DIGITAL IMAGE PROCESSING: COPYRIGHT INFRINGEMENT ANALYSIS AFTER *ACUFF-ROSE*

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I. INTRODUCTION

The digital revolution is proceeding so rapidly that it now touches almost every facet of life. The domain of art is no exception. With digital samplers, musicians now can use preexisting works to play any instrument they want, in any style, at any tempo and key, and in combination with any set of other sounds and instruments they desire.[1] Digital imaging technologies provide visual artists analogous creative powers.[2] As with so many other technological contexts, copyright policies are having a hard time adjusting to the new technological realities of artistic creativity.[3] To date, much of the legal scholarship dealing with the interface of new technologies and traditional

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1 *See, e.g.,* Robert Tomsho, As *Sampling Revolutionizes Recording, Debate Grows Over Aesthetics, Copyrights,* WALL St. J., Nov. 5, 1990, at Bl.

2 *See, e.g.,* Lyndsay Simpson, *The Lying Eye,* GOOD WEEKEND, July 31, 1993, at 18; Michael Karol, *Elvis Lives!,* GRAPHICS ARTS MONTHLY, Aug. 1991, at 68; Michael W. Miller, *High-Tech Alterations of Sights and Sounds Divides the Arts World,* WALL St. J., Sept. 1, 1987, at Al.

3. The controversy over copyright protection for computer software and user interfaces provides the most pertinent example. *See, e.g.,* Lotus Dev. Corp. v. Borland Intl., Inc., 49 F.3d 807 (1st Cir. 1995); Computer Associates Intern., Inc. v. Altai, Inc., 982 F.2d 693 (2d Cir. 1992); Whelan Assoc, v. Jaslow Dental Lab., 797 F.2d 1222 (3d Cir.

art forms have focused on the propriety of using digital audio samplers.[4] However, it seems likely that with the impending revolution in multimedia technologies, the most substantial and widespread legal issues soon will involve digital imaging.[5] The recent move by Kodak to heighten the importance of its digital imaging unit and to enter alliances with computer firms, such as Apple, clearly illustrates the momentum that is building in this arena.[6]

Digital imaging raises a wide spectrum of legal and ethical issues. Copyright infringement, the topic of this article, may be the most important, but it certainly is not the sole domain of concern. Digital imaging challenges traditional notions that photographs depict reality. This leads to problems in several fields. For instance, in the judicial system, one now must question the evidentiary weight that should be accorded photographs and videos.[7] Likewise, journalists must be concerned with the accuracy of the pictures they publish.[8] On a related front, digital imaging can be used to change the context within which people are perceived. This may pose issues regarding defamation, and involving privacy and publicity rights.[9] Digital

1986); Apple Computer, Inc. v. Microsoft Corp. and Hewlett-Packard Co., 799 F. Supp. 1006 (N.D. Cal. 1992), *aff'd in part, rev'd in part,* Apple Computer, Inc. v. Microsoft Corp., 35 F.3d 1345 (9th Cir. 1994); Lotus Dev. Corp., v. Paperback Software Intern., 740 F. Supp 37 (D. Mass. 1990). Other areas in which technology has strained traditional copyright doctrines include decompilation of computer programs, the use of video cassette recorders and the introduction of digital audio tape.

4. *See, e.g.,* Jeffrey H. Brown, *They Don't Make Music the* Way *They Used To: The Legal Implications of Sampling in Contemporary Music,* 1992 Wise. L. REV. 1941; Thomas C. Moglovkin. *Original Digital: No More Free Samples,* 64 S. CAL. L. REV. 135 (1990); Bryam, *Digital Sound Sampling and a Federal Right of Publicity: Is It Live or Is It Macintosh?,* 10 COMPUTER L. J. 365 (1990); Bruce McGiverin, *Digital Sound Sampling, Copyright and Publicity: Protecting Against the Electronic Appropriation of Sounds,* 87 COLUM. L. REV. 1723 (1987).

5 *See, e.g.,* Suzanne Muchnic, *In Cyberspace, Can Anyone Really Appreciate Art?,* L. A. TIMES, Apr. 3,1994, at Calendar 5.

6 Wendy Bounds, *Kodak to Ask Computer Firms for Alliances,* WALL St. J., Mar. 29, 1994, at A3.

7 *See* Don E. Tomlinson, *One Technological Step Forward and Two Legal Steps Back: Digitalization and Television Newspictures As Evidence and As Libel,* 9 LOYOLA Ent. L. J. 237(1989).

8 *See, e.g.,* Simpson, *supra* note 2, at 18; Karol, *supra* note 2 at 68; Katz, *Why Pictures Lie,* ESQUIRE, June, 1990, at 93, Clare Ansberry, *Alterations of Photos Raise Host of Legal, Ethical Issues,* WALL St. J., Jan. 26, 1989, at Bl; Stewart Brand, Kevin Kelly & Jay Kinney, *Digital Retouching: The End of Photography as Evidence of Anything,* WHOLE EARTH REVIEW, July 1985, at 42.

9 *See* Don E. Tomlinson & Christopher R. Harris, *Free-Lance Photojournalism in a Digital World: Copyright, Lanham Act and Droit Moral Considerations Plus a Sui Generis Solution,* 45 FED. COMM. L. J. 1, 3 (Dec. 1992); Carlos Hamann, *She's Merely*

imaging also can raise trademark-type issues, as for example, when an altered product is attributed to the original artist.[10]

Although all of the these concerns are important and interesting, recent events in the legal landscape make this a particularly compelling time to focus on copyright infringement and digital imaging. One set of developments involve digital technologies and the so-called information superhighway. In 1993, President Clinton formed the Information Infrastructure Task Force to articulate how government and private industry might foster information flows in a digital environment. Pursuant to this objective, a working group on intellectual property rights issued a draft report in 1994.[11] Not surprisingly, copyright infringement issues were the dominant theme of this document. Appearing almost in lock-step with this effort have been an increasing set of judicial decisions dealing with copyright infringements in a digitized environment.[12] As will be shown, some of these have particular relevance to digital imaging practices.

Another pertinent feature is the relatively recent incorporation of moral rights principles into the copyright laws of the United States. In 1988 the United States joined the Berne Convention for the Protection of Literary and Artistic Works, the dominant international copyright multilateral agreement which requires, among other things, that member countries protect certain moral rights in addition to economic rights.[13] Although the initial package of legislation that implemented the Berne Convention in the United States had no provisions explicitly dealing with moral rights, the Copyright Act was amended by the Visual Artists Rights Act of 1990[14] to protect certain

Saying They Showed More of Her Than the Law Allows, WALL St. J., July 20, 1992, at Bl. *Cf.* McGiverin, *supra* note 4, at 1738-1743 (explaining the implications of digital audio sampling to the rights of publicity).

10 *See* Tomlinson & Harris, id. at 32-40.

11 *Intellectual Property and the National Information Infrastructure, A Preliminary Draft of the Report of the Working Group on Intellectual Property Rights,* July 1994 (hereinafter IITF WORKING GROUP REPORT). The report may be found on the World Wide Web at http://www.uspto.gov/niip.html.

12 *See, e.g.,* Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992); Computer Associates Intern., Inc. v. Altai, Inc., 982 F.2d 693 (2d Cir. 1992); Advanced Computer Services of Michigan, Inc. v. MAI Systems Corp., 845 F. Supp 356 (E.D. Va. 1994); Playboy Enterprises, Inc. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993); Apple Computer, Inc. v. Microsoft Corp. and Hewlett-Packard Co., 799 F. Supp. 1006 (N.D. Cal. 1992), *aff'd in part, rev'd in part,* Apple Computer, Inc. v. Microsoft Corp., 35 F.3d 1345 (9th Cir. 1994); Cubby, Inc. v. CompuServe, 776 F. Supp. 135 (S.D. N.Y. 1991).

13 Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, 102 Stat. 2853 (1988) (codified in scattered sections of 17 U.S.C.).

14 Visual Artists Rights Act of 1990, Pub. L. No. 101-650, 104 Stat. 5128 (1991) (codified in scattered sections of 17 U.S.C.).

noneconomic personal interests in limited edition works of visual arts. Since those engaged in digital imaging utilize preexisting visual works in their activities, they naturally must be concerned with the range and extent of these new forms of protection. In addition, ratification by the United States of GATT's Uruguay Round in December of 1994 enhances the possibilities that moral rights will be the subject of further review in this country in the future. This prospect is not mandated since the protection of moral rights was specifically excluded from the GATT treaty, primarily at the behest of the United States which was not yet prepared to adopt stronger provisions.[15] However, one might expect the United States to incrementally close the moral rights gap between it and most of its trading partners as time passes. Thus, there soon may be even more reasons for those involved with digital imaging in the United States to pay attention to this long ignored dimension of copyright infringement.

The Supreme Court's opinion in *Campbell v. Acuff-Rose, Incorporated*[16] potentially may prove to be the most important recent development regarding copyright infringement with digital imaging. This decision received substantial attention in the press, mainly because it involved a rap version of a well-known song written by the beloved artist, Roy Orbison. Nonetheless, the Supreme Court was sharply criticized by former solicitor general Kenneth Starr for spending its scarce time and resources on this case while avoiding several issues which he believed had much more important and widespread business consequences.[17] This evaluation about *Acuff-Rose* may have been short-sighted, however. As new technologies have challenged customary notions of copyright, courts have found it increasingly necessary to resolve copyright disputes through the equitable principles of fair use.[18] As shall be seen, this is no less the case with digital imaging. Since the central focus of *Acuff-Rose* was fair use, any clarification that the Supreme Court might provide to this doctrine could have substantial business ramifications to multi- media technologies. Yet, the timing and importance of *Acuff-Rose* to digital imaging is especially compelling. That the appellate court decision in *Acuff-Rose* was not sympathetic to the fair use defense in the closely related field of music, of course, was troublesome for digi

[15] *See* ANNUAL REPORT OF THE SECTION OF PATENT, TRADEMARK & COPYRIGHT LAW (American Bar Association) 1991-1992, at 416.

[16] 114 S. Ct. 1164 (1994).

[17] Kenneth Starr, *Supreme Court Needs a Management Revolt,* WALL ST. J., Oct. 13, 1993, at A23.

[18] *See, e.g.,* Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417 (1984); Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992).

tal imaging, in and of itself.[19] However, *Acuff-Rose* also came on the heels of *Rogers v. Koons*[20], an appellate court decision dealing directly with the visual arts that seemed to limit the applicability of the fair use defense in that context as well. Thus, the environment in the lower courts could not be viewed as overly hospitable to many potential uses of digital imaging devices. *Acuff-Rose,* therefore, had the potential to allay or solidify many of the fears raised by these appellate decisions for those involved in digital imaging.

This article discusses the principles of copyright infringement in the United States that are pertinent to those engaged in digital imaging. There is first a short discussion of digital imaging technology. Next, the article considers the rights bestowed on images by the federal copyright laws. This section examines the economic rights provided by the Copyright Act, and raises the topic of moral rights, a concept that is increasing in importance in the United States and which recently received limited explicit recognition under the federal law. This component also reviews how fair use qualifies economic and moral rights, and discusses how *Acuff-Rose* clarified several fair use issues. The article then examines the infringement issues. This analysis begins with a review of ownership rights, and then moves into the ways digital imaging might violate the specific rights granted by copyright to images. The treatment of infringement demonstrates the importance of fair use to digital imaging, and explains how fair use, based on the Supreme Court's *Acuff-Rose* decision, might serve to protect some of the ways that this technology is used.

II. BASICS OF DIGITAL IMAGING

At the most abstract level, one engages in digital imaging by inputting pictures into a computer, altering the images and then displaying or printing them. The first step is to input an image into the computer in a form that the computer can manipulate. There are essentially two ways of accomplishing this task. The most prevalent method is to use drum or flatbed scanning devices to translate an image depicted on a tangible medium, such as paper, into digital form. These scanners divide the image into thousands of small square areas, called pixels, and assign numerical values to each pixel that represent each particular region's color and other visual characteristics. The entire photo, thereby, is translated into a large array of

19. Acuff-Rose Music, Inc. v. Campbell, 972 F.2d 1429 (6th Cir. 1992).

[20] 960 F.2d 301 (2d Cir. 1992).

digital pixel information which then can be transferred into the random access memory ("RAM") of a computer. These scanning devices can retrieve the information from numerous types of sources, including standard photographs, negatives, paper and canvass.

The other method that is now becoming more prevalent avoids scanning from a *hard copy* altogether. For instance, there now are digital filmless cameras which store photographic information on video floppy diskettes rather than on film.[21] This analog information then may be translated into digital pixel data using on-board analog/digital converters. Once the information is digitized, it then is in a form that can be read by a computer system. In addition, the digital information can be transmitted over standard phone or cable lines, or over the air, using satellite or microwave technologies. In this way, a photographer could take a picture and send it halfway around the world to a computer system of a magazine editor without ever having printed out a hard copy of the work.[22]

Once an image is digitized and stored in the RAM of a computer system, the sky is the limit. Through the computer, an operator can manipulate the digitized information to change the shape, color, focus, lighting and density of the image, and to seamlessly merge it with other images and data.[23] At any time, the altered image may be saved in a more permanent storage medium, such as a hard or floppy diskette. It also may be "printed" on hard copy media such as paper or film using any of wide range of sophisticated color output devices that are now available. In addition, the digitally manipulated image may be uploaded on bulletin boards for others to view. Finally, the digital information embodying the new work may be transmitted to different sites where it then can be stored, used, and even altered more extensively in those locations.

The power of digital imaging is extraordinary, and it likely will rapidly revolutionize the art and business of photography.[24] Popular attention has already been aroused by such instances as *Time's* alteration of O.J. Simpson's appearance for a cover page, and by a picture of Tonya Harding practicing next to Nancy Kerrigan, when the two had not yet appeared on the ice together.[28] With digital imaging, one

[21] *See* Sean Callahan, *Eye Tech,* Forbes ASAP, June 7,1993, at 57.

[22] *See* Tomlinson & Harris, *supra* note 9, at 10.

[23] *See, e.g.,* David A. Kaplan, Anthony Duignan-Cabrera & Lynda Wright, *Lights! Action! Disk Drives!,* NEWSWEEK, July 22,1991, at 54.

24.See, e.g., Tomlinson & Harris, *supra* note 9, at 2-11; John Gastineau, *Bent Fish: Issues of Ownership and Infringement in Digitally Processed Images,* 67 INDIANA L. J. 95, 97-103 (1991); Karol, *supra* note 8, at 68.

[25] *See* Brand, Kelly & Kinney, *supra* note 8, at 42.

can engage in almost unlimited forms of creativity. Now one can merge portions of preexisting images, so as to make it appear, for example, that flying saucers are swooping into a well-recognized intersection of San Francisco.[26] With digital imaging, an artist can make a social statement, by perhaps fusing an image of a computer with wheels and having it *drive* down a highway which has the word *information* written on it. The pallet can be even further expanded since it is possible to merge pre-existing images with computer generated graphics. And, of course, all of this can be put into motion through successive video tape frames, as movies such as *Terminator 11* aptly demonstrate.[27]

For the analytical purposes of this article, it is useful to divide the rationales for digital imaging into three broad categories. One objective is associated with artistic movements that are derived from the cultures of postmodernism, such as Dadaism and Cubism.[28] The goal here is to take images out of their expected contexts and present them in new forms, media, locations and in novel combinations. By changing the context of images, these artists allegedly force members of society to question the unconscious meanings they assign to everyday objects. Postmodern art forms, therefore, appropriate images from mass culture to criticize the fundamental perceptions on which society is based.[29] Although the appropriated images may be the object of derision, these artists often are motivated by a broader goal to comment on an aspect of society at large.[30]

Another set of artists employ digital imaging simply to make beautiful or exciting new images. Some unspoken social purpose is not the objective of this class of artists. Rather, beauty and novelty are the driving forces. A final category of persons who use digital imaging technologies do so more for technical than artistic reasons. These typically involve those engaged in editing functions, such as cropping and highlighting. As this article will demonstrate, the categorization of one's objective for digital imaging affects the likelihood that the use will be deemed infringing.

[26] This photo appeared on the cover of the WHOLE EARTH REVIEW in July of 1985.

[27] Kaplan, Duignan-Cabrera & Wright, *supra* note 23, at 54.

[28] For thorough discussions of the history and purposes of post-modern art movements, *see, e.g.,* E. Kenley Ames, Note, *Beyond Rogers v. Koons. A Fair Use Standard for Appropriation,* 93 COLUM. L. REV. 1473 (1993); Lynne A. Greenberg, *The Art of Appropriation: Puppies, Piracy and Post-Modernism,* 11 CARDOZO ARTS & ENT. L. J. 1 (1992); Patricia Krieg, Note, *Copyright, Free Speech and the Visual Arts,* 93 YALE L. J. 1565 (1984). *See also* Margot Mifflin, *Media: A Collage Revolution,* WALL ST. J., Dec. 31, 1993; Rogers v. Koons, 960 F.2d 301, 309 (2d Cir. 1992).

[29] Ames, *supra* note 28, at 1477-1483.

[30] *Id.* at 1500.

III. Federal Copyright Protection for Images

A. Expressions versus Ideas

Copyright protects the expression in a visual image, but not the ideas.[31] An artist, for instance, who paints a scene in oil based pastels of a couple lounging under the sun on the beach will enjoy substantial protection. Indeed, almost every element of the painting is pro- tectible expression, including the choice of colors, materials and brush strokes, the placement of objects, and the appearances of the couples.[32] However, the artist cannot go so far as to prevent anyone seeing the picture from creating a scene with a couple relaxing on the beach. This likely would be considered the basic idea of the painting, and would not be susceptible to copyright protection.[33] In addition, the painter could not prevent others from developing images that use the natural or publicly available objects depicted in the painting, such as the sun.[34] Rather, the painter's rights only extend to the creative ways these objects are expressed, as for instance, with their orientations, forms and colors.

[31] Copyright subsists in original works of authorship fixed in any tangible medium of expression from which they can be perceived, reproduced or otherwise communicated either directly of with the aid of a machine. 17 U.S.C. § 102(a) (1988). This covers digital images as long as they are considered fixed under the terms of the Act. To be fixed, the work must be sufficiently permanent or stable to permit it to be perceived reproduced or otherwise communicated for a period of more than transitory duration. *Id.* at § 101. Clearly, a digital image stored in a permanent storage device qualifies. Even a digital image stored only in RAM might meet this standard. *See generally* Advanced Computer Services of Michigan, Inc. v. MAI Systems Corp., 845 F. Supp. 356, 363 (E.D. Va. 1994).

[32] *See, e.g.,* Burrows-Giles Lithographic Co. v. Sarony, 111 U.S. 53 (1884); Time, Inc. v. Bernard Geis Assoc., 293 F. Supp. 130 (S.D.N.Y. 1968).

[33] Ideas are not protected by copyright. 17 U.S.C. § 102(b) (1988). Distinguishing the idea from the expression in a literary work is *ad hoc.* As Judge Learned Hand stated, the expressions and ideas of literary works may be discerned according to a spectrum of abstractions, ranging from the very general to the very specific; according to Judge Hand, "Nobody has ever been able to fix the boundary, and nobody ever can." Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930). The same difficulties are no less real with pictorial and graphic works.

34.Natural objects are "discoveries" which may not be protected by copyright. 17 U.S.C. § 102(b) (1988). Publicly available expressions, by definition, are free for public use unless they have been protected by copyright. If the publicly available articles are protected by copyright, then there may be limitations on the ability to use them in visual works of art without permission. However, publicly visible architectural works that are protected by copyright may be used in paintings, photographs and other forms of pictorial representations without permission. 17 U.S.C. § 120 (1988).

Since photographs are treated no differently than the painting, a photographer could stage the scene with the couple on the beach and then shoot pictures using a conventional or digital camera. The choices of colors for the swimsuits and towels, the placement of the subjects, the colors achieved through filters, and the visual effects created by the selection of the lens all may be protected as expressions through copyright.[35] What is sometimes troublesome about photographs is that they may totally embody subject matter provided by nature. This does not mean, however, that the nature photograph is devoid of copyright protection. Indeed, nature photographs embody a host of creative attributes conceived by the photographer, such as composition, filtering, depth-of-field and exposure. Thus, one could not lawfully copy a nature photograph without permission. On the other hand, the nature photographer cannot stop another photographer from taking pictures of the same natural elements. The photographer does not own the natural items displayed in the photograph, only the way he or she *interpreted* them.

B. Economic Rights

Copyright provides visual artists with numerous economic rights in their creative expressions. The most important is the exclusive right to reproduce the image in copies.[36] Thus, any person who makes a copy of the protected expressions in a copyrighted visual image infringes the right of reproduction. This right is not limited simply to exact replications, however. It also covers situations wherein the new piece contains expression that to the normal viewing audience appears substantially similar to the expression in the original.[37] As will be discussed further with infringement, substantial similarity may be based on the quantity of the expression that is duplicated, or the qualitative importance of the material.[38]

[35] Time, Inc. v. Bernard Geis Assoc., 293 F. Supp. 130 (S.D.N.Y. 1968).

[36]17 U.S.C. § 106(1) (1988).

[37] *See, e.g.,* Computer Associates Intern., Inc. v. Altai, Inc., 982 F.2d 693 (2d Cir. 1992); Horgan v. MacMillan Inc., 789 F.2d 157 (2d Cir. 1986); Roth Greeting Cards v. United Card Co., 429 F.2d 1106 (9th Cir. 1970); Sid & Marty Krofft Television v. McDonald's Corp., 562 F.2d 1157 (9th Cir. 1977); Lotus Dev. Corp., v. Paperback Software Intern., 740 F. Supp 37 (D. Mass. 1990).

[38] *See, e.g.,* Whelan Assoc, v. Jaslow Dental Lab., 797 F.2d 1222 (3d Cir. 1986); Atari, Inc. v. North American Phillips Consumer Electronics Corp., 672 F.2d 607 (7th Cir.), *cert, denied,* 459 U.S. 880 (1982).

Federal copyright law provides a copyright owner the exclusive right to prepare derivative works based on the protected work.[39] A derivative work is a product based upon one or more preexisting pieces.[40] Regarding visual images, all conceivable ways that the protected expression can be recast, transformed or adapted are derivative works.[41] A potentially troublesome aspect for digital image processing arises from a plausible interpretation of the definition of derivative work. Some have argued that one need only incorporate portions of the protected work in another piece to make a derivative work.[42] Taking this position to an extreme, a work thereby would be derivative if it incorporated one pixel of information from a preexisting work. Such an interpretation would condemn all unapproved forms of digital image processing since the practice relies on the use, and therefore incorporation, of preexisting works. Fortunately for those engaged in digital image processing, such a strict interpretation has not prevailed in the courts; rather, courts have held that a work is derivative only if it constitutes a reproduction of the original.[43] In other words, a work is derivative only if it is substantially similar to the copyrighted piece, either in quantitative or qualitative terms.[44] When considering potential infringements from digital processing, therefore, the derivative right is no more of an impediment than the right to make reproductions in copies. This does not mean that the derivative right is meaningless to those involved with digital imaging, however. For instance, one may be granted permission by the copyright owner to make reproductions, that is, to create substantially similar pieces by digital methods. Such new works may embody significant creative additions and alterations worthy of copyright protection. Without the right to make derivative works, however, the individual using digital imaging will not be able to own any independent copyright privileges in the newly developed creative expressions. Rather, these rights will belong to the original artist by virtue of the right to make derivative works. Thus, one who plans to make reproductions using digital imaging should obtain reproduction and derivative rights from the preexisting work's artist if there is an expectation that substantial creative effort will go into the development of the new piece.

[39]17 U.S.C.§ 106(2X1988).

[40] Jd. at § 101.

41. *Id.*

[42] This argument was made in Litchfield v. Spielberg, 736 F.2d 1352, 1357 (9th Cir 1984).

[43] *Id.* at 1357.

44.Id.

A visual artist also has the exclusive right to perform or display a copyrighted work publicly.[45] This means that only the copyright owner may show the work at a place open to the public, or where a substantial number of persons outside a normal circle of friends and family are gathered.[46] A public performance or display also occurs when the work is transmitted for viewing in another place or places.[47] Taken at face value, these conditions would render art galleries unable to hang works for public viewing without gaining permissions from all copyright owners of their works. To alleviate this burden, there is a limited exception for the owner of a particular copy of a copyrighted work to display the work to viewers at the place where the copy is located.[48] However, this exception does not apply to performances of audiovisual works or for transmissions of still images. Therefore an image that is uploaded on a computer bulletin board that is open to the public as defined above is displayed when users accessing the board view the image.[49]

The final economic right enjoyed by a copyright owner is the right to distribute copies of the work to the public.[50] An important exception to this right, termed the first-sale doctrine, occurs after one becomes the owner of a lawfully made copy of a copyrighted work, as for instance, when one buys a piece of work from an artist or art gallery. Under these circumstances, the owner of the copy can sell or otherwise dispose of that copy to the public without the permission of the copyright owner, unless the respective parties otherwise have an agreement restricting redistributions.[51] However, this right does not allow the owner of a copy to reproduce the work, publicly perform or display it, or prepare a derivative work of it. To enjoy these privileges, the owner of the copy would have to be granted permission from the copyright owner.

One burning question raised by the digital environment of the information superhighway involves the way one should characterize a transmission of a copyrighted work from one computer system to another. Indeed, this issue received substantial focus in the Preliminary Report issued by the Working Group of the Information

[45]17 U.S.C. §§ 106(4), (5) (1988).

[46] *Id.* at § 101.

47.Id.

[48] *Id.* at § 109(c).

[49] The image also is reproduced in the RAMs of the recipients' computers. This may raise copyright questions also. *See infra* notes 152-154 and accompanying text.

[50]17 U.S.C. § 106(3) (1988).

[51] *Id.* at § 109(a). There are exceptions to the first sale doctrine that prohibit the owners of copies to rent or lease computer programs and sound recordings in certain situations. *Id.* at § 109(bXlXa).

Infrastructure Task Force ("IITF") in charge of intellectual property rights.[62] Suppose an individual who lawfully owns a digitized copy of a copyrighted image makes that image available to other computer users via network connections. Several users predictably download the image into their computer systems. One who only gives this a quick thought likely would believe that the owner of the copy has made an infringing distribution of the copy. However, as will be discussed later, the issue may be more complicated than that. For example, if the act is a distribution, then it might be protected by the first- sale doctrine. Also, it is possible that the situation does not involve a distribution at all. Rather, it may be that the recipients are simply making reproductions within their computer systems. If this is the way the transmission is characterized, then the image may be delivered to others with virtual impunity, since the source may not be in violation of any copyright privileges. Enforcement efforts, therefore, would have to proceed against the individual recipients, a task that would be nearly impossible. This puzzle presented by the emergence of new technologies has persuaded the IITF Working Group that a new transmission right should be added to the list of economic copyright privileges. According to its suggestion, the copyright owner would have the exclusive right to transmit a reproduction of the work to another site.[53] Until the time arrives that this recommendation is adopted, however, any discussion of copyright infringements involving transmissions in the digital environment will have to deal with the characterization problem.

C. MORAL RIGHTS

In addition to the economic rights which have long been protected by United States copyright laws, the Copyright Act now protects moral rights in specified works of visual arts.[54] Moral rights have a long and rich copyright tradition in Europe and in other parts of the globe. However, until the passage of the Visual Artists Rights Act, moral rights were not a component of federal copyright policies in the United States. Rather, moral rights protection was somewhat ill- defined and ethereal in the United States, stemming not from copy-

[52] ijtf Working Group Report, *supra* note 11, at 38-42.
[53] *Id.* at 120-123.
[54] *See supra* note 14 and accompanying text.

right policies, but rather from a hodgepodge of predominantly state laws.[55]

The United States has been slower to adopt moral rights as a component of its copyright policies than have other countries, especially in Europe, because the philosophical justifications for copyright are somewhat different in the United States than elsewhere.[56] United States copyright laws are founded on the teachings of John Locke, as later modified by utilitarian and natural rights philosophers. According to these theorists, individuals will not engage in creative endeavors without the prospect of economic rewards, such as those which result from the protection of private property. For instance, an author likely would not be willing to invest the time and energy required to create a book, if those creative acts could be readily taken without permission by others once the book was made available to the public. Copyright in the United States is designed to provide authors the right to control the economic rewards from their creations to ensure that they have the financial incentives to undertake their projects in the first place. Copyright policies in the United States, thus, are distinctly economic in their orientation. This stands to reason since they derive from theories regarding private property in general. No special attention is given to any noneconomic personal interests that authors might have in artistic creations. Rather, the purposes for copyright are seen as no different than those for other forms of property. Therefore, copyright owners, just as owners of land or commodities, may determine the ways they believe are most suitable to profit from their property interests, and may go so far as to sell all their interests in their property if they so choose.

European copyright policies derive from somewhat different traditions, having been based on the writings of such philosophers as Immanuel Kant and George Hegel.[57] In Kant's view, an author's stake in a creative work was more profoundly personal than a commodity-like property interest. Authors, by creating art, extend their own personalities onto and within their works, allowing them to communicate the essences of their personal beings to the public. Books, for instance, are seen as a means of carrying on the interchange of

[55] *See* Edward J. Damich, *Moral Rights Protection and Resale Royalties for Visual Art in the United States: Development and Current Status,* 12 CARDOZO ARTS & ENT. L. J. 387,387-398 (1994).

[56] *See* Neil Netanel, *Alienability Restrictions and the Enhancement of Author Autonomy in United States and Continental Copyright Law,* 12 CARDOZO ARTS & ENT. L. J. 1 (1994); Justin Hughes, *The Philosophy of Intellectual Property,* 77 GEO. L. J. 287 (1988).

[57] Netanel, *id.,* at 17-23.

thought, as opposed to being a vehicle of commerce.[58] Accordingly, the goal of the legal system should be to protect the innate personal rights of the authors rather than commercial attributes of the objects. Also, since the protected personal rights are a function of the individual creators, they should not be transferable to others.

Hegel similarly emphasized that authors have personal rights in creative endeavors, but acknowledged that there are separate economic rights as well. Rather than being simply an extension of personality, artistic creations are viewed as separate articles to which authors externalize their personal beings.[59] Creative pieces, thereby, have both the economic elements of independent commodities and the personal attributes of their authors. As such, they are dualist in nature, encompassing both fully transferable economic interests and inalienable personal interests.[60]

Based on these theories, copyright policies in Europe and elsewhere protect certain personal and moral interests of authors in their art. The most prevalent rights are the right of attribution, sometimes called the right of paternity, and the right of integrity. The right of attribution gives authors the ability to demand that their works identify them as their creators, or that they be published pseu- donymously or anonymously. The right of integrity enables authors to prevent uses or modifications of their works that would prejudice their reputations. Some countries expand the scope of the moral components to such aspects as rights to determine whether and when works can be disclosed to the public, and rights to demand that they be withdrawn from public display or distribution.[61] Since these rights are personal, they belong to the author and may not be transferred, even when all economic stakes are sold. Accordingly, artists who have sold all economic copyright interests in their images still could prevent public displays of the works if they have been altered in such ways that might damage their reputations. In some international jurisdictions, they might even be able to prevent displays of their unaltered works when the viewing context is deemed undesirable.[62] In some instances, the artist may be able to prevent dissemination of the work altogether, although this right is highly qualified and not often invoked.[63]

[58] *Id.* at 19.

[59] Hughes, *supra* note 56, at 330-339.

[60] Netanel, *supra* note 56, at 21-23.

[61] *Id.* at 24.

[62] *See id.* at 25.

[63] *Id.* at 32-34.

The Berne Convention follows the dualist copyright doctrine requiring that moral rights be protected independently from economic rights. Article 6bis of the Berne Convention provides:

> Independently of the author's economic rights, and even after transfer of said rights, the author shall have the right to claim authorship of the work and to object to any distortion, mutilation or other modification of, or other derogatory action, in relation to, the said work, which would be prejudicial to his honour or reputation.[64]

This provision is not self-executing; therefore, member countries must pass legislation to effectuate it. Also, it provides only minimum requirements respecting the protection of moral rights. Countries are free to protect moral rights to a greater degree if they wish. When the United States signed the Berne Convention in 1988, its policymakers believed that the Copyright Act did not need to be modified to bring the country into conformance with Article 6bis. In their judgment, a variety of state and other federal laws already provided the requisite moral rights protections.[65]

As previously noted, the Copyright Act was amended in 1990 by the Visual Artists Rights Act which explicitly added moral rights protection for certain visual works. The set of works covered by the Act is extremely limited, and is defined both by inclusion and exclusion.[66] A protected work of visual art is a painting, drawing, print or sculpture existing singly or in a limited edition of two hundred copies or fewer that are signed and consecutively numbered by the author.[67] It also includes still photographic images produced for exhibition purposes only, and existing singly or in signed and consecutively numbered limited editions of two hundred copies or fewer.[68] The Act specifically excludes from moral rights protection various classes of

[64] Guide to the Berne Convention, Art. 6bis, Pub. No. 615(E) (World Intellectual Property Organization) (1978).

[65] *See* JAY DRATLER, JR., INTELLECTUAL PROPERTY LAW: COMMERCIAL, CREATIVE, AND INDUSTRIAL PROPERTY § 6.01[6] (1991 & Supp. 1994). Although this article is concerned only with federal copyright infringement in the United States, and thus does not analyze the applicability of these policies on digital imaging, those involved with the technology would be well advised to scrutinize the various other rights that their practices might offend in the United States. In addition, they must be cognizant that moral rights statutes in many foreign countries provide more extensive protections than required by the Berne Convention.

66. 17 U.S.C. § 101 (Supp. II. 1990).

[67] *Id.* at § 101, cl. 1 (definition of a "work of visual art").

[68] *Id.* at cl. 2.

images, including posters, technical drawings, audiovisual works, applied art, books, magazines, and electronic publications.[69] It also excludes any work made for hire, an ownership term.[70]

Those works that are covered by the Act enjoy rights of attribution and integrity.[71] Thus, authors of these works have the right to claim authorship of the work and to prevent the use of their names when their works have been distorted or modified in ways that would be prejudicial to their honor or reputation.[72] In addition, they have the right to prevent any intentional distortion or other modification of the work which would be prejudicial to their honor or reputation, among other integrity rights.[73] However, there are several exceptions to these rights.[74] One which may be of particular importance to digital image processors states these rights do not extend to and are not implicated by reproductions, depictions or portrayals appearing in any of the excluded formats, such as books, periodicals, audio visual works or works made for hire.[75] In other words, authors of limited edition pieces of art that otherwise are covered by the moral rights provisions of the Act cannot apply attribution or integrity rights when their art is reproduced or altered within those formats that typically are used for mass-production and distribution.[76] Some authors have concluded that the Act does not apply to any reproduction that does not physically modify the original or limited edition copy.[77] However, this may be too broad an interpretation.[78]

Two other moral rights issues may pertain to those involved with digital imaging. First, the rights of attribution and integrity provided under the federal copyright act may be waived by the author but may not be transferred.[79] Second, the rights accorded under the federal law preempt equivalent state rights. However, such preemption is limited to those works of visual arts covered under the federal act, and extends only to those rights that are equivalent to the rights of attribution and integrity.[80] Thus, there may be state protection of moral rights in visual art forms that are not within the greatly cir

[69] *Id.* at cl. A(i).

[70] *Id.* at cl. B. See *infra* Section IV (A).

[71] 17 U.S.C. § 106A (Supp. II. 1990).

[72] *Id.* at §§ 106A(a)(l), (2).

[73] *Id.* at § 106A(a)(3).

[74] *Id.* at § 106A(c).

[75] *Id.* at § 106A(c)(3).

[76] DRATLER, *supra* note 65, at § 6.01[6].

[77] Netanel, *supra* note 56, at 47; Damich, *supra* note 55, at 402.

[78] *See infra* note 164 and accompanying text.

[79] 17 U.S.C. § 106A(e) (Supp. II. 1990).

[80] *Id.* at § 301(f).

cumscribed reach of the Copyright Act. Also, since the federal act does not provide moral rights protections to certain mass distribution reproductions and distortions, it can be argued that state law may afford such protection.

D. FAIR USE

The exclusive privileges to enjoy the economic and moral rights provided by the Copyright Act are subject to a wide set of exceptions which apply in special circumstances. In the case of digital imaging, the most important exception is fair use, which applies both to economic and moral rights.[81] The fair use exception is based on an equitable doctrine which balances four factors: (1) the purpose of the use and its commercial character, (2) the nature of the copyrighted work, (3) the amount and substantiality used in relation to the entire copyrighted work, and (4) the effect of the use upon the value of the copyrighted work.

Acuff-Rose is the most recent Supreme Court case dealing with the fair use exception. Although it ostensibly only considers the treatment of parodies with the fair use analysis, it also gives insights on how the fair use criteria should be applied to questions posed by new technologies, such as digital sampling and digital imaging. This clarification is critical to those involved in digital imaging because, prior to *Acuff-Rose,* there were elements of confusion about all of the fair use factors which, when viewed together, were potentially devastating to many uses of the technology. First, there was substantial

[81] *Id.* at § 107 (1977 & Supp. 1995). Section 107 provides:

> Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research is not an infringement of copyright. In determining whether the use made of a work in a particular case is a fair use the factors to be considered shall include —
>
> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
>
> (2) the nature of the copyrighted work;
>
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
>
> (4) the effect of the use upon the potential market for or value of the copyrighted work.
>
> The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

Id.

debate about the Supreme Court's previous statement in *Sony Corporation v. Universal City Studios*[82] that a commercial use is presumptively unfair. Since most uses of digital imaging are commercial, greater articulation of this issue is crucial to the industry. Second, the courts always have extended more protection to creative works than factual ones.[83] Again, this is not advantageous to the digital image processor who normally uses creative visual pieces. Third, the analysis of the substantiality factor considers not only the amount that is copied, but also the importance of the material.[84] Given that digital imagers often are interested in using the most prominent features of a work, it is important to understand how this might be balanced with the other factors. Finally, many courts placed a heavy burden on those making commercial uses to prove that their practices would not have a market effect on the copyright holder.[85] Such an interpretation could be seen as simply the final nail in the digital imaging coffin. Thus, considering all of these potentially negative aspects simultaneously, digital imagers clearly had much to worry about when relying on fair use, at least prior to *Acuff-Rose.* Indeed, as noted in the introduction, the tone of recent appellate court cases seemed somewhat hostile to manipulations of copyrighted artistic materials.

[82] 464 U.S. 417, 449 (1984) ("If the Betamax were used to make copies for a commercial or profitmaking purpose, such use would presumptively be unfair.") *See* Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510, 1522 (9th Cir. 1992) ("[T]he presumption of unfairness that arises in such cases can be rebutted by the characteristics of a particular commercial use."); Acuff-Rose Music, Inc. v. Campbell, 972 F.2d 1429, 1436- 37 (6th Cir.), *rev'd and remanded,* 114 S. Ct. 1164 (1994) ("We agree that commercial purpose is not itself controlling on the issue of fair use, but find that the district court placed insufficient evidence on the command of *Harper & Row,* wherein the Supreme Court expressly reaffirmed its earlier holding that '[E]very commercial use of copyrighted material is presumptively an unfair exploitation of the monopoly privilege that belongs to the owner of copyright.'").

[83] *See, e.g., Sega,* 977 F.2d at 1524 ("Works of fiction receive greater protection than works that have strong factual elements, such as historical or biographical works . . ., or works that have strong functional elements, such as accounting textbooks.").

[84] *See, e.g.,* Harper & Row Publishers v. Nation Enter., 471 U.S. 539, 564-66, 568 (1985) (although the Nation only took 300 words out of President Ford's memoirs, the amount nonetheless was significant because the quotations were the heart of the book and the parts most likely to be important in licensing.).

[85] *See, e.g., Sony,* 464 U.S. at 451 ("What is necessary is a showing by a preponderance of the evidence that some meaningful likelihood of future harm exists. If the intended use is for commercial gain, that likelihood may be presumed."); *Koons,* 960 F.2d at 312 ("Yet where the use is intended for commercial gain some meaningful likelihood of future harm is presumed").

1. Campbell v. Acuff-Rose Music, Inc.: Fair Use Clarified

In 1964, Roy Orbison and William Dees wrote a rock ballad called *Oh, Pretty Woman* and assigned their rights to Acuff-Rose. In 1989,2 *Live Crew* wrote a song title *Pretty Woman* which it claimed to be a parody of *Oh, Pretty Woman.* For *Pretty Woman, 2 Live Crew* copied the characteristic opening bass riff and the first line of the lyrics of *Oh, Pretty Woman.* After the opening, *2 Live Crew's* version quickly degenerates into a play on words, substituting predictable lyrics with shocking ones. *2 Live Crew's* manager informed Acuff-Rose of their song, and stated that the group would credit Acuff-Rose with ownership of the original song and would pay a fee for the use the group wished to make of *Oh, Pretty Woman.* Acuff-Rose refused to grant permission. Nonetheless, *2 Live Crew* released records, cassettes and CDs of *Pretty Woman* in 1989 in an album titled *As Clean As They Wanna Be.* In 1990, Acuff-Rose sued *2 Live Crew* for copyright infringement. The district court granted summary judgment for 2 *Live Crew* based on fair use. The court of appeals reversed, ruling that 2 *Live Crew's* use of material from *Oh, Pretty Woman* could not constitute a fair use.[86] 2 *Live Crew* appealed the determination to the Supreme Court. The decision in *Acuff-Rose* was eagerly awaited by a wide range of satirists, such as *Capitol Steps,* who often integrate copyrighted works of others into their new creations.[87] Many of the supporters of 2 *Live Crew* were hoping that the Supreme Court would issue an opinion broadly protecting most forms of social commentary from copyright infringement claims.[88]

Although the decision of the Supreme Court was that the case be remanded to the district court, one would never know this by listening to press accounts which generally reported the verdict as a complete vindication for 2 *Live Crew's song.*™ When the dust cleared, the

[86] Acuff-Rose Music, Inc. v. Campbell, 972 F.2d 1429 (6th Cir. 1992).

[87] *See* Joan Biskupic, *'Oh, Pretty Woman' Is Focus of Court Dispute on Limits to Parody,* WASH. POST, NOV. 7,1993, at A33.

[88] *See generally* Ames, *supra* note 28 (arguing that art created from existing imagery is a valid form of criticism and comment that should be protected by copyright law against suits for infringement.); Marlin H. Smith, *The Limits of Copyright: Property, Parody and the Public Domain,* 42 DUKE L. J. 1233 (1993) (the result in *Koons* is inconsistent with copyright jurisprudence and contrary to the goals of copyright law which are to stimulate artistic creativity and preserve First Amendment rights to free speech and the press). The case also was anticipated by well-known composers and songwriters, who were seeking to maximize their control over their copyrighted works. They wanted the Court to confirm that most unauthorized commercial uses of copyrighted material, including many of those involving parody, are presumptively unfair.

[89] The case was remanded to determine (1) if the repetition of the bass riff was a fair use and (2) whether or not the release of the song reduced the ability of Acuff-Rose to license other rap artists to produce nonparody versions of *Oh, Pretty Woman.*

advocates for each side received only half a loaf. The Court did not make an overriding policy pronouncement protecting the free speech rights of artists. It also did not provide copyright owners the blanket protection they were seeking from commercial uses of their materials. Rather, and probably appropriately, the Supreme Court stated that no factor ever can be counted on to necessarily overcome the importance of all the others. Thus, the interested parties did not gain the definitive *per se* or safe harbor rules that they may have wanted. Instead, the Court only was able to provide some guideposts which add clarity to certain fair use determinations. For digital image processors, this means that they still must practice their trade at their own risk. However, from *Acuff-Rose,* they may gain some sense of when the equities likely will tip in their favor.

Although not explicitly, *Acuff-Rose* presents a sliding scale approach for analyzing reproductions of copyrighted purposes for commercial purposes. This scale ranges from pure parodies, which enjoy the greatest freedoms under fair use, through satire and other general social commentaries, to mere appropriation, which receives very little or no relief from fair use.

a. *Parody*

The Supreme Court stated that for copyright purposes, parody is defined as "the use of some elements of a prior author's composition to create a new one that, at least in part, comments on the author's works."[90] The critical purpose of the new work helps overcome the commercial aspects of the venture. Also, since the critical wit focuses on the prior work, it is necessary for the parodist to take sufficient distinctive and memorable features of that work to ensure that the audience will identify the subject of the criticism. In other words, the parody must conjure up at least enough of the original to make the object of its critical wit recognizable.[91] How much is needed to conjure up the original depends on the circumstances. However, a parodist clearly has more flexibility in dealing with the "amount and substantiality" factor than do other artists who use copyrighted materials.

The Supreme Court previously stated that the market effect factor is "undoubtedly the single most important element of fair use."[92] The Court did not waver from this view, at least by implication, in *Acuff- Rose* given that it clearly used the market effect factor as an over-

[90] *Acuff-Rose,* 114 S. Ct. at 1172.
[91] *Id.* at 1176.
[92] Harper & Row Publishers v. Nation Enter., 471 U.S. 529, 566 (1985).

arching watchdog for the other factors. According to the Court, since pure parody pokes fun directly at a preexisting work, it is highly unlikely that the original artist would have a personal interest in developing a work of that kind. Nor is it reasonable to believe that this artist would license others to do it.[93] Thus, it is hard for original artists to claim that parodists earn revenues that they otherwise would have received. The only possible harm is if the parody taps another artistic market, and in the process lessens the demand in that market for nonparodic versions of the original.[94] The more that this is possible, the less material the parodist may take to conjure up the original piece. Thus, a question remaining in the *Acuff-Rose* litigation is whether or not *2 Live Crew's* rap version, albeit a parody to some degree, satisfies the rap demand for *Oh, Pretty Woman,* thereby reducing the chances for Acuff-Rose to license Roy Orbison's song for a less critical rap arrangement.[95]

b. *Satire*

2 Live Crew's song is a parody to some degree, but its wit has more generalized social elements as well.[96] The Supreme Court noted approvingly that the song (1) was clearly intended to ridicule the white-bread original and (2) reminds us that sexual congress with nameless streetwalkers is not necessarily the stuff of romance and is not necessarily without its consequences.[97] The Supreme Court stated that the more loosely a parody targets the original, the tougher it will be to meet the fair use standards.[98] In other words, the greater the artist is motivated to use preexisting material to make general social commentaries, the less applicable is the fair use defense. This is because the owner of the original material may be very willing to license his or her material for the purpose of making general social statements, and thus could lose value by the introduction of the satire. Thus, as a work moves along the scale from pure parody toward general satire, the creator will be permitted to take progres-

[93] *Acuff-Rose,* 114 S. Ct. at 1178 ("The market for potential derivative uses include only those that the creators of original works would in general develop or license others to develop. Yet the unlikelihood that creators of imaginative works will license critical reviews or lampoons of their own productions removes such uses from the very notion of a potential licensing market.").

[94] *Id.* at 1178 ("2 Live Crew's song comprises not only parody but also rap music, and the derivative market for rap music is a proper focus of enquiry.").
[95] *Id.* at 1178-79.
[96] *Id.* at 1172-73 ("[A] work may contain both parodic and nonparodic elements.").
[97] *Id.* at 1173.
[98] *Id.* at 1172 n.14.

sively less recognizable material from preexisting copyrighted works. Because of the special role that comment and criticism have in the fair use analysis, the Court stated that there may be occasions when it is equitable for satires to integrate copyrighted material without any specific attempt to criticize the original. However, these situations are much more constrained than with parody. Using the market effect test once again as the watchdog, the Court stated, "when there is little or no risk of market substitution, whether because of the large extent of the transformation of the earlier work, the new work's minimal distribution in the market, the small extent to which it borrows from an original, or other factors, taking parodic aim at an original is a less critical factor in the analysis, and looser forms of parody may be found to be fair use, as may satire with lesser justification for the borrowing than would otherwise be required."[99]

c. *Mere Appropriation*

An artist that appropriates copyrighted material simply to create new art work will find little solace from the fair use defense. Under these circumstances, the *purpose* factor becomes an enormous negative weight, since there is nothing to counterbalance the commercial aspect. Also, the potential for market harm obviously increases. As noted by the Supreme Court, if the appropriator uses copyrighted material merely to get attention or to avoid the drudgery in working up something fresh, the claim to fairness in borrowing from another's work diminishes accordingly, if it does not vanish, and other factors, like the extent of its commerciality loom larger.[100] The only potential savior is that the new work is a major transformation of the original. However, under these circumstances, it is likely that the new work would not be sufficiently similar to be considered a reproduction in the first place.

IV. Infringement Analysis for Digital Image Processing

A. Ownership

The first step for plaintiffs in copyright infringement suits is to prove that they are the owners of the rights alleged to have been violated.

[99] *Id.*
[100] *Id.* at 1172.

This means that they must prove that they own the rights to the originally creative aspects that are expressed in tangible media of expression. Typically, the artist is the owner of all economic rights in a visual image.[101] However, there certainly are scenarios where this is not the case.

The most difficult cases may be the ones where an artist or photographer is commissioned by another person to create a visual image. Many photojournalists are free-lance in that they are not salaried employees of particular magazines or newspapers. For instance, when a magazine needs a photograph from a defined location or for a specialized type of event, the magazine's editors often contact photographers who have expertise in the desired topic and who would be willing to work in the requisite location. The magazine may provide a set of required parameters for the photograph, including the type of film, the orientation of the picture, and other special requirements.[102] Often these commitments are made over the telephone without any written contractual arrangements.[103] If digital image processors ever wanted to use these photographs, who must they contact for permission? Or, saying this in a way that is more pertinent for this article, if one of these photographs were used by a digital imaging processor without permission, who would be the owner having the right to sue for copyright infringement?

The Copyright Act provides that the photographer is the owner of the copyright privileges unless the photograph is a "work made for hire," in which case the magazine would be the owner.[104] A work made for hire is defined as follows:

> (1) a work prepared by an employee within the scope of his or her employment; or
>
> (2) a work specially ordered or commissioned for use as a contribution to a collective work, as part of a motion picture or other audiovisual work, as a translation, as a supplementary work, as a compilation, as an instructional text, as a test, as answer material for a test, or as an atlas, if the parties

[101] Copyright vests initially in the author or authors of a work. 17 U.S.C. § 201(a) (1988).

[102] Tomlinson & Harris, *supra* note 9, at 23.

[103] *Id.*

[104] 17 U.S.C. § 201(b) (1988) ("In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless the parties have expressly agreed otherwise in a written instrument signed by them, owns all the rights comprised in the copyright.").

> expressly agree in a written instrument signed by them that the work shall be considered a work made for hire... .[105]

Depending on the type of magazine for which the photograph was requested, it is possible to argue that the photograph was commissioned as a contribution to a collective work.[106] However, even under this somewhat remote possibility, there would still have to be written agreement between the parties specifying the work made for hire relationship for the magazine to be the owner of the copyright. Obviously, if the agreement is made over the phone, this criteria will not be met.

The more likely scenario, at least in the above example, is that the commissioning party is not engaged in the development of a collective work. Thus, the photographer will own the copyright privileges in the photograph unless the photographer is an employee working within the scope of his or her employment. There once was great confusion in the courts over how the term *employee* should be defined, with some interpreting the word as encompassing any individual who was directed to perform a specific task.[107] However, the Supreme Court greatly clarified the issue in *Community for Creative Non- Violence v. Reid.*[108] Under the Copyright Act, the term employee is to be given the usual agency definition.[109] Thus, whether or not the photographer is an employee, as opposed to an independent contractor, depends on a number of factors, including (1) who has the right to control the creative aspects of the photograph, (2) the skill required in photography, (3) the owner of the photographic equipment used, (4) the duration of the relationship, (5) the right of the magazine to assign additional projects to the photographer, (6) the method of payment and (7) how taxes and benefits are treated.[110] Based on these and other relevant factors, it is clear that most free-lance photographers will be treated as independent contractors rather than employees. Thus, free-lance photographers generally own the copyrights to their photographs, and license relevant privileges on varying terms,

[105] *Id.* at § 101.

[106] A "collective work" defined in the Copyright Act as "a work, such as a periodical issue, anthology, or encyclopedia, in which a number of contributions, constituting separate and independent works in themselves, are assembled in a collective whole." *Id.*

[107] *See* Aldon Accessories Ltd. v. Spiegel, Inc., 738 F.2d 548 (2d Cir.), *cert, denied,* 469 U.S. 982 (1984).

[108] 490 U.S. 730 (1989).

[109] *Id.* at 740-41.

110.Id. at 751-52.

either directly or through stock-photo agencies to magazines, newspapers, and others who might be interested in using them.[111]

Nevertheless, there certainly are a wide range of situations wherein the photographers or artists will not own the economic copyright privileges in their visual pieces. The most obvious case is where the artist works as an employee for another person or company, as, for example, does a staff photographer who works for a newspaper. In other contexts, artists may assign their economic rights to others through written contracts. This may occur even when independent contractors are commissioned to perform artistic services. Also, digital image processors may use audiovisual works as their source material. If so, then the developer of the audiovisual work will own the copyrights to images commissioned for the work if the artists signed documents stating that their contributions were works made for hire. Another possibility is that the commissioning party made sufficient creative artistic decisions in the development of the piece to be considered a joint owner in its copyrights.[112] In that situation the digital image processor needs only to receive permission from one of the joint owners, or alternatively, can be sued by either for copyright infringement.

A final possibility is that the visual image itself was developed by means of digital image processing. For instance, an artist may get permission from a photographer to create a derivative work of a photograph using digital imaging techniques. The copyrights to any creative additions contributed by the digital imaging processor would be owned by that individual, while the photographer would retain copyright ownership to the basic source materials integrated into the piece.[113] Therefore, a person who wanted to use digital imaging to manipulate this image likely would have to deal with the ownership rights of two individuals. Indeed, the list of owners could easily be lengthier if the selected image contained copyrighted materials derived from more than one original source.

When dealing with the possibility of moral rights infringement actions, the owners may be different than those of the economic rights. The Copyright Act provides that the creative artists are the

[111] *See* Tomlinson & Harris, *supra* note 9, at 23-25; Gastineau, *supra* note 24, at 99-100.

[112] The Copyright Act provides that authors of a joint work are co-owners of copyright in a work. 17 U.S.C. § 201(a) (1988). Authors of a joint work intend that their contributions be inseparable. *Id.* at § 101 (definition of "joint work"). Each author must contribute more than a de minimis amount of original expressions, and not merely idea. Ashton-Tate Corp. v. Ross, 728 F. Supp. 597 (N.D. Cal. 1989).

[113] 17 U.S.C. § 103(b).

owners of any moral rights provided by the federal statute.[114] Even if the artists assign their economic copyrights, they still retain the moral rights of attribution and integrity.[116] This is because these rights may not be transferred. Rather they may only be waived by written instruments in very specific terms for specific uses of the works.[116] For visual images that fall within the definition of works made for hire, there are no owners of moral rights under the Copyright Act.[117] Thus, under these circumstances, neither the commissioning parties nor the creative artists may bring infringement actions for moral rights violations under federal copyright law.

B. Unlawful Reproduction

One engages in unlawful reproduction for copyright purposes when one uses a protected work to create another having expressions which are substantially similar to those of the original. Copyright law only protects works from reproduction; unlike patent law, it does not prevent others from creating even identical works from independent sources of creativity. Thus, one critical component of copyright infringement actions is proving that the alleged infringer had access to the copyrighted image.[118] One way of making this proof is through tangible evidence that the alleged infringer was in possession of the copyrighted image before making the image in question. Another means is to show that the similarities are so great that access can be inferred unless the defendant can prove otherwise.[119]

Digital technologies may make it more difficult for artists to prove that there has been access to their works. When digital filmless cameras are used, for instance, there may be less of a paper trail leading from the original photographer to the digital image processor.[120] Also, since scanning devices can capture images from a wide variety of publicly available sources, the digital image processor may not have to deal directly with an artist to have access to an image in a usable form. In addition, for many uses of digital image processing, the original work will be altered at least enough so that access may not be

[114] *Id.* at § 106A(a).

[115] *Id.* at § 106A(e)(2).

[116] *Id.* at § 106A(e)(l).

[117] The definition of "work of visual art" excludes any work made for hire. Id. at § 101, cl. B (definition of "work of visual art").

[118] JOHN W. HAZARD, JR., COPYRIGHT LAW IN BUSINESS AND PRACTICE para. 7.2[3] (1989)

[119] *See, e.g.,* Midway Mfg. Co. v. Dirkschneider, 543 F. Supp. 466 (D. Neb. 1981).

[120] Tomlinson & Harris, *supra* note 9, at 10.

taken for granted. The result is that makers of visual images may need to rely on certain technological solutions to either prevent scanning or to prove that their images were used by another. Assuming that access can be proven, the question, then, is what the digital image processor can do with the image.

Just because a person had access to a copyrighted image and then produced a new image does not mean that this person reproduced the original image. Reproduction obviously requires that the copyrighted image be used to some degree in the making of the next image. Exact duplication is not required, however, since it then would be easy to avoid infringement simply by making small changes.[121] Rather, courts have consistently held that a reproduction is made when the allegedly infringing image is substantially similar to the copyrighted work.[122] For this evaluation, analytical dissection of component parts may be probative, and the opinions of experts in the field are relevant.[123]

Determining that there has been a reproduction, however, is not sufficient to prove that there has been copyright infringement. This is because copyrighted works contain attributes which are not protected by copyright. For instance, all copyrighted works consist of an idea or ideas to which the coverage of copyright does not extend. Also, many protectible works may combine elements from the public domain in creative ways. Although the combination may enjoy copyright protection, the individual elements may be copied and used by others in different ways. Thus, the key steps in copyright infringement cases are to remove the unprotectible elements from the copyrighted work, and then to analyze whether the allegedly infringing piece is substantially similar to those features that remain.[124] For this evaluation, courts rely on the eyes of average consumers to make the comparisons.[125] Some courts ask whether the allegedly infringing work has the same "total concept and feel" as the copyrighted work.[126] This form of analysis is satisfactory when practically all the elements of the copyrighted work enjoy copyright protection, such as possibly

[121] *See* EARL W. KINTNER & JACK LAHR, AN INTELLECTUAL PROPERTY LAW PRIMER 416 (2d ed. 1982).

[122] *See, e.g.,* Computer Associates Intern., Inc. v. Altai, Inc., 982 F.2d 693, 701 (2d Cir. 1992); Whelan Assoc, v. Jaslow Dental Lab., 797 F.2d 1222, 1231-32 (3d Cir. 1986); Arnstein v. Porter, 154 F.2d 464, 468-69 (2d Cir. 1946).

[123] *See, e.g., Whelan,* 797 F.2d at 1232; *Arnstein,* 154 F.2d at 468-69.

[124] *See, e.g.,* Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp., 562 F.2d 1157,1163 (9th Cir. 1977).

[125] *See, e.g., Arnstein,* 154 F.2d at 468-69.

[126] *E.g., Krofft,* 562 F.2d at 1167. *See* Lotus Dev. Corp., v. Paperback Software Intern., 740 F. Supp. 37, 63 (D. Mass. 1990).

with some novels or abstract paintings. However, as works become more functional or fact related, such as the case with computer programs, then it becomes increasingly essential to filter out the unprotected elements prior to comparison.[127] Thus, the most sophisticated general appraisal is that a new piece constitutes an unlawful reproduction of a copyrighted work only if the new piece is substantially similar to the protected expressions in the copyrighted work.

How one determines whether there is substantial similarity to the protected expressions is another mystifying experience that is not subject to hard-and-fast rules. On one dimension, it may have a quantitative component: Using a large proportion of the protected expressions can be infringing. The inquiry also may have a qualitative aspect, though; that is, using a relatively small protectible aspect may be infringing if that aspect is an important or notable feature of the copyrighted work.[128] Some may find substantial similarity because protected pieces of the copyrighted work appear almost identically, albeit in fragments, in various locations of the implicated work.[129] It is also possible that works will be substantially similar when there is little exact duplication, but when they nonetheless are organized or are structured in analogous ways.[130]

As reviewed earlier in this article, postmodern artists use digital image processing to create new art forms that are intended to make some degree of social commentary. Others use the technology simply to combine and transform images into new pieces of art having no social content. Also, there are those who use the technology to edit and perfect copyrighted images.

Postmodern artists, almost by definition, create works which to the relevant audience appear substantially similar to the original source materials. Most forms of social commentary likely will require the artist to take sufficient copyrighted material, either in a quantitative

[127] *E.g., Computer Associates,* 982 F.2d at 704 ("The essentially utilitarian nature of a computer program further complicates the task of distilling its idea from its expression.").

[128] *E.g., Whelan,* 797 F.2d at 1245 ("[T]he court must make a qualitative, not quantitative, judgment about the character of the work as a whole and the importance of the substantially similar portions of the work."); *Atari,* 672 F.2d at 618 ("When analyzing two works to determine whether they are substantially similar, courts should be careful not to lose sight of the forest for the trees.").

[129] There are two ways that works may be substantially similar: through "comprehensive nonliteral similarity" and "fragmented literal similarity." The former means the fundamental essence or structure of one work is duplicated in another. The latter occurs when there is occasional, but not complete word-for-word similarity. *Whelan* 797 F.2d at 1234 n.26 (citing 3 MELVILLE B. NIMMER & DAVID NIMMER, COPYRIGHT § 13.03[A] (1984)).

[130] *Id.*

or qualitative sense, so that there is an appropriate context for the criticism. Therefore, digital imaging artists of this genre will be making unlawful reproductions and derivative works, unless protected by a specific limitation. In this case, only the fair use limitation to the copyright owners's exclusive rights seems applicable. Digital image processors engaged in editing functions likewise, and even more definitely, will be making substantially similar works, thereby implicating reproduction rights unless they are somehow limited by the fair use doctrine.

It is not so manifestly clear, however, that digital imagers who are motivated not with social intentions but rather with the goal of creating beauty will run afoul of the substantial similarity standard when they integrate existing images into their works. The digital image technician can create a beautiful ocean vista by merging bits and pieces from images distributed by other artists and photographers. Perhaps the imager could use a sunset from one photograph, and a sail from another, and a boat from another, the ocean from yet another, and the surrounding cliffs from some other image. The result may be a picture that bears little resemblance to any particular image used in the process. Of course, if the image processor uses particularly important or beautiful aspects of any or all of the copyrighted images, then problems arise, since the measure of substantial similarity has a qualitative component. In these situations, the degree that the digital imaging professional alters the attributes of each basic source material will be a key factor.

It is possible that there is some hostility toward this latter type of digital imaging because the technology is not yet accepted as a craft demanding artistic skill. The belief may be that digital image technicians are not artists; rather, they are technology buffs who pirate the work of real artists. Any creativity that results from imaging is more a function of the computer's abilities than the artistic skill of the individual.[131] To these objections, one only has to point to the introduction and development of other technologies, such as the camera. Certainly, it is easier for the photographers to depict realistic scenes than those who paint in, let's say, oils. But few now would say that

[131] If a computer graphics program is used to create the ultimate digital image, then one might argue that the computer programmer should have some protectible copyright interest in the final product. However, it is not clear what that ownership status would be under the Copyright Act. The programmer might be a "joint owner," but the Act requires that joint owners have the *intention* to merge their contributions. Likely, the computer program would be considered merely a creative tool, comparable analytically to a camera. However, if graphics from the computer program are incorporated, then the programmer might have a separate copyright interest in the graphics.

photographers have less artistic skill than painters; rather the photographers apply a different form of artistic skill. The same is true with the digital image processors. Their jobs are a step easier than even those of the photographers, and this, in and of itself, may just seem unfair. But whether it is unfair or not in some ethical way, it is certainly not a grievance that is protected by the copyright laws.

One other issue is relevant in the substantial similarity analysis. Not all aspects of an image are expressions capable of copyright protection. As already mentioned, a picture of a magnificent sunset taken from a remote region in Tibet may be protected from copying because the image incorporates many creative attributes, such as composition, exposure and filtering. However, the individual natural objects, such as the sun, the mountains and the wildlife are free for anyone's creative use. One who copies the photograph violates the copyright because the expressive elements are reproduced. With digital imaging, though, the natural elements of the Tibet scenery may be digitally appropriated while all the creative elements can be digitally altered or removed. If this were done, the photographer, who likely invested a huge amount of time and effort to reach the remote locale, may rightfully feel angry that the digital imager could access the scene simply by scanning the image into a machine. However, the Supreme Court made it clear in *Feist Publications v. Rural Telephone Service*[132] that copyright does not protect information, facts or natural elements even when tremendous energies are devoted to acquiring them. Although the Supreme Court recognized that the result may be harsh in some circumstances, copyright does not provide protection simply because of the "sweat of the brow" involved in the enterprise.[133] These principles should apply directly to the nature photographer. The substantial similarity required for unlawful reproduction, therefore, cannot be based on the mere fact that the digital imager took a natural object that theretofore was unique to a particular copyrighted photograph, as long as the photographer's creative additions, such as filtering, are effectively altered.

C. The Fair Use Limitation on Unlawful Reproduction

Assuming that the digital imaging processor takes sufficient expression from a copyrighted work, either in a qualitative or quantitative

[132] 499 U.S. 340 (1991).

[133] *Id.* at 374.

sense, for there to be substantial similarity of expression, then relief from infringement, if any, will have to rest on fair use. The imaging artists and editors who act without social cause will find no help here. Given that the image is not transformed sufficiently to overcome objections of substantial similarity, there is nothing within the fair use factors which should protect these digital imagers. These image processors will be seen essentially as pirates, taking unlawful advantage of the creative fruits of others. Their commercial purpose stands unbalanced by any recognized social objective of fair use; the nature of what is taken is creative; recognizably important aspects are appropriated; and under the circumstances, the original artists would be willing to license their works. These represent the classic example cited by the Supreme Court where the imager borrows to gain attention or to avoid the drudgery of working up something fresh. In terms of the sliding scale, these situations involve mere appropriation, and will not find solace with fair use. Thus, digital image processors who are not involved in social criticism must transform the existing images sufficiently to avoid a determination of substantial similarity. Otherwise, unless they receive permission, they will infringe the reproduction and derivative rights of those individuals who own these economic copyright privileges in the underlying images.

When the digital imager works with a critical eye, then the fair use calculus becomes more complicated. One important saving grace from *Acuff-Rose* is that the commercial nature of the digital enterprise will not destroy a possible determination of fair use. According to *Acuff-Rose,* the more the original work or works bear the brunt of the critical wit raised in the digitally altered form, the broader will be the protection under the fair use doctrine. Whether the entire original may be used in the new image is an open question. However, if pure parody is the goal, and there are no discrete portions of the original which effectively conjure up the entire image, than a fair use argument at least theoretically seems very plausible. Unfortunately, many digital imagers have broader social targets in mind. Under these circumstances, fair use will depend greatly on the likelihood that the original artist would sanction the criticism made from the digitally altered work, or at least would enter the market served by it. Other issues, such as the extent of the borrowed material may also be relevant. In this regard, the more that satire dominates the intent of the artist and overshadows any evidence of parody, the more risky that widescale reproduction clearly becomes.

The only relevant case to date explicitly dealing with fair use and the appropriation of copyrighted visual images for commercial artis

tic purposes is *Rogers v. Koons.*[134] This litigation arose after Jeff Koons sculpted a representation of a black-and-white photograph, copyrighted by Art Rogers, of eight puppies held by a man and woman who were smiling and sitting on a bench. Koons intended that the three dimensional polychromed wooden sculpture look just like the photograph with certain embellishments such as the addition of color, round clown noses on the puppies, and daisies in the hair of the grinning man and woman. Although the Second Circuit implicitly accepted that the sculpture was a satire of society at large, it held that the work was not a fair use of Rogers' photograph.[135] The crux of the court's holding was that since the critical eye of the sculpture was not aimed at the photograph, there was no excuse for taking so much of the essence of the photograph. The court stated, "If an infringement of copyrightable expression could be justified as fair use solely on the basis of the infringer's claim to a higher or different artistic use . . . there would be no practical boundary to the fair use defense."[136] The court thus determined that Koons was sailing not under the "parody flag" but rather the "flag of piracy."[137]

The decision in *Koons*, although preceding *Acuff-Rose,* seems to be somewhat faithful to its analysis. The court found commercial motivation to be relevant, but not determinative.[138] It also ruled that there should be greater leeway for parody than general social satire.[139] According to the court, Koons took too much from Rogers' work, not only for satire, but also for a parody. The court stated that "the essence of Rogers' photograph was copied nearly *in toto,* much more than would have been necessary even if the sculpture had been a parody of plaintiff's work."[140] In addition, it determined that Rogers may have been willing to license the photograph so that it could be

[134] 960 F.2d 301 (2d Cir. 1992). Several other infringement suits have been brought, such as ones against Andy Warhol, Robert Rausenberg and David Salle, but these were all settled. *See* Martha Buskirk, *Appropriation Under the Gun,* Akt in America, June

1992, at 37. A recent dispute pitting Tony Stone Images against Corel also may be pertinent. *See* Alana Kainz, *Corel to Fight Lawsuit Over Photo; U.S. Company Says Contest-Winning Photo* Was a Copy, Seeks *$400,000,* Ottawa Citizen, Dec. 8, 1994, at F8; Andy Gilgrist, *Photo Library Goes to Court Over Picture-Winner,* Design Week Nov. 25, 1994, at 5.

[135] *Koons,* 960 F.2d at 309-10.

[136] /d. at 310.

[137] *Id.* at 311.

[138] *Id.* at 309 ("We have stated that, though it is a significant factor, whether the profit element of the fair use calculus affects the ultimate determination of whether there is a fair use depends on the totality of the factors considered; it is not itself controlling").

[139] *Id.* at 310.

[140] *Id.* at 311.

translated into sculpture. Koons' version of sculpture thereby may have diminished Rogers' ability to enter this market.[141]

Koons raises some controversial issues which may be at odds with the Supreme Court's subsequent decision in *Acuff-Rose.* First, its approach to satire may have been too harsh. General social satire deserves less protection than parody, but the court seems to dismiss protection altogether. Also, it is not clear that Koons' work is much less a parody than *2 Live Crew's* song, *Pretty Woman.* The Supreme Court accepted that *Pretty Woman* was a degree of parody, but its social component clearly is the more substantial. The same may be true of Koons' sculpture. The most important issue for postmodern digital processors may turn on the court's *dicta* about parody and the substantiality factor. Although a parodist may be able to rely on a key lyric or core motif to conjure up the original in music or literature, it may be more difficult to take anything less than the whole with visual images.[142] As surmised above, if images are so integrated that parodies cannot be made with mere components, then postmodern artists using digital technologies should have more flexibility than *Koons* suggests to use entire images for the purposes of parodies. How well this argument will hold water clearly will be the essence of much future litigation in the visual arts.

D. Unlawful Reproduction: Interim Copying and Archiving

Discussions about the copyright implications of digital imaging usually focus on the final product. One must keep in mind, though, that when an image is scanned, or directly transferred from digital form into a digital image processor, some form of reproduction has been made at this juncture. Several issues are raised by this event.

As a starting point, one should recognize that the digital imaging device does not store the visual image. Rather a translation of the image, consisting of binary code Is and 0s, is made and held by the device. Even though the Is and 0s do not bear any visual resemblance to the original image, and thus are not substantially similar to the viewing audience, there is no doubt that they represent a derivative work, as defined in the Copyright Act. The binary representation of the image is, in effect, equivalent to a french translation of an eng- lish literary work. The only difference is that the digital translation

[141] *Id.* at 312 ("It is obviously not implausible that another artist, who would be willing to purchase the rights from Rogers, would want to produce a sculpture like Rogers' photo and, with Koons' work extant, such market is reduced.").

[142] Ames, *supra* note 28, at 1483-84.

is made so that it can be read by a computer rather than by another individual.

One might believe that the copyright laws would not cover a copy that is simply made within the internal structure of a computer- aided machine. However, this judgment would be an error. The definition of *copies* in the Copyright Act makes it very clear that the information held by the digital imaging device comes within the ambit of the law.[143] Cases in the computer field also demonstrate that the information does not have to be stored in a form of long-term memory before copyright issues arise. Even if the information is scanned into a temporary form of random access memory for immediate use, a reproduction has been made which must be authorized or fall within a recognized exception.[144] One may wonder why there is a problem with digital imaging when it is a common practice to copy computer programs into computer memories without specific authority. The situations differ, though, because there are special exceptions in the Copyright Act which enable users to make copies of computer programs for archival purposes and when the copies are necessary to use the computers.[145] However, there is no equivalent exception for making copies of visual images.

Possibly the most persuasive argument one can make is that the copy made internally within the machine is simply an interim format. If the final product is lawful, what harm can come from the fact that a temporary copy was made, as long as it was erased when the final image was completed? This argument recently was made in the landmark computer decompilation case, *Sega Enterprises v. Accolade*,[146] decided by the Ninth Circuit Court of Appeals. In a nutshell, Accolade translated Sega's video games from object code into source code so that Accolade could determine the interface instructions required for its games to operate on the Sega video entertainment system console. Personnel at Accolade isolated the operating instructions, and allegedly only gave them to its video game software developing teams who otherwise had no other access to Sega's video game codes. For the purposes of the case, therefore, it was assumed

[143] 17 U.S.C. § 101 (1988) (Copies are "material objects ... in which a work is fixed . . . and from which the work can be perceived, reproduced or otherwise communicated either directly or with the aid of a machine or a device").

[144] *See* MAI Systems Corp. v. Peak Computer Inc., 26 U.S.P.Q.2d (BNA) 1458 (9th Cir. 1993); Advanced Computer Services of Michigan, Inc. v. MAI Systems Corp., 845 F Supp. 356, 363 (E. D. Va. 1994) ("Plaintiffs argue that, because a program in RAM is only captured momentarily in the memory of a computer, it is too transient and ephemeral to meet the Act's requirements for 'fixation.' This argument too fails ")

[145] 17 U.S.C. § 117(1988).

146. 977 F2d 1510 (9th Cir. 1992).

that Accolade's final products were not copies of Sega's games except for the interface instructions, which were considered to be unprotected ideas or systems. After learning the interface instructions, Accolade destroyed its translations of Sega's games.

The Ninth Circuit rendered its decision based on the assumption that Accolade's final products were not unlawful reproductions of Sega's games. Thus, the case focused on the legitimacy of the copies that were temporarily made so that the lawful end products could be made. The court held that the lawfulness of the finished product does not, in and of itself, excuse the making of temporary interim copies. Rather, unauthorized interim uses of copyrighted works are lawful only if they, themselves, do not infringe, or if they fall within a statutory exception.[147] Thus, the act of scanning an image into a digital imaging device will be an infringement, notwithstanding the possible legality of the final transformed product, unless one of two conditions is met: (1) so little of the original image is scanned that the test for substantial similarity is not met; or (2) the interim copy made in the digital processing unit can be classified as a fair use. The first condition is probably not the typical scenario. Thus, the practice of digital imaging will be unlawful unless the making of an interim copy is a fair use.

The Ninth Circuit determined that decompilation of a copyrighted program is a fair use only if there are no alternative ways to access the ideas and functional elements that underlie the program, and when there is a legitimate reason for seeking such access.[148] The rationale for this appraisal is that copyrighted materials contain ideas and functions which do not come within the ambit of copyright protection. Thus, unless they are protected by some other domain of the intellectual property system, these elements are supposed to be available for public use. It follows that if copying provides the only way to obtain these unprotected elements, then copying should be condoned as a fair use. Analogizing this principle to digital imaging, one can conclude that an interim copy may be a fair use if imaging is the only way to recognize or obtain the ideas in an image. Unfortunately, this characterization will not protect the digital image processor since one easily can dissect the ideas of an image simply by looking at it.

To protect the digital imager, one needs to interpret *Sega* somewhat more broadly. Perhaps *Sega* could be read to mean that interim copying is lawful if there is no other way to achieve some specific lawful end. If so, then a digital imaging processor should be allowed to

[147] *Id.* at 1519.

[148] *Id.* at 1518.

engage in interim copying, but only to the degree that the copying is required to achieve an objective which itself is a fair use or otherwise is not an infringement. In this way, assuming the final transformation is a fair use or sufficiently dissimilar so as not to be a reproduction, the interim copy would not infringe as long as no more is scanned for interim use than is required to develop the final product.

It is doubtful that this standard would protect the practice of scanning entire images for digital imaging. Rather, only those portions of the image that are intended for integration can be stored temporarily in memory. Possibly some argument may be made that a digital imaging artist does not fully know the portions of an image that will be needed until after the entire image is manipulated. Just as one cannot read the ideas of computer code until after decompilation is complete, so may it be that an artist cannot be aware of the potential fair use until the full image is digitally examined. This clearly is a stretch that ultimately will have to be examined by the courts in light of expert testimony explaining how the artistic imaging process functions.

Those involved with digital imaging, for convenience or other reasons, may wish to store copyrighted digital images in a more permanent medium than in the computer's random access memory, such as on the hard disk. Archiving the copyrighted photo in this way without permission would very likely be an infringement of the copyright owner's reproduction rights. There can be no debate that the permanently stored image is a reproduction of the copyrighted image. Thus, it only can be noninfringing if it is protected by a statutory limitation. As mentioned before, there is a specific limitation for archival copies of computer programs, but this does not extend to images. Therefore, the only possible argument, again, is that permanent storage satisfies the fair use balancing standards. Unlike with interim copies where a fair use argument is plausible, successfully applying fair use to archiving seems remote at best. As noted, interim copies may represent a fair use if they are necessary to create a non- infringing transformative piece. This line of reasoning will not be effective in the case of archiving, however. One trying to justify archiving might claim that the image could be used in the future for other noninfringing transformations. This argument will not satisfy the fair use principles of *Sega,* though, because the archiving here would not be necessary to develop the subsequent noninfringing digital transformations of the image. Rather, the digital imaging processor simply could preserve the original authorized version for future scanning, or could purchase a new one. Therefore, those individuals who scan and store images in permanent formats without permission tread in very dangerous seas.

E. Transmissions and Infringement

There are many contexts in which those involved with digital imaging might depend on the transmission of digital images from one location to another. The simplest situation might arise when a person in one location scans a desired image and then transmits the digitized version to another site for manipulation. Or, expanding this more broadly, a person might scan an image, display it to others either through a personal bulletin board or via another person's bulletin board, and allow the image to be transmitted to other sites if the recipients choose to download it. Once downloaded, the image then can be transformed through digital imaging techniques by the recipients. Another scenario occurs when a digital image processor first manipulates an image, and then displays and transmits it through personal or third-party bulletin board systems.

Before tackling the copyright infringement aspects of these scenarios, it is useful to accurately determine how the acts of displaying and transmitting images between computer systems should be characterized under the Copyright Act. For instance, suppose a photographer sells a digitized version of an image on a CD and authorizes the buyer to load the image into the hard disk for storage and into the RAM of the computer so that it may be viewed. What happens if the buyer communicates with other computers so that other users may view the image if they choose to do so? Has the copyrighted image been displayed publicly? If so, then the buyer, who was not granted display rights, has infringed one of the economic rights of the copyright owner. According to the Act, "to display a work publicly" includes the transmission of images to the public or to a place where a substantial number of persons outside of a normal circle of a family and its social acquaintances are gathered.[149] Thus, display rights will be infringed if the image may be accessed for viewing by more than family and friends.

However, the scenario above involves more than the display right, even if the viewers do nothing else than look at the image. The other computer users do not view the image by peering into your computer system. Rather, they make a reproduction of the image in the RAMs of their computers and then view the copy stored in RAM. Thus, they have engaged in reproductions which are infringing unless they are authorized, which is certainly not the case in this situation, or unless they are protected by a specific limitation on the reproduction right in the Copyright Act. As usual, fair use is the focal point. This time,

[149]17 U.S.C. § 101 (1988).

though, the fair use argument may have substantial merit, most notably because the viewers presumably do so for nonprofit reasons. Also, even though the whole image is reproduced, the reproduction is preserved for only a short period of time and only for viewing. Finally, it may be hard for the copyright holder to argue that profits are jeopardized by the practice, unless the potential to observe the image on-line deters the viewers from purchasing the image through authorized channels.

Suppose now that some of the other computer users download the image into their permanent storage devices. Have copies of the image been distributed to the public? Again, if the answer is yes, then the rights of the copyright owner have been infringed, barring a limitation such as fair use. One court has held that this practice does constitute a distribution.[150] However, as previously discussed, the experts on the IITF Working Group disagree with this position. According to the IITF Working Group draft report, it is improper to characterize this situation as a distribution because one who distributes a copy must part with the copy. Otherwise, the Working Group argues, there will be a conflict with the first sale doctrine, which allows owners of copies to redistribute them without copyright liability.[151] The Working Group fears that if the downloading is deemed a distribution of a copy, then it is protected by the first sale doctrine. Since one retains the original copy, however, the original image then could serve as the host for numerous other protected distributions, a result that is inconsistent with the first sale doctrine's objectives.[152]

The IITF Working Group is correct that this situation defies traditional analysis. This is because the one original becomes several copies in distant computers. Thus, it is clear that reproductions have been made. The real issue, therefore, is who makes the reproductions. Either the user is making reproductions and distributing the copies to the recipient computer systems, or the recipients are receiving transmissions of the image and making the copies in their computers. Apparently, the IITF Working Group is more comfortable with the latter characterization, especially in light of perceived problems with the first sale doctrine. However, their fear about the first sale doctrine seems misplaced, since the doctrine does not protect the distribution of unauthorized copies, which the first scenario clearly

150.playboy Enterprises, Inc. v. Frena, 839 F. Supp. 1552,1556 (M.D. Fla. 1993).

[151] IITF WORKING GROUP REPORT, *supra* note 11, at 39.

[152] *Id.*

involves.[163] Thus, the Working Group appears to be improperly justifying their chosen result, which is to argue that the recipient is making the copies. Maybe the better approach is to be more simplistic. Since the copies are made at the direction and control of the recipients, it is more logical to assume that they make the copies. However, this conclusion is not mandated by the terms of the Copyright Act, notwithstanding the IITF Working Group's concern about the first sale doctrine.[154] Fortunately, the issue ultimately will be moot if the Working Group's suggestions are translated into law since the Group wants to clarify that a *distribution* includes the distribution of copies by transmission.[155] This presumably would make the buyer liable in the above scenario for infringing the distribution right, and would relieve the recipients of liability for reproduction. However, until such clarifications are added to the Copyright Act, these questions regarding distribution and reproduction rights will remain.

With these principles in mind, it now is possible to review the three transmission scenarios posed above that have relevance for those involved with digital imaging. The first situation, in which a digital imager, without permission, scans an image in one location and transmits it to another, is the least complex. Assume that the scanning into RAM is judged to be a fair use. If the image then is transmitted to RAM in one other site and erased from the original temporary memory source, one can argue that there is no infringement. However, for this to be the case, either the act of distributing or copying, depending on how one analytically dissects the transmission, must also be regarded as a fair use. Given the commercial nature of the venture, one may have to argue that the transmission is necessary to accomplish the protected end use. However, this approach seems dubious. Rather, one probably should appeal to the big picture. This practice is no different than copying the image into RAM and moving the computer without losing a power source. How this can be any more economically harmful to the copyright owner than leaving the computer in the same place is hard to fathom. Of course, if the original image is saved in a permanent storage medium in either location, then infringement occurs.

[153]Section 109(a) of Title 17 states, "Notwithstanding the provisions of section 106(3), the owner of a particular copy or phonorecord *lawfully made* under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord." (Emphasis added). 17 U.S.C. § 109(a) (1988).

[154] One could, for instance, legitimately characterize the recipient's instruction to transfer a file as a request to the transmitter to make and distribute a copy.

[155] IITF WORKING GROUP REPORT, *supra* note 11, at 120-22.

The second scenario involves individuals who transmit images to the public, with some recipients then engaging in infringing acts of digital imaging. Assuming that the transmissions are not authorized, then the transmitters will infringe display rights when recipients view the image. In addition, either the transmitters or the recipients will infringe if permanent copies are made in the recipients' computers.

The question then is whether the transmitting parties would be responsible for any subsequent acts of infringement incurred by digital image processors who manipulate the images. The answer here may depend on how the unauthorized transmissions are characterized. If they are distributions, then possibly the transmitters should be charged with subsequent infringing uses. Since the distributions are unauthorized, it seems appropriate to hold the distributors responsible for all reasonably foreseeable unlawful conduct which derives from the initial acts of illegality.[156] In a sense, the transmitters, by engaging in infringing distributions, are co-conspirators with all those who foreseeably depend on the unlawful acts to further their infringing conduct. Without a doubt, one who distributes an image in digital form should expect that some recipients will infringe the image's copyright through digital imaging; therefore, the requisite level of scienter is present.

If the transmissions are not considered distributions, then the transmitters possibly may escape liability for subsequent infringing acts. This is because, in a sense, the transmitters may have done nothing wrong, especially if they were authorized to load the images into the computer. Rather, the recipients acted inappropriately by copying the images into their computer systems. Of course, if the transmitters unlawfully scanned the images into their computers,

[156] A contributory liability standard is not the correct measure of responsibility in this situation. With contributory liability, individuals are held responsible for the unlawful actions of others even though, strictly speaking, they personally acted in a lawful manner. In a sense, the actors do nothing wrong, but they knowingly enable others to engage in unlawful activities. For policy reasons, liability attaches only if there are few if any lawful repercussions of the otherwise lawful conduct. This standard is inappropriate here because the transmitters' activities, by directly infringing exclusive rights to distribute, are unlawful and thus should not be protected by the policy rationales for contributory liability. Rather, it seems more appropriate to judge their responsibility under negligence principles. Given that their actions violate a statute, negligence should either be presumed or be relatively easy to prove. Thus, the transmitters should be held liable if their transmissions are the proximate cause and cause-in-fact of the infringements undertaken by digital image processors. Proximate cause is judged by the standard of reasonable foreseeability. Therefore, the transmitters should be held responsible for all infringements which are reasonably foreseeable consequences of their unlawful transmissions.

then maybe they should be held liable, under the co-conspirator theory, for every reasonably foreseeable infringing act that transpires because they made the images publicly available without permission. This result seems fair, despite the fact that the transmitters did not specifically infringe the copyright owners' distribution rights.

If the transmissions are appropriately authorized by the copyright owners, then the transmitters will not be liable when some recipients engage in infringing acts of digital imaging. Analogizing from principles laid down in *Sony,* a person making lawful transmissions should not be liable for infringing uses of transmissions as long as there are substantial noninfringing uses of the transmissions.[157] Since viewing would be a substantial noninfringing activity under this circumstance, there can be no responsibility for those who choose to use the image in an infringing way.

The final scenario involves an image that is transformed prior to its transmission to the public. If the transformed image, itself, infringes then the transmitter will be liable for unauthorized display when the image is viewed by recipients. The transmitter also may be liable for distributing copies to the public, but once again this depends on how the situation is characterized. If the transmitted image is not an infringing reproduction, either because it lacks substantial similarity or because of fair use, then the transmission of that image obviously cannot infringe another copyright owner's rights.

A final issue that has been raised within transmission contexts involves the liability of third-party bulletin board providers.[158] As noted previously, a host of infringements potentially may result when images are transmitted between computer systems. Often, these transmissions rely on bulletin board services whose operators have no specific knowledge about what is being transmitted. Is it fair to hold them responsible for the copyright infringements when their only role is providing a communication link? The leading case to date is *Playboy Enterprises v. Frena*[159] which held that bulletin board operators indeed are liable. In *Frena,* certain subscribers uploaded unauthorized copies of copyrighted Playboy photographs onto George Frena's subscription bulletin board service which other subscribers then downloaded. The court held that Frena infringed both the display and distribution rights. In reaching this conclusion, the court

[157] *Sony,* 464 U.S. at 442.

[158] *See* Sega Enterprises Ltd. v. MAPHIA, 857 F. Supp. 679 (N.D. Cai. 1994); Playboy Enterprises, Inc. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993); Cubby, Inc. v. CompuServe, 776 F. Supp. 135 (S.D. N.Y. 1991).

[159] 839 F. Supp. 1552,1555-59 (M.D. Fla. 1993).

determined that it does not matter that Frena may have been unaware of the copyright infringements.[160] Intent, it said, is not a determinant of copyright infringement; rather it only bears on the amount of statutory damages.[161] Bulletin board operators, in a sense, are treated more harshly with respect to copyright infringements than defamation. For bulletin board operators to be charged for libelous statements carried over their systems, they must exercise some form of editorial control.[162] This principle does not carry over to copyright infringement apparently. Yet, the *Frena* leaves open the possibility that statutory damages, if requested as the remedy, could be reduced to a somewhat low figure.[163] If this happens, then the only meaningful repercussion will be that future distributions of the infringing images will be enjoined.

F. Copyright Infringement and Moral Rights

Even if digital image processors receive all the necessary copyright permissions from the owners of the economic copyright interests, they also must recognize the possibility that there may be moral rights with which they have to reckon. Currently, the moral rights provisions under the Copyright Act likely will not affect the practices of digital imagers. First, they only apply to a very limited set of works, excluding most mass-produced forms of art and works made for hire. Second, the federal act is most concerned with alterations made to the original copies, and not with reproductions which differ in appearance from the original pieces. Indeed, as previously noted, some scholars believe that reproductions never can run afoul of the Copyright Act. However, this may be stretching the terms of the Act too far. It is possible that a distorting reproduction of a limited edition piece of art that is neither developed as a work made for hire nor distributed in the defined mass-produced formats could violate the rights of integrity and attribution under the terms of the Copyright

160.Id. at 1559.

[161] *Id.*

[162] *Cubby,* 776 F. Supp. at 139-40.

[163] A court has the discretion to reduce statutory damages to $200 for all infringements involved in the action when the infringer proves that he or she was not aware and had no reason to believe that his or her acts constituted copyright infringement. 17 U.S.C. § 504(c)(2) (1988).

Act.[164] Overall, the applicability of the Act's moral rights provisions to digital imaging appears minimal, at best. Nonetheless, digital imagers must always keep in mind that the Visual Artists Rights Act likely was only a first step for federal protection of moral rights.[166] Therefore, they should always be alert to possible future amendments strengthening moral rights under the federal copyright laws.

Although this article deals exclusively with infringement issues under the Copyright Act, digital image processors should note that they may encounter stronger moral rights principles under state laws and in other countries. For instance, some states may extend the right of integrity more explicitly to reproductions.[166] As noted previously, the application of these state policies likely will not be preempted by provisions in the federal copyright statute. Also, many countries have policies which more liberally protect integrity rights. As just one example, a department store in France violated Henri Rousseau's right of integrity when it displayed reproductions of his work that differed from the original in color and in form.[167] Thus, digital image processors with international marketing objectives must be extremely cautious about moral rights.

V. Conclusion

This article has dealt with the ways that digital imaging practices might infringe the economic and moral rights provided under the fed-

[164] Section 106A of Title 17 states

> The rights described in paragraphs (1) and (2) of subsection (a) [right of attribution] shall not apply to any reproduction, depiction, portrayal, or other use of a work, in, upon, or in connection with any item described in subparagraph (A) or (B) of the definition of'work of visual art' in section 101, and any such reproduction, depiction, portrayal, or other use of a work is not a destruction, distortion, mutilation, or other modification described in paragraph (3) of subsection (a) [right of integrity]. 17 U.S.C. § 106A(c)(3) (Supp. II. 1990). Clauses (A) and (B) of the definition of work of visual art in section 101 provide: A work of visual art does not include (A)(i) any poster, map, globe, chart, technical drawing, diagram, model, applied art, motion picture or other audio-visual work, book, magazine, newspaper, periodical, data base, electronic information service, electronic publication, or similar publication; (ii) any merchandising item or advertising, promotional, descriptive, covering, or packaging material or container; (iii) any portion or part of any item described in clause (i) or (ii); [or] (B) any work made for hire.

Id.

[165] *See* Dratler, *supra* note 65, at § 6.01[6].

166.Damich, *supra* note 55, at 399-400.

[167] Netanel, *supra* note 56, at 38.

eral Copyright Act. It should be clear that many of the ways that individuals wish to use digital imaging technologies will infringe the rights of copyright owners. Whether this is appropriate from a policy framework is open to discussion. Until new legal solutions are found, though, fair use likely will be the primary mediator to balance contending rights in the marketplace. One should not assume, though, that original artists hold all the cards. For although digital imagers often may infringe the rights of copyright owners, there may be very little, on a practical level, that the violated artists may do about it. Problems of proof and enforcement abound in the digital world.[168] Therefore, copyright owners may have to take matters into their own hands with new technological solutions. For instance, digital identifiers may be added to images to aid the detection of copying,[169] or royalty systems may be developed which exact payments when images are downloaded. What is clear is that digital imaging is an exciting, but troublesome tool. It is a foregone conclusion that the technology will be widely adopted and used. How the technology will be controlled and harnessed so as not to unduly upset the delicate balance of the intellectual property system will be fascinating indeed.

[168] *See* Tomlinson & Harris, *supra* note 9, at 1-4, 9-11, 54-56.
[169] *Id.* at 42.