists) with *Apple*, 714 F.2d at 1248 (upholding validity of computer program copyright) and *Williams*, 685 F.2d at 875 (establishing validity of separate computer program and audiovisual copyrights).

154. See *Kramer*, 783 F.2d at 442 (protecting previously registered computer program with audiovisual copyright); *supra* notes 37-38 (discussing *Kramer* facts regarding separate copyright registrations of Hi-Lo by *Kramer* and SMS).

155. See *infra* notes 157-84 and accompanying text (discussing court decisions that require stricter proof requirements for copyright infringement than *Kramer* court); *infra* notes 185-89 and accompanying text (discussing problems with proof requirements for copyright infringement from *Kramer*).

156. See *Kramer*, 783 F.2d at 445 (copying either audiovisual or underlying computer program constitutes infringement of audiovisual copyright).

157. See *infra* notes 158-73 and accompanying text (discussing court decisions limiting proof of audiovisual copyright infringement to visual aspects of audiovisual).

158. 794 F.2d 613 (11th Cir. 1986).

159. *Id.* at 614.

160. *Id.*

161. See *id.* at 615 (viewing only audiovisual displays to determine if audiovisual copyright infringement exists).

protects only the work that appears on the video screen.<sup>162</sup> As a result, because other copyrights protect against infringement of the computer program, the Eleventh Circuit compared only the visual characteristics of the video screen images in determining whether the defendant had infringed the audiovisual copyright.<sup>163</sup>

In addition to the Eleventh Circuit's reliance on the video screen images in finding copyright infringement, several federal district courts have addressed the factors to consider in cases alleging infringement of an audiovisual copyright.<sup>164</sup> For example, in *Midway Manufacturing Co. v. Strohon*<sup>165</sup> the United States District Court for the Northern District of Illinois considered whether a video game audiovisual and underlying computer program could maintain separate copyright protection.<sup>166</sup> In *Strohon* Midway Manufacturing Company (Midway) claimed copyright infringement of audiovisual and program copyrights in Midway's "Pac-Man" video game after the defendant had copied the ROM of the game.<sup>167</sup> The *Strohon* court determined that by making subtle changes in the computer program, an author substantially can change an audiovisual display.<sup>168</sup> The district court recognized that by writing an entirely new program that would create an identical audiovisual, a person could infringe the copyright on a video game audiovisual without infringing the copyright on the underlying computer program.<sup>169</sup> The *Strohon* court reasoned that the converse possibility, that a person could infringe the program's copyright but not the audiovisual's copyright, also could occur.<sup>170</sup> The district court found infringement of the computer program copyright because the copied computer program remained substantially similar to the original.<sup>171</sup> The *Strohon* court found, however, that because the defendant substantially had changed the characters and design in the audiovisual display, no infringement of the audiovisual copyright existed.<sup>172</sup> The district court concluded, therefore, that a person

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162. See *id.* (viewing audiovisual displays to determine if infringement of audiovisual copyright occurred).

163. *Id.*

164. See, e.g., *Bally*, 568 F. Supp. at 1281-82 (comparing only screen displays in finding that no audiovisual copyright infringement occurred); *Strohon*, 564 F. Supp. at 746, 749 (distinguishing between audiovisual and program in proving infringement); *Bandai-America*, 546 F. Supp. at 144-45 (finding no audiovisual copyright infringement after comparing video screen similarities); *Midway Mfg. Co. v. Dirkschneider*, 543 F. Supp. 466, 481-83 (D. Neb. 1981) (comparing similarities in game board to prove infringement).

165. 564 F. Supp. 741 (N.D. Ill. 1983).

166. *Id.* at 749.

167. *Id.* at 743-44.

168. *Id.* In *Strohon* the Pac-Man characters on the Pac-Man game audiovisual disappeared completely in the copied version of Pac-Man. *Id.* at 747. The figures in the copied game were block figures. *Id.* The court found no infringement of the audiovisual copyright without the distinctive Pac-Man characters. *Id.*

169. *Id.*

170. *Id.* at 749.

171. *Id.* at 752-53.

172. *Id.* at 748.

could infringe the computer program copyright without infringing the audiovisual copyright.<sup>173</sup>

Although the *Strohon* court found that a party could infringe a computer program copyright without infringing the audiovisual copyright, the Fourth Circuit in *Kramer* held that proof of copying the computer program proved copying of the audiovisual.<sup>174</sup> The *Kramer* court found that audiovisual copyright infringement exists when a plaintiff proves that another party copied the video game's underlying computer program.<sup>175</sup> The Fourth Circuit did not require that any substantial similarity exist between the original and allegedly copied audiovisual works.<sup>176</sup> Although *Kramer* appears to be the only federal circuit court of appeals to address whether direct evidence of copying dismisses the requirement of substantial similarity between video game audiovisuals, other circuit court decisions concerning copyrighted works suggest that to establish copyright infringement, a plaintiff must establish not only that direct copying of an audiovisual display occurred, but that a substantial similarity existed between the original and copied audiovisual displays.<sup>177</sup> For example, in *Universal Athletic Sales Co. v.*

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173. *Id.* at 749.

174. *See Kramer*, 783 F.2d at 445 (copying computer program infringes audiovisual copyright). Like *Kramer* the United States District Court for the Northern District of California considered whether copyright infringement automatically exists when a plaintiff has direct evidence of copying a video game audiovisual. *See Broderbund Software, Inc. v. Unison World, Inc.*, 648 F. Supp. 1127, 1135 (N.D. Cal. 1986). In *Broderbund Software, Inc. v. Unison World, Inc.* the plaintiff, Broderbund Software, Inc. (Broderbund), claimed that the defendant, Unison World, Inc. (Unison), had infringed Broderbund's copyright on the audiovisual of a computer software printing program because Unison had copied the audiovisual's appearance. *Id.* at 1131. In *Broderbund* one of Unison's employees admitted to copying Broderbund's audiovisual. *Id.* at 1135. The court concluded that Broderbund had produced sufficient direct evidence of copying to prove audiovisual copyright infringement. *Id.* The *Broderbund* court, however, then considered whether the original and copied audiovisuals were substantially similar for the purpose of completing the court's record. *Id.* at 1136-37; *see infra* note 177 and accompanying text (discussing substantial similarity).

175. *Kramer*, 783 F.2d at 445.

176. *Id.*

177. *See Universal Athletic Sales Co. v. Salkeld*, 511 F.2d 904, 907 (3d Cir.) (requiring substantial similarity between works for copyright infringement), *cert. denied*, 423 U.S. 863 (1975); *Roth Greeting Cards v. United Card Co.*, 429 F.2d 1106, 1110 (9th Cir. 1970) (substantial similarity must exist between original and copied work to find copyright infringement); *see also Rexnord, Inc. v. Modern Handling Sys., Inc.*, 379 F. Supp. 1190, 1194 (D. Del. 1974) (plaintiff must show actual copying plus substantial and material similarity for copyright infringement).

In establishing proof of direct copying, the Fourth Circuit in *Kramer* correctly determined that the inclusion of "common errors" in the programs of both the original and copied works helps establish proof of direct copying. *See Kramer*, 783 F.2d at 446 (common errors indicative of copying); *see also College Entrance Book Co. v. Amsco Book Co.*, 119 F.2d 874, 875 (2d Cir. 1941) (common errors help show actual copying); *Rexnord, Inc. v. Modern Handling Sys., Inc.*, 379 F. Supp. 1190, 1194 (D. Del. 1974) (common errors show actual copying); 3 M. NIMMER, *supra* note 20, § 13.03[C], at 13-44 (common errors provide substantial proof of actual copying).



*Salkeld*<sup>178</sup> the Third Circuit considered whether the defendant had infringed the plaintiff's copyright on a wall chart.<sup>179</sup> In *Salkeld* the plaintiff alleged that the defendant had copied an exercise chart containing certain designs.<sup>180</sup> The Third Circuit found that to establish copyright infringement, a plaintiff first must prove that the defendant copied the copyrighted work, and then must establish that a substantial similarity existed between the copyrighted work and the copy.<sup>181</sup> Although the *Salkeld* court found that the plaintiff could use a substantial similarity test between the works to assist in proving that the defendant had copied the protected work, the court reasoned that copyright infringement occurs only if the defendant's copying constituted an improper appropriation of the work.<sup>182</sup> The Third Circuit found that although courts should apply a substantial similarity test to allow a plaintiff to prove copying through indirect evidence, a stricter substantial similarity test applies after a finding that copying occurred.<sup>183</sup> The *Salkeld* court concluded that even if direct proof of copying was available, a court should not find copyright infringement unless a substantial similarity existed between copied works.<sup>184</sup>

Because the Fourth Circuit in *Kramer* did not require that a substantial similarity exist between works in copyright infringement actions, *Kramer* creates potential situations in which plaintiffs can win audiovisual copyright infringement actions when no similarities exist between the original and copied audiovisuals.<sup>185</sup> Under the 1976 Act, copyrights protect only the

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178. 511 F.2d 904 (3d Cir.), cert. denied, 423 U.S. 863 (1975).

179. *Id.* at 907-09.

180. *Id.*

181. *Id.* at 907.

182. See *id.* (no infringement unless copying constituted improper appropriation). Courts have determined whether an improper appropriation has resulted from copying a work by considering the immediate reaction of the ordinary person upon seeing the original and copied works. See *id.* (applying ordinary observer test); *Arnstein v. Porter*, 154 F.2d 464, 472-73 (2d Cir. 1946) (improper appropriation tested from viewpoint of ordinary lay person); 3 M. NIMMER, *supra* note 20, § 13.03[E], at 13-46 (describing "audience" or "ordinary observer" test).

183. *Salkeld*, 511 F.2d at 907. In determining whether the defendant had copied the copyrighted work, the *Salkeld* court applied a substantial similarity test in which the court looked to see if an ordinary lay person would find a similarity between the two works. *Id.*; see *supra* note 182 (describing ordinary observer test). After determining that copying existed, however, the *Salkeld* court found that a stricter substantial similarity test would apply to determine if an improper appropriation occurred. *Salkeld*, 511 F.2d at 907. Under the stricter substantial similarity test, the Third Circuit found that a court should dissect works to pinpoint similarities. *Id.* But see *Whelan Assocs., Inc. v. Jaslow Dental Laboratory, Inc.*, 797 F.2d 1222, 1232-33 (3d Cir. 1986) (establishing single merged test for substantial similarity when considering complex copyright issues).

184. See *Salkeld*, 511 F.2d at 907 (requiring substantial similarity between works for copyright infringement).

185. See *Kramer*, 783 F.2d at 445 (failing to require substantial similarity between works in proof requirements for copyright infringement). Compare *Kramer*, 783 F.2d at 445 (direct evidence of copying computer program proves infringement of audiovisual) with *Strohon*, 564 F. Supp. at 749 (copying program will not necessarily cause infringement of audiovisual if even slight changes made in program).

expression of a video game's idea, not the actual idea.<sup>186</sup> Consequently, unless a substantial similarity exists between the original and allegedly copied audiovisuals, no copyright infringement should occur because the allegedly copied audiovisual embodies a new expression of the video game's idea.<sup>187</sup> Authors should not receive copyright protection over another author's new expression of the audiovisual's idea.<sup>188</sup> The *Kramer* court's decision, however, appears to allow findings of copyright infringement when an author has copied only the underlying idea of a video game, rather than the expression of the video game's idea.<sup>189</sup>

In *Kramer* the Fourth Circuit expanded the scope of protection that the video game audiovisual copyright affords a copyright holder to include the underlying computer program to the extent that the program embodied the

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186. *Atari*, 672 F.2d at 615; see *supra* note 1 (discussing rule that only expressions of ideas are copyrightable).

187. See *Atari*, 672 F.2d at 615 (no copyright infringement unless substantial similarity between expression of idea).

188. See *id.* at 615-16 (authors can protect no more than expression of idea).

189. See *Kramer*, 783 F.2d at 445 (expanding methods to prove infringement of audiovisual copyright). The potential hazards resulting from the Fourth Circuit's decision allowing a finding of audiovisual copyright infringement in dissimilar audiovisuals could increase as a result of a recent decision that reduced the proof requirements for establishing infringement of computer program copyrights. See *Whelan*, 797 F.2d at 1237 (reducing proof requirements in computer program copyright infringement case). In *Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc.* the Third Circuit considered whether a finding of copyright infringement in a computer program copyright required that the copied computer program embody the same literal elements as the original program. *Whelan*, 797 F.2d at 1233-34. In *Whelan Associates, Inc. (Whelan)* alleged that the defendant had infringed a computer program copyright by creating a derivative work from Whelan's original program. *Id.* at 1227; see *supra* note 90 (discussing copyrights on derivative works). In establishing similarity between the two programs, the Third Circuit found that a person could infringe a literary work copyright without copying the literary work's literal elements, but could not infringe the copyright merely by copying the plot or plot devices of the literary work. *Whelan*, 797 F.2d at 1237. The *Whelan* court reasoned that because the Copyright Office protects computer programs with literary work copyrights, a person could infringe a computer program copyright without copying the program's literal elements. *Id.* The Third Circuit concluded, therefore, that copying the computer program's overall structure could infringe the computer program copyright. *Id.* The *Whelan* decision illustrates the possibility of inequitable results ensuing from *Kramer*'s finding that proof of program copying establishes audiovisual copyright infringement. See *Kramer*, 783 F.2d at 445-46 (failing to require proof of substantial similarity between audiovisuals in finding copyright infringement). The *Whelan* court eased the proof requirements in finding infringement of a computer program copyright. See *Whelan*, 797 F.2d at 1237 (finding proof of computer program copyright infringement when substantial similarity in overall structure of computer program exists). The Third Circuit allowed a plaintiff to prove program copying when only the programs' overall structures appeared similar. See *id.* The lack of similarity in the underlying literal elements of the program can result in completely dissimilar audiovisuals. See *Strohon*, 564 F. Supp. at 749 (even slight changes in computer program can cause great change in program's output). The *Kramer* decision, however, would allow courts to find audiovisual copyright infringement when even great dissimilarities exist between audiovisuals. See *Kramer*, 783 F.2d at 445 (finding proof of audiovisual copyright infringement upon showing copying of computer program).

expression of the audiovisual.<sup>190</sup> After finding that the audiovisual copyright protected both the audiovisual and computer program, the Fourth Circuit reduced the standards necessary for proving audiovisual copyright infringement by allowing proof of copying the computer program to establish infringement of the audiovisual copyright.<sup>191</sup> In holding that the video game audiovisual copyright protects both the audiovisual and the underlying computer program, the *Kramer* decision conflicts with the Copyright Office's practice of requiring separate copyright registrations in a video game audiovisual and underlying computer program.<sup>192</sup> Because the Fourth Circuit's decision does not affect the Copyright Office's practice of issuing separate copyright registrations on a video game audiovisual and underlying computer program,<sup>193</sup> the Fourth Circuit has created the possibility of increased litigation between holders of video game audiovisual copyrights and holders of computer program copyrights because both copyright holders can claim rights in the computer program.<sup>194</sup> In addition, by extending the protection that the audiovisual copyright provides the audiovisual copyright holder to the underlying computer program, *Kramer* increases substantially the rights of the audiovisual copyright holder to include rights in the computer program.<sup>195</sup> Finally, by reducing the burden of proof that an audiovisual copyright holder must meet to establish infringement of the audiovisual copyright,<sup>196</sup> the *Kramer* decision may allow audiovisual copyright holders to recover for copyright infringement even if the infringing audiovisual is completely dissimilar to the original audiovisual.<sup>197</sup>

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190. *Kramer*, 783 F.2d at 442.

191. *Id.* at 445.

192. See *supra* notes 148-54 and accompanying text (discussing Copyright Office practices regarding separate registration of video game audiovisuals and computer programs).

193. See *supra* note 150 and accompanying text (discussing Copyright Office practices).

194. See *supra* notes 148-54 and accompanying text (discussing problems associated with implementing *Kramer* court's decision extending scope of audiovisual copyright protection).

195. See *supra* notes 156-84 and accompanying text (discussing increased protection that audiovisual copyright holder receives under *Kramer* decision).

196. See *supra* notes 185-89 and accompanying text (discussing *Kramer* court's proof requirements for establishing audiovisual copyright infringement).

197. See *supra* note 189 and accompanying text (making small changes in computer program can result in completely different audiovisual).

### B. Unit Publication: The Evolution of a Doctrine

Under section 401(a) of the Copyright Act of 1976<sup>1</sup> (1976 Act), an author must include notice of copyright on his work.<sup>2</sup> Failure to comply with the statutory requirement may result in release of the work to the public domain.<sup>3</sup> The federal courts must determine the level of compliance with the notice requirement that constitutes sufficient notice.<sup>4</sup> Strict application of the statute results in technical forfeitures, benefit to the copyright infringer, and harm to the copyright holder.<sup>5</sup> In *Koontz v. Jaffarian*,<sup>6</sup> the United States Court of Appeals for the Fourth Circuit applied the concept that other federal courts had recognized as a solution to the resulting inequity of strict statutory interpretation.<sup>7</sup> The Fourth Circuit identified the

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1. Copyright Act of 1976, 17 U.S.C. §§ 101-914 (1982).

2. Copyright Act of 1976, 17 U.S.C. § 401(a)(1982). Section 401(a) requires a visually perceivable notice of copyright on all publicly distributed copies of a work protected under the Copyright Act of 1976 (1976 Act). *Id.* Section 401(b) specifies the requisite form of notice. *Id.* § 401(b). First, notice of copyright must include the letter "c" in a circle, or the word "Copyright", or the abbreviation "Copr.". *Id.* Second, copyright notice must contain the year of the first publication of the item. *Id.* The statute permits omission of the year of publication for a pictorial, graphic, or sculptural work and identifies greeting cards, postcards, stationery, jewelry, dolls and toys as examples of articles not requiring the year of first publication in the copyright notice. *Id.* Finally, for effective notice of copyright, the copyright owner's name or an alternative generally known designation must appear in the notice. *Id.*

Under the 1976 Act, the notice requirement serves four functions. H.R. REP. NO. 1476, 94th Cong., 2d Sess. 143 [hereinafter 1976 HOUSE REPORT], reprinted in 1976 U.S. CODE CONG. & ADMIN. NEWS 5659, 5759. First, the notice of copyright places in the public domain published material that no one wants to copyright. *Id.* Second, the copyright notice informs the public of the copyright status of the work. *Id.* Third, the copyright notice identifies the copyright owner. *Id.* Finally, notice of copyright indicates the date of publication. *Id.*

3. See Copyright Act of 1976, 17 U.S.C. § 405(a) (1982) (specifying effect of omission of copyright on owner). Section 405(a) of the 1976 Act provides for three circumstances in which the copyright holder may not lose the copyright in a work despite the omission of notice from the work. *Id.* For example, the copyright holder will not lose the copyright if only relatively few copies lacked notice, or if registration for the work occurs within five years after publication without notice and the holder makes a reasonable effort to add notice to the distributed copies. *Id.* The copyright will also remain valid if the omission violates an express written agreement that as a condition of the copyright holder's authorization of distribution, the copies would contain notice of copyright. *Id.* The Copyright Act of 1909 contained no similar provision. Copyright Act of 1909, ch.320, 35 Stat. 1075 (1909)(current version at 17 U.S.C. §§ 101-914 (1982)). See *Fleischer Studios, Inc. v. Ralph A. Freundlich, Inc.*, 73 F.2d 276, 277 (2d Cir. 1934)(finding that under 1909 Act, publication without notice waives right to preserve monopoly and results in dedication of work to public); *Smith v. Bartlett*, 18 F. Supp. 35, 37 (D. Me. 1937)(same).

4. See *infra* notes 20-148 and accompanying text (review of cases interpreting and applying notice requirement).

5. See *infra* notes 15-19 and accompanying text (discussing cases that illustrate inequitable results of strict application of statutory notice requirement).

6. 787 F.2d 906 (4th Cir. 1986).

7. *Id.* at 909; See M. NIMMER, A TREATISE ON THE LAW OF LITERARY, MUSICAL AND ARTISTIC PROPERTY, AND THE PROTECTION OF IDEAS § 7.10, at 7-64 to 7-66 (1986) (courts have found that only one notice is necessary for all works in single commercial unit); *infra* notes 22-115 and accompanying text (discussing cases prior to *Koontz v. Jaffarian* applying concept of unit publication).

concept as the doctrine of unit publication.<sup>8</sup> The unit publication doctrine embodies the notion that one notice of copyright gives copyright protection to all component parts of a single commercial unit if the parts are integral or essential to the unit.<sup>9</sup>

The statutory notice requirement has evolved from a strict statutory construction and corresponding strict judicial interpretation of the author's notice requirement to a more lenient standard.<sup>10</sup> For example, a comparison

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8. *Koontz*, 787 F.2d at 909; see *Koontz v. Jaffarian*, 31 PAT. TRADEMARK & COPYRIGHT J. (BNA) 523 (Apr. 17, 1986) (describing procedure and substance of *Koontz*); *Koontz v. Jaffarian*, 30 PAT. TRADEMARK & COPYRIGHT J. (BNA) 121 (June 6, 1985) (describing district court's decision in *Koontz*). Prior to *Koontz v. Jaffarian*, no court had identified expressly the concept of one notice of copyright protecting the elements of a work as the equitable doctrine of unit publication. See *infra* notes 22-115 and accompanying text (discussion of earlier cases applying concept of unit publication). The plaintiff, *Koontz*, presented the doctrine to the district court. *Koontz v. Jaffarian*, 617 F. Supp. 1108, 1112 (E.D. Va. 1985), *aff'd*, 787 F.2d 906 (4th Cir. 1986). The defendant, *Jaffarian*, argued that *Koontz* had fabricated the doctrine of unit publication and that the doctrine had no legal validity. Brief for Richard *Jaffarian Associates, Inc. and Richard Jaffarian, Defendants - Appellants* at 6, *Koontz v. Jaffarian*, 787 F.2d 906 (4th Cir. 1986) (No. 85-1765). *Jaffarian* argued that *Koontz* had concocted the unit publication doctrine to create a cause of action that did not exist. *Id.* at 31. *Jaffarian* noted that *Koontz* had no statutory, case law, or literary support for the unit publication doctrine. *Id.* at 28. *Koontz* countered with case law supporting the concept of the doctrine. Brief for *Dennis W. Koontz and Master Service Co. - Appellees* at 36-39, *Koontz v. Jaffarian*, 787 F.2d 906 (4th Cir. 1986)(No. 85-1765). *Koontz* also argued that the Copyright Office recognized the legal doctrine of unit publication. *Id.* at 41. *Koontz* presented § 1013.15 of the Compendium of Copyright Office Practices as evidence of the Copyright Office's acknowledgement of the doctrine. COMPENDIUM OF COPYRIGHT OFFICE PRACTICES § 1013.15 (1984). Section 1013.15 states that a single notice of copyright is sufficient for a multi-part work if notice is affixed in a manner and location that gives reasonable notice of the copyright claim to the entire unit of publication. *Id.* *Jaffarian* argued that § 1013.15 did not apply for two reasons. Defendant's Brief at 37, *Koontz* (No. 85-1765). First, *Jaffarian* asserted that the components did not have the same publication dates. *Id.* *Jaffarian* also asserted that all of the components did not share the same publisher and in all of the examples in § 1013.15, the components had the same publisher. *Id.* at 38.

The district court conceded that no statutory recognition of the unit publication doctrine exists. *Koontz*, 617 F. Supp. at 1112. The district court also noted that the federal courts had developed a rule that notice of copyright on one element of a publication gives copyright protection to all elements of the publication when the elements of publication are integral or essential to each other. *Id.* The district court adopted the federal courts' rule. *Id.* In affirming the district court's judgment, the Fourth Circuit adopted the district court's reasoning *Koontz*, 787 F.2d at 907-10. Accordingly, the Fourth Circuit recognized the doctrine of unit publication. *Id.* at 909.

9. See *Koontz*, 787 F.2d at 909 (defining and discussing unit publication doctrine).

10. See Act of May 31, 1790, ch. 15, § 3, 1 Stat. 124 (exemplifying strict statutory construction). Although it did not require actual notice on the work, the first federal copyright act required registration and publication of notice of copyright in at least one newspaper for four weeks. *Id.* Subsequently, the Act of April 29, 1802 required placement of the author's name, state of residence, the Act of Congress under which the claim was made, and the date of registration of the claim on either the title page or the following page. Act of Apr. 29, 1802, ch. 36, § 1, 2 Stat. 171, 171. The Act of February 3, 1831 reduced the notice requirement to read: "[e]ntered according to Act of Congress, in the year \_\_\_\_\_, . . . in the clerk's office of the district court of \_\_\_\_\_." Act of Feb. 3, 1831, ch. 16, § 5, 4 Stat. 436, 437. The Acts

of statutory language from the two most recent federal copyright laws illustrates the noticeable shift in attitude in favor of the copyright owner.<sup>11</sup> The Copyright Act of 1909 (1909 Act) set forth strict standards with which the copyright holder had to comply.<sup>12</sup> Failure to include notice of copyright after publication resulted in the work entering the public domain.<sup>13</sup> The

of 1802 and 1831 required notice to be on the face of non-book items. Act of Apr. 29, 1802, ch. 36, § 1, 2 Stat. 171, 171; Act of Feb. 3, 1831, ch. 16, § 5, 4 Stat. 436, 437. The revision in 1870 provided for less severe requirements in the case of a map, chart, musical composition, print, cut, engraving, photograph, painting, drawing, chromo, statue, statuary or model, and a design. Revision of 1870, ch. 230, § 100, 16 Stat. 198, 214. In situations involving less stringent notice requirements, notice could be on some portion of the face or front of the substance upon which the work was mounted. *Id.* The Act of June 18, 1874 introduced the short form notice: "Copyright, 18 \_\_\_\_\_, by A.B.". Act of June 18, 1874, ch. 301, § 1, 18 Stat. 78, 79. The statute continued to require notice on either the title page or the following page of the work. *Id.* The notice requirement on non-literary items became less strict and notice could be on some visible part of the item or on the substance on which the author mounted the item. *Id.* With enactment of the Copyright Act of 1909 (1909 Act), the notice requirement changed. Copyright Act of 1909, ch. 320, 35 Stat. 1075 (1909) (current version at 17 U.S.C. §§ 101-914 (1982)). For periodicals, the author could place notice under the masthead. *Id.* Furthermore, Congress recognized six additional classes of work that did not require inclusion of the year of publication, including maps, photographs, and reproductions of works of art. *Id.* at 1079. In addition, the 1909 Act permitted abbreviation of the copyright holder's name to initials or some other mark, providing that the full name appeared elsewhere on the work. *Id.* The 1976 Act empowers the Register of Copyrights to specify a list of suitable locations for notice of copyright. 1976 HOUSE REPORT, *supra* note 2, at 144. The list is not exhaustive. *Id.* Consequently, notice placed in a manner not specified on the list may be effective if reasonable notice of the copyright claim results. *Id.* The House Report noted that errors or omissions in notice should not cause outright forfeiture. *Id.* Omission of notice does not invalidate a copyright. See Copyright Act of 1976, 17 U.S.C. § 405(a) (1982) (identifying circumstances when omission of notice is not fatal to copyright); *supra* note 2 and accompanying text (discussing statutory notice requirements for 1976 Act); *infra* notes 15-19 and accompanying text (cases demonstrating strict judicial interpretation of notice requirement); *infra* notes 22-148 and accompanying text (cases exemplifying lenient judicial interpretation of notice requirement).

11. See A. LATMAN, *THE COPYRIGHT LAW: HOWELL'S COPYRIGHT LAW REVISED AND THE 1976 ACT* 122 (5th ed. 1979) (asserting that comparison of statutory language reveals shift in congressional attitude toward author). The language of the Act of 1874 reveals congressional disapproval of copyright protection: "No person shall be entitled to a copyright *unless* he shall . . ." Rev. Stat. § 4956 (emphasis added). The corresponding provisions in the Copyright Act of 1909 provide that: "Any person entitled thereto by this Act *may* secure copyright for his work by publication thereof with the notice of copyright required by this Act . . ." Copyright Act of 1909, ch. 320, § 9, 35 Stat. 1075, 1077 (1909) (current version at 17 U.S.C. § 401(a) (1982)) (emphasis added). The Copyright Act of 1976 extends congressional acceptance of copyright to read "Whenever a work protected under this title is published . . . a notice of copyright . . . shall be placed on all publicly distributed copies . . ." Copyright Act of 1976, 17 U.S.C. § 401(a)(1982) (emphasis added); see *infra* notes 12-14 and accompanying text (comparing language of 1909 Act with language of 1976 Act).

12. See Copyright Act of 1909, ch. 320, 35 Stat. 1075 (1909) (current version at 17 U.S.C. §§ 101-914 (1982)) (setting forth statutory standards of compliance with notice requirement); see also *supra* note 10 and accompanying text (discussing notice requirement of 1909 Act).

13. See Copyright Act of 1909, 35 Stat. 1075 (1909) (current version at 17 U.S.C. §§

1976 Act, which supersedes the 1909 Act, includes more lenient provisions regarding omission of notice by providing three circumstances in which the copyright holder could omit notice, yet retain the copyright.<sup>14</sup> Early decisions reflected strict adherence to the notice requirement.<sup>15</sup> For example, in 1903, the United States Supreme Court in *Mifflin v. R.H. White Co.*<sup>16</sup> rejected outright the notion that less than absolute compliance with the statutory notice requirements would suffice.<sup>17</sup> The Supreme Court in *Mifflin* held that the burden of informing the public of a copyright rested entirely with the copyright holder and the public had no duty to look beyond the face of the notice.<sup>18</sup> As a consequence of early legislation and judicial interpretation similar to *Mifflin*, the omission, imperfection, or misplacement of notice could result in the author's work entering the public domain.<sup>19</sup>

The harsh results of strictly construing congressional enactments has prompted some federal courts to apply an equitable remedy to rectify the

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101-914 (1982)); Roth, *Is Notice Necessary? An Analysis of the Notice Provisions of the Copyright Law Revision*, 27 COPYRIGHT L. SYMP. (ASCAP) 245 (1982) (discussing effect of publication without notice of copyright under 1909 Act).

14. See *supra* note 3 and accompanying text (describing procedures in 1976 Act to avoid invalidation of copyright). The 1976 Act applies to causes of action accruing after January 1, 1978. Copyright Act of 1976, 17 U.S.C. § 101 (1982).

15. See, e.g., *Booth v. Haggard*, 184 F.2d 470, 471 (8th Cir. 1950)(notice of copyright invalid due to placement on third page instead of first or second page); *Deward & Rich, Inc. v. Bristol Sav. & Loan Co.*, 34 F. Supp. 345, 348 (W.D. Va. 1940), *aff'd*, 120 F.2d 537, 540 (4th Cir. 1941)(finding use of encircled "C" insufficient when statute required either "Copyright" or "Copyr."); *United Thrift Plan, Inc. v. National Thrift Plan, Inc.*, 34 F.2d 300, 302 (E.D.N.Y. 1929)(notice on back of 10-page booklet invalid due to improper placement); *Freeman v. The Trade Register, Inc.*, 173 F. 419, 425 (W.D. Wash. 1909)(copyright holder has no cause of action for admitted copying due to court's finding that page on which notice appeared is not title page); *J.A. Richards, Inc. v. New York Post*, 23 F. Supp. 619, 620 (S.D.N.Y. 1938)(finding that explicit statutory provisions render notice on back cover of book insufficient). See generally A. LATMAN, *supra* note 11, at 134 (discussing severity of 1909 Act).

16. 190 U.S. 260 (1903).

17. *Mifflin v. R.H. White Co.*, 190 U.S. 260, 264 (1903). In *Mifflin v. R.H. White Co.*, Houghton, Mifflin & Company, acting as the assignees of Oliver Wendell Holmes (Holmes), brought an action against the R.H. White Company for violation of the copyright on Holmes' "Professor at the Breakfast Table". *Id.* at 260. The publishers of the *Atlantic Monthly* magazine, Ticknor & Fields, reproduced Holmes' work in ten sections over ten months. *Id.* at 261. Ticknor & Fields registered a copyright for the *Atlantic Monthly* in the name of Ticknor & Fields. *Id.* at 263. Oliver Wendell Holmes registered a copyright for "Professor at the Breakfast Table" in his own name. *Id.*

In applying the Copyright Act of 1831, the Court reasoned that the object of copyright notice is to warn the public against republishing a specific book by a specific author or holder of the copyright. *Id.* at 264. The *Mifflin* Court found that the two notices revealed different titles and different copyright owners. *Id.* Further, the *Mifflin* Court rejected the argument that notice is sufficient if the public recognizes that someone owns a copyright. *Id.* The Supreme Court concluded that because the right to copyright protection is statutory, the public may demand that the holder comply with the precise statutory guidelines to obtain the copyright. *Id.*

18. *Mifflin*, 190 U.S. at 264.

19. See *supra* note 15 and accompanying text (cases illustrating strict statutory interpretation).

otherwise severe consequences to the copyright owner resulting from insufficient notice.<sup>20</sup> Specifically, federal courts have applied the concept of the unit publication doctrine when strict construction of the statutory notice requirement would produce an unjust outcome.<sup>21</sup> For example, in 1913 the United States Court of Appeals for the Eighth Circuit in *Lydiard-Peterson Co. v. Woodman*,<sup>22</sup> considered the issue of intentional copyright infringement.<sup>23</sup> In *Woodman*, Woodman had created a directory and a map of the property surrounding Lake Minnetonka, Minnesota.<sup>24</sup> The map, which fit in the front pocket of the directory, referenced figures explained in the directory.<sup>25</sup> The directory and the map contained notices of copyright, but only the copyright in the directory was valid.<sup>26</sup> The Lydiard-Peterson Company reproduced, printed and sold the map.<sup>27</sup> In upholding the strict notice guidelines of the Act of 1874, the Eighth Circuit maintained that certain vital information was missing from the notice on the map and, therefore, the notice on the map was invalid.<sup>28</sup> Next, the *Woodman* court developed an equitable theory to preserve Woodman's copyright in the map-directory.<sup>29</sup> The Eighth Circuit found that the map-directory constituted one publication

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20. See *Coventry Ware, Inc. v. Reliance Picture Frame Co.*, 288 F.2d 193, 195 (2d Cir.) (finding notice of copyright sufficient if positioned to notify anyone seeking to copy work), cert. denied, 368 U.S. 818 (1961); *Trifari, Krussman & Fishel, Inc. v. B. Steinberg-Kaslo Co.*, 144 F. Supp. 577, 581 (S.D.N.Y. 1956) (holding that insubstantial variations from statutory requirements will not relinquish copyright holder's rights). See generally A. LATMAN, supra note 11, at 122 (noting development of judicial tolerance to immaterial errors regarding notice).

21. See *infra* notes 22-115 and accompanying text (discussion of cases applying unit publication doctrine).

22. 204 F. 921 (8th Cir. 1913).

23. *Id.* An intentional copyright infringer is one who copies a work with knowledge of copyright protection on the item. See *Uneeda Doll Co. v. Goldfarb Novelty Co.*, 373 F.2d 851, 854 (2d Cir. 1967) (court found defendant to be an intentional infringer when infringer was aware of copyright on work), cert. dismissed, 389 U.S. 801 (1967).

24. *Woodman*, 204 F. at 923.

25. *Id.*

26. See *id.* at 924 (finding valid copyright notice on directory only); see also *infra* note 28 and accompanying text (explaining why Eighth Circuit in *Lydiard-Peterson Co. v. Woodman* found notice on map invalid).

27. *Woodman*, 204 F. at 922.

28. *Id.* at 924 (determining that notices on map were insufficient). In *Lydiard-Peterson Co. v. Woodman*, the map contained two separate attempts at copyright notice. *Id.* at 923. The first attempt appeared as "Woodman's Minnetonka Map-Directory. Copyright 1908. Drawn by J.C. Woodman" on the map. *Id.* Next, "Published by Woodman Publishing Co., 841 Lumber Exchange Building, Minneapolis, Minn. Red figures refer to Index Book with ten special books. Price including book, \$3.00 postpaid" also appeared on the map. *Id.* The Eighth Circuit held that the notices on the map were insufficient because Prentiss M. Woodman, the author of the copyrighted work, and J.C. Woodman, the draftsman of the map, lived in the same city and shared the same business address. *Id.* at 924. Consequently, the Eighth Circuit concluded that the "Woodman" referenced in the notices would imply J.C. Woodman, the draftsman, when Prentiss M. Woodman was the actual holder of the copyright. *Id.*

29. See *infra* notes 30-31 and accompanying text (discussing *Woodman* court's application of equitable theory to preserve copyright).



and that notice on the directory was sufficient for the publication.<sup>30</sup>

In identifying the map-directory as one publication, the Eighth Circuit found that the directory was integral to the map.<sup>31</sup> Examination of the facts indicates that the *Woodman* court struggled to find the directory integral to the map.<sup>32</sup> *Woodman* published one thousand maps and five hundred directories.<sup>33</sup> Five hundred extra maps were published without a directory.<sup>34</sup> The map was useful without the directory and therefore, the directory was not integral to the map.<sup>35</sup> Although the language of the Act of 1874 set out strict notice requirements, the Eighth Circuit reasoned around the notice requirements by applying the concept of unit publication.<sup>36</sup>

Congress adjusted the Act of 1874 notice requirement in the 1909 Act to allow for alternative notice provisions for specified items.<sup>37</sup> In 1937 the United States Court of Appeals for the Second Circuit considered the sufficiency of notice under the 1909 Act in *Patterson v. Century Productions, Inc.*<sup>38</sup> *Patterson* compiled eight reels of African wild animal footage to create a motion picture.<sup>39</sup> *Patterson* placed a notice of copyright on the first reel of film only.<sup>40</sup> The defendant obtained and duplicated the film and used a portion of the film in another motion picture.<sup>41</sup> The defendant argued that because notice of copyright did not appear on each reel of film, the notice of copyright was invalid.<sup>42</sup> Stating that the film was separated into eight parts for convenience in handling, the Second Circuit reasoned that *Patterson* copyrighted all eight reels as a unit and that a single notice of copyright protected the unit.<sup>43</sup> The *Patterson* court held that a single

30. *Woodman*, 204 F. at 924 (finding hyphenated word "map-directory" on map and directory as evidence that one is incomplete without other).

31. *Id.*

32. *See supra* notes 24-27 and accompanying text (discussing facts of *Lydiard-Peterson Co. v. Woodman*); *infra* notes 33-35 and accompanying text (same).

33. *Woodman*, 204 F. at 925.

34. *Id.*

35. *Id.* The Eighth Circuit in *Lydiard-Peterson Co. v. Woodman* chose not to address the discrepancy in the number of maps and directories. *Id.* Instead, the *Woodman* court declared that the parties had agreed to address only the issue of notice and were unable to address other issues on appeal. *Id.* The *Woodman* court further justified avoiding the discrepancy issue by declaring that the district court already had decided the issue. *Id.*

36. *See supra* notes 22-30 and accompanying text (describing *Woodman* court's application of unit publication doctrine).

37. *See supra* note 10 and accompanying text (discussing development of copyright law).

38. 93 F.2d 489 (2d Cir. 1937), *cert. denied*, 303 U.S. 655 (1938).

39. *See id.* at 491 (*Patterson* filmed wild animals for motion picture called *Shooting Big Game With A Camera*).

40. *See id.* (notice of copyright read "Copyright 1928 by F.B. Patterson, Pres. of National Cash Register Co.").

41. *See id.* (defendant incorporated copied footage into motion picture called *The Jungle Killer*).

42. *Id.* at 493.

43. *See id.* (finding single notice of copyright sufficient). The court in *Patterson v. Century Products, Inc.* stated that absent express statutory provisions requiring notice of copyright on every reel, one notice of copyright satisfied the notice requirement for all eight reels. *Id.*

notice of copyright would suffice as notice for the eight reels of film.<sup>44</sup> The Second Circuit noted, however, that Patterson had presented fewer than all eight reels at a showing.<sup>45</sup> The Second Circuit's opinion suggests that two facts were damaging to the copier's position.<sup>46</sup> First, the original owner, Patterson, was showing the films as a non-profit activity to religious, social, and educational organizations.<sup>47</sup> Condoning intentional infringement by requiring notice on all eight films would contravene the public policy of promoting charitable activity.<sup>48</sup> Next, when the copier acquired a copy of the entire film, he saw but disregarded the copyright notice.<sup>49</sup> The copier, therefore, intentionally infringed Patterson's copyright.<sup>50</sup> If the Second Circuit rigidly had applied the notice requirement of the 1909 Act, the film would have entered the public domain.<sup>51</sup> Although the 1909 Act set out strict provisions, the Second Circuit circumvented the provisions by applying the equitable theory of unit publication.<sup>52</sup>

In 1958 the Second Circuit modified again the strict statutory requirements in another case of intentional copyright infringement.<sup>53</sup> In *Boucher v. Du Boyes, Inc.*,<sup>54</sup> Du Boyes copied earrings that Boucher had designed and copyrighted.<sup>55</sup> The copier argued that both earrings in a pair had to contain a notice of copyright because one earring was useful separately as an ornament or clip.<sup>56</sup> The Second Circuit rejected the argument and stated that earrings are sold in a pair, as a unit, and simply because earrings might be useful separately, earrings are not separate works of art.<sup>57</sup> The Second Circuit, therefore, concluded that each earring did not require individual notice.<sup>58</sup> *Boucher* exemplifies the federal courts' willingness to apply the concept of unit publication when the work consists of identical components.<sup>59</sup>

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44. *Id.*

45. *Id.* at 491.

46. See *infra* notes 47-50 and accompanying text (examining facts damaging to infringer in *Patterson v. Century Products, Inc.*).

47. *Patterson*, 93 F.2d at 491.

48. See *supra* note 20 and accompanying text (discussing application of equitable remedy to guard against unjust results).

49. See *id.* (*Patterson* court implied that defendant copied plaintiff's film with knowledge of copyright).

50. *Id.*; see *supra* note 23 and accompanying text (defining intentional infringer).

51. See *supra* note 11 and accompanying text (discussing strict notice requirements under 1909 Act).

52. See *supra* notes 37-44 and accompanying text (discussing Second Circuit's application of unit publication doctrine to achieve equitable result).

53. See *infra* notes 54-59 and accompanying text (discussing modification of 1909 Act notice requirement in *Boucher v. Du Boyes, Inc.*).

54. 253 F.2d 948 (2d Cir.), cert. denied, 357 U.S. 936 (1958).

55. *Id.* at 949.

56. *Id.*

57. *Id.*

58. *Id.*

59. *Id.* The Second Circuit in *Boucher v. Du Boyes* awarded additional attorney's fees to the plaintiff due to the deliberate nature of the infringement and the lack of merit to the defendant's issues on appeal. *Id.* at 950. See *supra* notes 57-58 and accompanying text (illustrating *Boucher* court's equitable interpretation of 1909 Act).

Another interpretation of the notice requirement in the 1909 Act arose in 1959 when the United States District Court for the Southern District of New York considered the sufficiency of notice of a work composed of physically connected elements.<sup>60</sup> In *Scarves By Vera, Inc. v. United Merchants and Manufacturers, Inc.*,<sup>61</sup> the copyright owner, Scarves By Vera, Inc., manufactured three designs as prints for women's blouses.<sup>62</sup> Each blouse included two imprints of the same design, one imprint on the front and one imprint on the back.<sup>63</sup> In upholding the copyright holder's claim of infringement, the United States District Court for the Southern District of New York reasoned that two copies of the same design on a shirt were a unit and that one notice sufficed to protect the whole shirt.<sup>64</sup> The district court's decision in *Scarves By Vera* supported the post-1909 Act movement away from the notice requirement on each repetition of a copyrighted design.<sup>65</sup>

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60. See *infra* notes 61-65 and accompanying text (discussing application of unit publication doctrine when work comprises physically connected parts); cf. *Koontz v. Jaffarian*, 617 F. Supp. 1108, 1112 (E.D. Va. 1985) (noting that unit publication also applies in cases involving no physical connection of components), *aff'd*, 787 F.2d 906 (4th Cir. 1986).

61. 173 F. Supp. 625 (S.D.N.Y. 1959).

62. *Id.* at 627.

63. *Id.* at 628.

64. See *id.* (discussing sufficiency of one notice of copyright to protect shirt with two design imprints). The court in *Scarves By Vera, Inc. v. United Merchants and Manufacturers, Inc.* maintained that a notice reading "Vera" accompanied by an encircled "C" did not render notice invalid even though the Copyright Act of 1909 required the full name of the copyright holder, "Scarves By Vera, Inc.". *Id.*; see Copyright Act of 1909, ch. 320, § 18, 35 Stat. 1075, 1079 (1909) (current version at 17 U.S.C. § 401(b)(3) (1982)) (requiring full name of copyright holder to appear on accessible portion of work). In upholding the abbreviated copyright notice, the *Scarves By Vera* court reasoned that the plaintiff was a large and well-established leader in the field of women's clothes and that the abbreviated form of the company's name would not mislead an innocent person. *Scarves By Vera*, 173 F. Supp. at 628. Further, the district court found that the abbreviated notice of copyright constituted substantial compliance with the statutory requirement. *Id.*

Notice of copyright appeared on a cardboard hangtag attached to the shirt and on a woven label sewn into the side of the shirt. *Id.* at 627-28. The district court found that the hangtag did not meet the statutory notice requirement. *Id.* at 628. The *Scarves By Vera* court found, however, that the label sewn into a side seam was valid, although not sewn on the neck or other obvious place, because the placement was sufficiently obvious to notify anyone looking for a copyright. *Id.*

65. See *Scarves By Vera*, 173 F. Supp. at 628 (determining that single notice satisfactory for work bearing two imprints of same design); cf. *DeJonge & Co. v. Breuker & Kessler Co.*, 235 U.S. 33, 36-37 (1914) (finding that notice was required on each repetition of design on gift wrapping paper); *H.M. Kolbe Co. v. Armagus Textile Co.*, 315 F.2d 70, 72 n.2 (2d Cir. 1963) (distinguishing *DeJonge* on grounds that composite design at issue in *Kolbe*, consisting of alternating inversions of design, depended upon arrangement of figures on fabric and only required single notice). Commentators suggest that the distinction claimed by the *Kolbe* court may be artificial. M. NIMMER, *supra* note 7, at § 7.10[D]. The *Kolbe* court offered no rationale for finding that the work in *DeJonge* was a repetition of the design while the work in *Kolbe* was a single design. See *Kolbe*, 315 F.2d at 73 (failing to explain factual difference between design in *Kolbe* and *DeJonge*); see M. NIMMER, *supra* note 7, at 7-63 (discussing difficulty in distinguishing *Kolbe* and *DeJonge*).

Subsequent to the *Scarves By Vera* determination that a single notice suffices for physically connected components of a work, the federal courts continued to extend the liberalization of the 1909 Act notice requirement.<sup>66</sup> The United States District Court for the Southern District of California in *Doran v. Sunset House Distributing Corp.*<sup>67</sup> considered the sufficiency of copyright notice in an instance when non-identical elements physically connect to form the entire unit.<sup>68</sup> Doran brought an action for copyright infringement against the defendants.<sup>69</sup> Doran claimed ownership to the copyright to a three dimensional Santa Claus figure with three component parts consisting of the hood, the torso and the tunic.<sup>70</sup> The *Doran* court reasoned that without any one of the components, the unit could not serve the intended purpose as a Christmas decoration.<sup>71</sup> The *Doran* court, therefore, concluded that notice of copyright on the hood of a Santa Claus figure served as sufficient notice for the three component parts of the figure.<sup>72</sup>

In *Royalty Designs, Inc. v. Thriftcheck Service Corp.*,<sup>73</sup> the United States District Court for the Southern District of New York considered the validity of notice in another instance of physically attached component parts.<sup>74</sup> In *Royalty Designs*, the plaintiff manufactured and sold plastic molded coin banks shaped like dogs.<sup>75</sup> Upon finding that defendant's coin banks were copies, the *Royalty Designs* court determined that the plug on the bottom of the bank, on which the copyright appeared, was an essential part of the bank and without it, the bank could not serve the intended purpose of storing money.<sup>76</sup> The *Royalty Designs* court concluded that notice of copyright on the plug was adequate notice for the bank.<sup>77</sup> The

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66. See *infra* notes 67-72 and accompanying text (discussing liberalization of notice requirement in *Doran v. Sunset House Distrib. Corp.*).

67. 197 F. Supp. 940 (S.D. Cal. 1961), *aff'd*, 304 F.2d 251 (9th Cir. 1962).

68. *Id.* at 945-47.

69. *Id.* at 942.

70. *Id.* at 943. In *Doran v. Sunset House Distrib. Corp.*, both the plaintiff's and the defendants' Santa Claus figures were virtually identical and sold in similar packaging. *Id.* at 943. Furthermore, the first shipment of defendant's version contained an instruction sheet bearing plaintiff's name. *Id.* Defendant's model sold for less than plaintiff's model. *Id.*

71. *Id.* at 947 (noting that Doran sold components as unit and components were not useful individually).

72. *Id.*

73. 204 F. Supp. 702 (S.D.N.Y. 1962).

74. *Id.* at 704.

75. *Id.* at 703. On both of the plaintiff's coin banks in question in *Royalty Designs, Inc. v. Thriftcheck Service Corp.*, notice of copyright was on the metal plug that fit into the bottom of the bank. *Id.*

76. See *id.* at 704 (finding that metal stopper was essential component of banks). In *Royalty Designs*, Thriftcheck Service Corporation argued that Royalty Designs, Incorporated had improperly affixed notice of copyright to the banks. *Id.* The *Royalty Designs* court rejected the defendant's argument and found that the stopper fit securely into the hole on the bottom of the bank and was removable only by prying the stopper out of the bank. *Id.*

77. *Id.*

federal court decisions in *Scarves By Vera, Doran, and Royalty Designs* exemplify strong arguments in favor of allowing a single notice of copyright to suffice for a unit in which all of the elements are joined physically.<sup>78</sup>

In 1967, after the *Scarves By Vera, Doran and Royalty Designs* courts had broadened the notice requirement to permit a single notice to suffice for a work consisting of physically joined parts, the United States Court of Appeals for the Second Circuit further expanded the scope of the copyright notice requirement.<sup>79</sup> In *Uneeda Doll Co. v. Goldfarb Novelty Co.*,<sup>80</sup> the Second Circuit considered whether the combination of two notices of copyright represented substantial compliance with the notice requirement under the 1909 Act.<sup>81</sup> In *Uneeda Doll*, the Goldfarb Novelty Company (Goldfarb Novelty) copied Uneeda Doll Company's (Uneeda Doll) three and one half inch doll and sold the copied dolls in Walgreen Eastern Company's stores (Walgreen).<sup>82</sup> Uneeda Doll had placed an abbreviated notice of copyright on the doll's foot and a full notice of copyright on the container in which the manufacturer packaged the doll.<sup>83</sup> Uneeda Doll moved to enjoin Goldfarb Novelty and Walgreen from infringing the copyright on the doll.<sup>84</sup> The United States District Court for the Eastern District of New York found that the defendants intentionally had infringed the copyright on Uneeda Doll's toy doll and that the defendant's continued activity presented a threat of irreparable injury to Uneeda Doll.<sup>85</sup> The district court refused to grant injunctive relief, however, because, with the abbreviated notice on the doll's foot and the full notice on the package, Uneeda Doll had failed to comply with the notice provisions under the 1909 Act.<sup>86</sup> On appeal, the Second Circuit appraised the two notices of copyright and determined that when considered together, the two notices provided sufficient notice to inform innocent persons, those lacking an intent to infringe, of the existence of the copyright.<sup>87</sup> The Second Circuit determined that the container in which the manufacturer packaged the doll was the keeping place for the doll and, accordingly, the purchaser would not discard the

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78. See *supra* notes 60-77 and accompanying text (*Scarves By Vera, Doran, and Royalty Designs* courts finding that one notice was sufficient when all elements of unit were joined physically).

79. See *infra* notes 80-93 and accompanying text (presenting further expansion of copyright notice requirement).

80. 373 F.2d 851 (2d Cir. 1967).

81. *Id.* at 853.

82. *Id.* at 852-53.

83. *Id.* at 853.

84. *Id.* at 852.

85. *Id.*

86. *Id.*

87. See *id.* at 852-53 (considering sufficiency of combination of two notices of copyright). In *Uneeda Doll Co. v. Goldfarb Novelty Co.*, the copyright notice on the doll's foot read "U.D. Co. Inc. © 1965". *Id.* at 853. A notice on the cardboard container read "© Uneeda Doll Co., Inc. 1966". *Id.*

container.<sup>88</sup> The incomplete notice on the doll's foot satisfied the notice requirement when read in conjunction with the copyright notice on the cardboard container.<sup>89</sup> The Second Circuit reasoned that the notice of copyright on the container was sufficient because the container is the substance on which the manufacturer mounted the dolls and, accordingly, complied with the statutory provision.<sup>90</sup> The *Uneeda Doll* court further noted that a notice of copyright longer than the short form of notice could disfigure the three and one half inch doll.<sup>91</sup> Finally, the Second Circuit held that the claim of insufficient notice was not available to the willful infringer.<sup>92</sup> The Second Circuit stretched the boundary of the statutory notice requirement to find that an abbreviated notice of copyright on the work constituted adequate compliance under the 1909 Act when read in conjunction with the full notice of copyright on the cardboard container packaging the work.<sup>93</sup>

The level of sufficient notice under the 1909 Act was interpreted even more broadly by the United States Court of Appeals for the Sixth Circuit in 1974.<sup>94</sup> In *Monogram Models, Inc. v. Industro Motive Corp.*<sup>95</sup>, the Sixth Circuit considered the sufficiency of notice of copyright for an item when no notice appeared anywhere on the item.<sup>96</sup> Monogram Models, Incorporated (Monogram Models) brought an infringement action against Industro Motive Corporation (Industro Motive) for copyright infringement of two model airplane kits.<sup>97</sup> Monogram Models had placed notice of copyright on the

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88. *Id.* at 853. In *Uneeda Doll Co. v. Goldfarb Novelty Co.*, the package containing the doll consisted of cardboard with a three-sided transparent plastic window. *Id.* The *Uneeda Doll* court determined that the package was the "keeping place" for the doll. *Id.*

89. *Id.*

90. *See id.* (finding that statutory notice requirement was satisfied). As provided in section 18 of the Copyright Act of 1909, notice of copyright may appear on the substance on which the author mounts the work. *Id.*; see Copyright Act of 1909, ch. 320, § 18, 35 Stat. 1075, 1079 (1909)(current version at 17 U.S.C. § 401(c) (1982)). In *Uneeda Doll Co. v. Goldfarb Novelty Co.*, the United States Court of Appeals for the Second Circuit determined that the package on which the notice of copyright appeared was the substance on which the Uneeda Doll Company mounted the dolls. *Uneeda Doll*, 373 F.2d at 853.

91. *Id.*; see H.R. REP. No. 2222, 60th Cong., 2d Sess. 1909 (providing for short form of notice of copyright to avoid disfigurement of work); *supra* note 10 (describing statutory short form provision).

92. *Uneeda Doll*, 373 F.2d at 854; see *supra* note 85 and accompanying text (*Uneeda Doll* court finding intentional infringement); *Dan Kasoff, Inc. v. Novelty Jewelry Co.*, 309 F.2d 745, 746 (2d Cir. 1962) (willful infringer cannot claim insufficiency of notice); *National Comics Publications v. Fawcett Publications*, 191 F.2d 594, 601 (2d Cir. 1951) (same); *supra* note 23 (defining intentional infringer).

93. See *supra* notes 79-92 and accompanying text (discussing innovative application of unit publication doctrine in *Uneeda Doll*).

94. See *Monogram Models, Inc. v. Industro Motive Corp.*, 492 F.2d 1281, 1284-85 (6th Cir.) (liberal interpretation of 1909 Act), *cert. denied*, 419 U.S. 843 (1974); see also *infra* notes 96-102 and accompanying text (discussing *Monogram Models*).

95. 492 F.2d 1281 (6th Cir. 1974), *cert. denied*, 419 U.S. 843 (1974).

96. *Id.* at 1282-85.

97. *Id.* at 1282.

boxes and on the instruction sheets of the kits.<sup>98</sup> Industro Motive argued that Monogram Models' notice of copyright was invalid.<sup>99</sup> The *Monogram Models* court disagreed and concluded that notice of copyright need not appear on each of the parts of a plastic model airplane kit.<sup>100</sup> Having determined that Industro Motive had stolen Monogram Models' designs, the Sixth Circuit found that copyright notice on the container and instruction sheet was sufficient for the entire kit because the box and instructions were integral parts of the model airplanes.<sup>101</sup>

The *Uneeda Doll* and *Monogram Models* decisions upholding the sufficiency of copyright notice are contrary to the cases finding that notice on a sales flyer or a cardboard hangtag is insufficient.<sup>102</sup> The *Uneeda Doll* court found that the cardboard package was the keeping place for the doll.<sup>103</sup> The *Monogram Models* court found that the instruction sheet and cardboard box was part of the model airplane kit.<sup>104</sup> Arguably, the notice on the box in *Uneeda Doll* and the notice on the box and instruction sheet in *Monogram Models* were detachable and discardable.<sup>105</sup> In the cases finding that notice on a flyer or hangtag was insufficient, the federal courts have reasoned that the purchaser will discard the flyer or hangtag and consequently, discard the notice of copyright.<sup>106</sup> For example, in *Shapiro & Sons Bedspread Corp. v. Royal Mills Associates*,<sup>107</sup> Shapiro & Sons Bedspread Corporation (Shapiro) claimed that Royal Mills Associates (Royal Mills) had copied a bedspread fabric pattern to which Shapiro owned the copy-

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98. *Id.* at 1284. One of the two model airplanes in question in *Monogram Models, Inc. v. Industro Motive Corp.* contained notice of copyright on the inside of a wing part, but the notice was not visible after assembly. *Id.*

99. *Id.* Industro Motive contended that Monogram Model's notice of copyright on the container boxes and instruction sheets did not comply with the requirement in the 1909 Act that notice must be affixed to each copy. *Id.* at 1284. Copyright Act of 1909, ch. 320, § 9, 35 Stat. 1075, 1077 (1909) (current version at 17 U.S.C. § (1982).

100. *Id.* at 1285.

101. *Id.* at 1284.

102. See *infra* notes 103-10 and accompanying text (discussing insufficiency of notice on sales flyers and cardboard hangtags); *supra* note 64 (discussing insufficiency of cardboard tag).

103. *Uneeda Doll*, 373 F.2d at 853. See *supra* note 88 (discussing package as keeping place for doll).

104. *Monogram Models*, 492 F.2d at 1285.

105. See *supra* note 7, at 7.10[C], at 7-62 to 7-62.1 (wrapper or container on which notice appeared is discardable); *supra* notes 80-101 and accompanying text (discussing placement of notice of copyright in *Uneeda Doll* and *Monogram Models*); *infra* notes 111-15 and accompanying text (same).

106. See *Shapiro & Son Bedspread Corp. v. Royal Mills Assoc.*, 568 F. Supp. 972, 975 (S.D.N.Y. 1983)(sales flyer enclosed with bedspread is not integral part of bedspread because purchaser disregards flyer when unwrapping bedspread); *Scarves By Vera*, 173 F. Supp. at 628 (stating that hangtag bearing notice falls short of statutory requirement); *Trifari, Krussman & Fishel, Inc. v. B. Steinberg-Kaslo Co.*, 144 F. Supp. 577, 582 (S.D.N.Y. 1956)(same); *supra* note 64 and accompanying text (discussing copyright notice in *Scarves By Vera*); see also M. NIMMER, *supra* note 7, at 7-61 to 7-62.1 (examining cases involving detachable tags).

107. 568 F. Supp. 972 (S.D.N.Y. 1983).

right.<sup>108</sup> Shapiro argued that notice of copyright on the sales flyer enclosed with the bedspread was sufficient.<sup>109</sup> The United States District Court for the Southern District of New York rejected Shapiro's argument, holding that notice on a flyer was ineffective because the sales flyer is not an integral part of the bedspread, and the purchaser discards the flyer when unwrapping the bedspread.<sup>110</sup> Applying the *Shapiro* court's reasoning to the facts in *Monogram Models* and *Uneeda Doll* produces a different outcome than that which resulted in the two cases.<sup>111</sup> Rather than finding that the purchaser would discard the doll's container, the *Uneeda Doll* court claimed that a box was a "keeping place" for a doll.<sup>112</sup> Similarly, the *Monogram Models* court claimed that a cardboard box and instruction sheet were integral to a model airplane.<sup>113</sup> As the *Monogram Models* court stated, the copyright notices on the model airplane instruction sheet and container were apparent to anyone looking for the documentation of notice.<sup>114</sup> By applying to the copyright holder a standard of substantial compliance, the *Uneeda Doll* and *Monogram Models* courts tailored the facts to comply with the 1909 Act.<sup>115</sup>

The United States Court of Appeals for the Fourth Circuit observed a similarity between the relationship of the instruction sheet to the model airplane in *Monogram Models* and the relationship of the user manual to the computer software in *Koontz v. Jaffarian*<sup>116</sup> to apply the unit publication doctrine under the 1976 Act.<sup>117</sup> In *Koontz*, plaintiff Koontz published and copyrighted a manual containing data used in preparing electrical contracting bids.<sup>118</sup> The Hewlett-Packard Company (H-P) agreed with Koontz that H-P

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108. *Id.* at 974.

109. *Id.* at 974.

110. *Id.* at 975-76.

111. Compare *Shapiro*, 568 F. Supp. at 975-76 (sales flyer integral part of bedspread) with *Monogram Models*, 492 F.2d at 1284 (cardboard box and instruction sheet are part of airplane kit) and *Uneeda Doll*, 373 F.2d at 853 (cardboard container is doll's keeping place); see *supra* notes 102-10 and accompanying text (discussion of reasoning behind insufficiency of notice on sales flyer).

112. *Uneeda Doll*, 373 F.2d at 853; see *supra* notes 79-93 and accompanying text (presenting *Uneeda Doll* court's reasoning).

113. *Monogram Models*, 492 F.2d at 1284; *supra* notes 94-101 and accompanying text (discussion of *Monogram Models* court's reasoning).

114. *Monogram Models*, 492 F.2d at 1285.

115. See *supra* notes 79-101 and accompanying text (discussion of *Uneeda Doll* and *Monogram Models* courts' equitable construction of statutory notice requirement).

116. 787 F.2d 906 (4th Cir. 1986).

117. See *Koontz*, 787 F.2d at 909 (for all intents and purposes, manual is instruction sheet for software); *Monogram Models*, 492 F.2d at 1284 (instruction sheets are integral parts of model airplane kit); *infra* notes 118-38 and accompanying text (discussing *Koontz*); *supra* notes 2-3 and accompanying text (discussing 1976 Act).

118. *Koontz*, 787 F.2d at 907. In *Koontz v. Jaffarian*, the copyrighted manual contained a comprehensive data compilation of the price of over 57,000 items used in electrical construction and the time required for installation of the items. *Id.* Koontz revised the manual three times and copyrighted the manual with each revision. *Id.* at 908.



would compensate Koontz if he would help H-P develop a computer program to replicate the electrical estimating system.<sup>119</sup> Koontz agreed to supply his manual as part of the system.<sup>120</sup> The electrical estimating program and an abbreviated version of the extensive data compilation were stored on magnetic tape.<sup>121</sup> The program and data compilation on tape provided the user with an estimate that required decoding with Koontz' manual.<sup>122</sup> The magnetic tape, the program, and the data contained no notice of copyright.<sup>123</sup> When the estimating package failed to market successfully, Koontz' relationship with H-P terminated.<sup>124</sup> Koontz subsequently formed a joint venture with Glen Labbie, a codefendant, to improve and update the package.<sup>125</sup> The updated version included notice of copyright on the manual but not on the tape.<sup>126</sup> Jaffarian, Koontz' former employee, and Labbie separated from Koontz and, by copying Koontz' compiled data from the magnetic tape, they developed another electrical estimating package.<sup>127</sup> Koontz brought an action against Jaffarian and Labbie for copyright infringement charging that the defendants had violated Koontz' copyright protection by copying the data compilation.<sup>128</sup>

In affirming the decision of the United States District Court for the Eastern District of Virginia that Koontz' copyright was valid and that Labbie and Jaffarian had infringed upon the copyright, the Fourth Circuit adopted the doctrine of unit publication.<sup>129</sup> The Fourth Circuit explained that the purpose of copyright notice is to protect innocent infringers.<sup>130</sup> Because both Jaffarian and Labbie knew that Koontz had created the data compilation, the Fourth Circuit could justify applying the unit publication doctrine.<sup>131</sup>

In adopting the unit publication doctrine, the Fourth Circuit embraced the district court's reasoning.<sup>132</sup> First, the Fourth Circuit observed that the

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119. *Id.* at 907. In *Koontz v. Jaffarian*, Koontz agreed to provide the mathematical algorithms and the data compilations used to develop the electrical estimates. *Id.* Hewlett-Packard agreed to develop a computer program to simulate Koontz' manual system. *Id.*

120. *Id.*

121. *Id.*

122. *Id.* at 908. In *Koontz v. Jaffarian*, the data compilation on the magnetic tape appeared as code numbers and abbreviated descriptions because of the limited storage capacity on the tapes. *Koontz v. Jaffarian*, 617 F. Supp. 1108, 1111 (E.D. Va. 1985). The Koontz manual contained the necessary conversion charts. *Id.*

123. *Koontz*, 617 F. Supp. at 1112.

124. *Koontz*, 787 F.2d at 908.

125. *Id.*

126. *Id.*

127. *Id.* In *Koontz v. Jaffarian*, the data compilation was accessible to any user and a user could print out the entire data compilation. *Koontz*, 617 F. Supp. at 1111.

128. *Koontz*, 787 F.2d at 908.

129. *See id.* at 909 (Fourth Circuit adopting unit publication doctrine).

130. *Id.*

131. *See id.* at 909 (*Koontz* court considers wrongful intent of infringer).

132. *See infra* notes 133-37 and accompanying text (discussing Fourth Circuit's adoption of district court's reasoning).

manual and the software were available as a unit.<sup>133</sup> Furthermore, the Fourth Circuit indicated that although a purchaser could buy the manual without the software, the purchaser could not buy the software without the manual.<sup>134</sup> Finally, the Fourth Circuit noted that the average customer could not use the software without the manual.<sup>135</sup> Borrowing language from *Monogram Models*, the *Koontz* court reasoned that the manual was the instruction sheet for the software and like the instruction sheet in *Monogram Models*, which was integral to the model airplane kit, the user manual was integral to the programming package in *Koontz*.<sup>136</sup> Finally, the Fourth Circuit noted that the purpose of the notice requirement, which is to protect innocent infringers, was not furthered in *Koontz* because the infringers were aware of the source of the data compilation.<sup>137</sup> The unit publication doctrine provided the Fourth Circuit with a rationale to construe liberally the notice requirement and reach an equitable judgement.<sup>138</sup>

Although the doctrine of unit publication resulted in a fair outcome in *Koontz*, the doctrine has a limited application to the sufficiency of notice issue presented in *Koontz*.<sup>139</sup> The Fourth Circuit applied the doctrine of unit publication to a circumstance in which the computer program was dependant upon the user manual for operation.<sup>140</sup> Specifically, in *Koontz* the user manual was necessary to decode the abbreviated information on the screen.<sup>141</sup> Not all computer programs, however, depend on a decoding manual for operation.<sup>142</sup> Many programs assist the user through optional assistance, menus, or tutorials.<sup>143</sup> The Fourth Circuit noted that the average user required the manual

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133. See *Koontz*, 787 F.2d at 907-08 (*Koontz* court refers to program and data compilation as software). Technically, computer software includes programs, procedures, documents and the user manual. P. BURTON, A DICTIONARY OF MINICOMPUTING AND MICROCOMPUTING 2133.10 (1982); J. ROSENBERG, DICTIONARY OF COMPUTERS 163 (1984). The Fourth Circuit in *Koontz v. Jaffarian* refers to computer software and the user manual as distinct items. See *Koontz*, 787 F.2d at 908 (claiming that customer could calculate estimate with manual and software).

134. *Koontz*, 787 F.2d at 909.

135. *Id.*

136. See *id.* (characterizing manual as instruction sheet for program); see *Monogram Models*, 492 F.2d at 1284 (finding that instruction sheet was integral part of model airplane kit).

137. *Koontz*, 787 F.2d at 909.

138. See *supra* notes 118-28 and accompanying text (discussion of facts in *Koontz*); *supra* notes 22-115 and accompanying text (cases applying concept of unit publication to avoid unjust outcome).

139. See *infra* notes 140-48 and accompanying text (discussing limitations to unit publication doctrine in copyright protection of computer programs and user manuals).

140. See *Koontz*, 787 F.2d at 909 (applying doctrine of unit publication when computer program depended on user manual).

141. See *id.* (finding that average customer could not use electrical estimating software without user manual); *supra* notes 134-36 and accompanying text (describing dependency of computer program on user manual); *infra* notes 142-48 and accompanying text (same).

142. See *infra* note 143 (examples of computer programs operable without decoding manuals); cf. *supra* notes 134-36 and accompanying text (examining dependence of computer program and user manual in *Koontz*).

143. See LOTUS DEVELOPMENT CORPORATION, LOTUS 1-2-3 (1984) (example of menu-driven program); WORDPERFECT CORPORATION, WORDPERFECT (1985) (same).

to use the program.<sup>144</sup> The *Koontz* court relied on the user's dependency on the manual to find that notice on the magnetic tape was sufficient.<sup>145</sup> Further, alternative commercial manuals are available for the often-used, more popular programs.<sup>146</sup> The optional commercial manuals effectively sever any dependency that a user may have for the manual.<sup>147</sup> The Fourth Circuit thus applied the unit publication doctrine in *Koontz* because of the unique fact that the operation of the program depended solely upon translation from the manual.<sup>148</sup>

Since the decision of the United States District Court for the Eastern District of Virginia in *Koontz*, but prior to the Fourth Circuit's affirmation of the decision in March of 1986, one commentator suggested the doctrine of unit publication as a solution to another computer law issue.<sup>149</sup> The doctrine was a proposed answer to the confusion created by the dual requirement of registering an audiovisual work copyright on the computer screen display and of registering a literary work copyright on the computer instructions.<sup>150</sup> One proponent of a single copyright requirement maintains that a reasonable person would assume that one copyright covers the unit, including the screen display and the computer instructions.<sup>151</sup> The commentator's proposed application of the recently recognized doctrine of unit publication demonstrates that the doctrine has potential use in the technologically sophisticated area of computer law.<sup>152</sup>

The trend toward a notice requirement more favorable to the copyright holder results from a changing view by courts of the purpose that a notice requirement should serve.<sup>153</sup> Historically, courts have justified the notice

144. *Koontz*, 787 F.2d at 909.

145. See *id.* (average customer required manual to operate program).

146. See SAVARES, USING LOTUS 1-2-3 (1985)(commercially available user's guide for software); HEISER, MASTERING DBASE 2 THE EASY WAY (1984)(same).

147. See *supra* note 146 and accompanying text (exemplifying commercial substitutes for user manuals).

148. *Koontz*, 787 F.2d at 909; see *supra* notes 134-36 and accompanying text (explaining why computer program dependant on user manual in *Koontz*).

149. See Note, *Defining the Scope of Copyright Protection for Computer Software*, 38 STAN. L. REV. 497, 499 (1986) (suggesting unit publication doctrine as answer to questions raised by copyright of computer programs).

150. See *id.* at 530 (copyright on computer instructions does not protect screen displays). The Copyright Act of 1976 defines a literary work as "words, numbers, or other verbal or numerical symbols or indicia". 17 U.S.C. § 101 (1982). Under the 1976 Act, an audiovisual work comprises a "series of related images . . . together with accompanying sounds, if any". *Id.*

151. Note, *Defining the Scope of Copyright Protection of Computer Software*, *supra* note 149, at 531. One commentator notes that courts and commentators incorrectly assume that a copyright on the computer instructions protects against infringement of screen displays. *Id.* (citing *Whelan Assocs., Inc. v. Jaslow Dental Laboratory*, 609 F. Supp. 1307 (E.D. Pa. 1985); Comment, *Proving Copyright Infringement of Computer Software: An Analytical Framework*, 18 LOY. L.A.L. REV. 919, 942, 945 (1985)).

152. See *supra* notes 149-51 and accompanying text (discussing commentator's application of doctrine of unit publication in computer law).

153. See *infra* notes 154-63 and accompanying text (discussing changing goal of copyright notice requirement).

requirement in two ways.<sup>154</sup> First, the copyright grants to its holder certain exclusive rights.<sup>155</sup> Congress looks unfavorably upon the rights as hindering competition and as granting a monopoly in favor of the copyright holder.<sup>156</sup> Consequently, courts have demanded strict compliance with the statutory notice requirement.<sup>157</sup> Specifically, the holder of the copyright must comply with strict regulations in order to retain the exclusive rights.<sup>158</sup> The monopoly theory explains the outcome of earlier decisions that strictly applied the notice requirements.<sup>159</sup>

A second and still developing theory explaining the notice requirement is that the notice of copyright should prevent infringement by innocent parties.<sup>160</sup> The innocent infringer rationale emphasizes the reasonableness of notice rather than strict compliance because the copyright notice must only inform the public of copyright protection.<sup>161</sup> Under the innocent infringer rationale, the copyright holder complies with a more liberal notice requirement, and the goal of informing the innocent infringer endures.<sup>162</sup> The innocent infringer theory of the statutory notice requirement supports the courts' application of the doctrine of unit publication.<sup>163</sup>

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154. See *infra* notes 155-63 and accompanying text (discussion of justifications for notice requirement). Some observers suggest abolishing the copyright notice requirement. See Roth, *supra*, note 13, at 245 (recommending abolishment of notice requirement). Opponents of the notice requirement argue that the notice requirement causes unjust forfeitures and are ambiguous and impractical. *Id.* at 261, 273, & 274.

155. See *Mifflin v. R.H. White Co.*, 190 U.S. 260, 263 (1903) (discussing rights granted to copyright holder).

156. See *id.* (Supreme Court suggesting congressional disapproval of exclusive rights created by copyright). *But see* *Thompson v. Hubbard*, 131 U.S. 123, 151 (1889) (noting that copyright holder does not have monopoly because of issuance of copyright but instead copyright statute determines his rights); *Merrell v. Tice*, 104 U.S. 557, 561 (1881) (same).

157. See *supra* notes 15-19 and accompanying text (cases illustrating strict interpretation of statutory notice requirement).

158. See *supra* note 2 and accompanying text (discussing statutory notice requirements).

159. See Defendant's Brief at 35, *Koontz* (No. 85-1765) (copyright holder must comply with strict statutory requirements to hold monopoly on his work); *supra* notes 15-19 and accompanying text (discussing earlier cases strictly applying notice requirement).

160. See *Monogram Models*, 492 F.2d at 1285 (determining that purpose of notice requirement is to advise public of copyright and to prevent innocent persons from accidental infringement); *Uneeda Doll*, 373 F.2d at 852 (same); *Fleischer Studios, Inc. v. Ralph A. Freundlich, Inc.*, 73 F.2d 276, 277 (2d Cir. 1934) (same), *cert. denied*, 294 U.S. 717 (1935); *Koontz v. Jaffarian*, 617 F. Supp. 1108, 1112 (E.D. Va. 1985) (same); *Doran v. Sunset House Distrib. Corp.*, 197 F. Supp. 940, 946 (S.D. Cal. 1961) (same); *Trifari, Krussman & Fishel, Inc. v. B. Steinberg-Kaslo Co.*, 144 F. Supp. 577, 581 (S.D.N.Y. 1956) (same).

161. See *supra* notes 10-138 and accompanying text (examining trend toward reasonable construction of statutory notice requirement).

162. See *supra* notes 2-3 and accompanying text (1976 Act contains more liberal notice requirement than 1909 Act); *supra* notes 22-138 and accompanying text (precedent for proposition that intent of notice requirement is to protect innocent infringers).

163. See *supra* notes 160-62 and accompanying text (discussing goal of notice requirement as protecting innocent infringer).