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Copyright Ownership in a Networked Multimedia Environment

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COPYRIGHT OWNERSHIP IN A NETWORKED MULTIMEDIA ENVIRONMENT

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INTRODUCTION

Applications

The United States is implementing technology-oriented legislation that will provide a national infrastructure for the exchange of information.¹ This legislation is going to provide advancements comparable to the industrial age.² Major industries, such as the entertainment, telecommunications, and computer industries, will be merged and interconnected to provide tremendous economic benefits to the country. In addition, society as we know it will experience a profound change. Terminology like "knowbots,"³ "virtual library,"⁴ and "cyberspace,"⁵ will be commonly used as the parlance of the times.

The new technology will impact the way we as individuals function. The average American will be able to interact with his television set.⁶ Americans will carry a medical card the size of a credit card that contains pictures, text, and voice recordings detailing their entire medical history.⁷ Phone systems that display the person on the other end of the line will be commonplace.⁸ Lastly, the entire repository of books, videos, and recordings will be available on-line so that they can be accessed from a home computer.⁹

TECHNOLOGY

All of this capability will be available to the average American in the future, but there is a subset of this capability that is available in a system known as "Mosaic and the World-Wide Web." The system runs across a backbone network

¹The High Performance Computing Act, Pub.L.No. 102-194, (1991). The Information SuperHighway, H.R. 1757, 100th Cong., 1st Sess. (1993).

²William E. Halal, *Managing Information Technology in the Year 2000*, Future Technology Service of IDC Government,(1992).

³A knowbot is a knowledge robot that will go out into a computer network and intelligently gather the information that the requestor requires from the massive amounts of information that will be available. Future Technology Service Bulletin ISG Pub No. 1347, Knowbots (Information Strategies Group, 1991).

⁴A virtual library is a library that contains all of its works on authorship on computer network. See Intellectual Property Issues in the Library Network Context, Proceedings of the Library of Congress Network Advisory Committee Meeting. Network Development and MARC Standards Office, Network Planning Paper No. 17, 1989.

⁵David S. Jackson, *Cyberpunk*, Time Magazine, February 8, 1993. Cyberspace is the environment that a particular person creates on their computer when interfacing with a computer network. For example, if an artist goes out on the network and collects artistic material, the cyberspace that is created would be an artistic one.

⁶Irwin Dorros, Howard Miller, Paul Faffo, *2020 Vision: The Information Era*, Institute for Electrical and Electronic Engineering(I.E.E.E), October 28, 1993.

⁷Id.

⁸Id.

⁹Id.

called the internet,¹⁰ uses an human interface called Mosaic,¹¹ and is controlled by a distributed repository of index servers know as the World-Wide Web.¹²

Mosaic, as it is commonly known, is a networked multimedia¹³ system. The Mosaic component of the system allows you to create and view primary documents that reference secondary documents, much like any word processor. The difference between Mosaic and the basic word processor is that Mosaic allows you to transfer the secondary document in full text to your computer by highlighting that document.¹⁴ For example, Mosaic could be used to create a legal brief that references cases in an index. By highlighting one of the cases in the index, the case itself, in full text, could be transmitted over the internet to your computer. Your computer would find the address of the case from one of the World-Wide Web servers. Using Mosaic, the capability is there to see any secondary document that is referenced by the primary document that you have on the screen, no matter where in the world that secondary document is located. The capability of the system does not stop there. Mosaic is considered a multimedia system because it has the capability to transmit text, voice, and video as well. Therefore, an author can combine voice, video, and data into one multimedia document. This potentially could give an author the ability to create a multimedia document which contains text written by an author in New York, and video produced by an animator in California, with the voice of James Earl Jones.

Although the ability to integrate these works offers a tremendous amount of opportunities for creative expression, each of these works carries Intellectual Property Rights. Furthermore, if the Intellectual Property Rights associated with these works are not properly managed, Intellectual Property laws could stop the advancement of the Mosaic technology.

OBJECTIVES

The exclusivity provided by Intellectual Property normally spurs creativity, however, if Intellectual Property Rights are not carefully managed, designed for, and protected, they can impede the advancement of technology.¹⁵ Therefore, while technologies like Mosaic may seem to herald in a glorious new age, there are significant Intellectual Property hurdles that need to be crossed before we can reach this computer aged euphoria.¹⁶ Using a technology like Mosaic opens up a pandoras box of Intellectual Property woes involving trademarks, trade secrets, patents, unfair competition, and most importantly copyright law.

This paper will endeavor to analyze the copyright issues presented by this new technology, and more particularly, the copyright issues in a networked multimedia system. At the outset, the paper will introduce the reader to a brief overview of copyright law,¹⁷ as background. A specific networked multimedia environment, Mosaic, will be dissected and categorized into the statutorily proscribed categories for copyright works.¹⁸ Finally, this paper will discuss the effects of Mosaic produced, hypermedia works on traditional rights protected by copyright.

¹⁰The internet is a network of computers created by the Department of Defense. Site.

¹¹Mosaic is a user interface that allows you to compose multimedia documents. Site

¹²The World-Wide Web is a network of interconnected servers that retain the address of various hypertext documents found on the internet.

¹³Multimedia works are works that combine text images, sound, computer software and associated computer hardware to create something new. Michael D. Scott, James N. Talbott, *Interactive Multimedia: What is it, Why is it important and What do I need to know about it?*, (Practicing Law Institute, 1993).

¹⁴Transfer the document from a remote computer to the computer located at your work site.

¹⁵Robert A. Buckles, *Ideas, Inventions and Patents*, p8, 1957. Intellectual property protects innovation by encouraging disclosure, protecting investment, and increasing competition.

¹⁶Corporation for National Research Initiatives, *Workshop on the Protection of Intellectual Property Rights in a Digital Library System*,(1989).

¹⁷United States Code, Title 17.

¹⁸17 U.S.C.A. § 106 (West 1983).

INTELLECTUAL PROPERTY

Property, as defined by law, is usually denoted by the bundle of rights associated with an article.¹⁹ When someone is said to have the "ownership rights" in property, that person is able to exercise certain rights with respect to that article.²⁰ Among these rights are the right to exclude, alienate, inherit, or devise the article. Therefore, if a person can devise, alienate, exclude, or pass the property onto their heirs, that person is said to have an ownership interest in the article.²¹

Intellectual Property are "certain creations of the human mind that are given the legal aspects of a property right."²² A creation of the human mind which can be excluded from use, alienated, inherited, or devised is considered Intellectual Property. Furthermore, if a person can exercise the right to exclude, alienate, devise, or pass the property on as an inheritance, that person is said to have ownership in the Intellectual Property. Intellectual Property is defined into quantifiable legal instruments, such as patents,²³ trademarks,²⁴ unfair competition,²⁵ and copyright.²⁶

COPYRIGHT LAW

The United States Constitution provides for the protection of Intellectual Property by declaring The Congress shall have the power.... To promote the progress of the sciences and useful arts by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries.²⁷

As a result of this mandate by the constitution, copyright statutes have been promulgated since 1790. However, there are several revisions which have more of a bearing on modern day copyright law. Among these, the 1909 Act is important today because it made a distinction between pre-publication and post-publication rights.²⁸ This is still important because of the large body of works copyrighted under the 1909 Act. The 1976 Act²⁹ abandoned this distinction and changed the copyright coverage from 56 years, as defined by the 1909 Act, to a period of the lifetime of the author plus 50 years.³⁰ The 1976 Act was then further amended in 1980 by the National Commission on New Technology Uses of Copyright Works(CONTU) to include the protection of computer programs.³¹ Lastly, in 1989, the last major revision was made to the copyright statute. The revision provided for the United States participation in the "Berne Convention," which is an international copyright agreement.³² Although the Berne Convention has weakened some rights by making notice of

¹⁹63A Am. Jur. 2d Property § 1 (1984).

²⁰Id.

²¹Id.

²²J. Thomas McCarthy, McCarthy's Desk Encyclopedia of Intellectual Property (Published by BNA books 1991).

²³Title 35 of the United States Code.

²⁴Title 15 of the United States Code.

²⁵15 U.S.C.A. § 45 (West 1983).

²⁶Title 17 of the United States Code.

²⁷U.S. CONST. art1, sect 8, clause 8.

²⁸Copyright Act, Pub. L. No. 94-553(1909).

²⁹Copyright Act , Pub.L.No. 94-553 (1976).

³⁰17 U.S.C.A § 304 (West 1983).

³¹17 U.S.C.A. § 117 (West 1983).

³²The Berne Convention Implementation Act, Pub.L.No. 100-568 (1989).

copyright discretionary, in general, the Convention has given United States' authors more rights and advantages in the international arena.

In general, copyright law, as we know it today, is premised on the amendments starting with the 1976 Act. Under current copyright law, a copyright subsists in any work of authorship once it is fixed to a tangible medium.³³ These works of authorship include literary works, musical works, dramatic works, pantomimes, choreographic works, pictorial, graphic and sculptural works, sound recordings, and architectural works.³⁴ However, copyright protection does not extend to the idea, functional, or utilitarian aspects of the work, but only resides in the fixation in tangible form.³⁵ Compilations and derivations are also statutory areas that are protected³⁶ under current copyright law.

In addition to the fixation requirement, the work must also have some degree of originality.³⁷ In previous case law, the author had to show some sweat or work to meet the originality requirement. This was known as the "sweat theory."³⁸ Under the current interpretation of the case law, an author meets the originality requirement by demonstrating some modicum of "originality."³⁹ This modicum of originality has been defined in recent cases like *Feist Publications v. Rural Telephone Service Company*,⁴⁰ which turned back the sweat theory of copyright. Therefore, copyright protection is available for any work of authorship, which falls in one of the statutorily proscribed categories for copyright and contains a modicum of originality.

Once a work is eligible for copyright protection, a copyright in the work will give the author a number of rights.⁴¹ Among these rights are the right to reproduce the work, prepare derivative works, to distribute copies, to perform the work publicly, and to display the work publicly.⁴² These rights can be transferred collectively or under the 1976 Act, individually.⁴³

In addition to the rights associated with the work, control over the work will also depend on the nature of the ownership. When an individual has a claim of authorship, the rights associated with the copyright will reside with the author,⁴⁴ unless it is a work for hire⁴⁵ in which case the ownership rights will reside with the employer.

In addition to the single authorship scenario, a number of ownership issues come up when there is more than one author or manipulations of works of authorship. For example, different ownership rights come into play when you have joint works, derivative works, or compilations. A joint work is a work in which the authors had the intent of combining their efforts into a unitary whole.⁴⁶ Joint owners have an independent right to license the use of the work, subject to a

³³17 U.S.C.A. § 102 (West 1983).

³⁴*Id.*

³⁵17 U.S.C.A. § 102(b) (West 1983).

³⁶17 U.S.C.A. § 103 (West 1983).

³⁷*Feist Publications, Inc v. Rural Telephone Service Company, Inc.* 499 U.S. 340, 111 S.Ct 1282 (1991).

³⁸*Schroeder v. William Morrow & Co.*, 566 F.2d 3 (7th Cir.1977).

³⁹*Id.*

⁴⁰*Id.*

⁴¹Edward H. Rabin, Roberta Rosenthal Kwall, *Fundamentals of Modern Real Property Law*, (The Foundation Press, 1992).

⁴²17 U.S.C.A. § 106 (West 1983).

⁴³17 U.S.C.A. § 201(d)(1) (West 1983).

⁴⁴17 U.S.C.A. § 201(a) (West 1983).

⁴⁵17 U.S.C.A. § 201(b) (West 1983).

⁴⁶17 U.S.C.A. § 101 (West 1983).

duty of accounting to the other co-owners for profit.⁴⁷ A co-owner in a joint work can unilaterally alienate his interest in the joint work, but the co-owner cannot alienate the entire work.⁴⁸ Lastly, on the death of the co-owner their interest in the joint work passes to their heirs and not the surviving co-owner.⁴⁹

A derivative work is "a work that is based on a pre-existing work in which the pre-existing work is changed, condensed, or embellished in some way."⁵⁰ The author of the derivative work does not gain any rights in the underlying work. The copyright in the derivative work and the underlying work are separate from and independent of each other.⁵¹ Therefore, the author of a derivative work will not have the right to use the underlying work without paying a royalty. However, the author will gain the ownership rights in the derivation, which by definition is based on the underlying work.

Lastly, a compilation is a work that combines pre-existing material in a way that meets the common law requirement of originality.⁵² The owner of the compilation does not acquire any rights in the underlying work.⁵³ The copyright protection only covers the way that the author has combined, arranged, or organized the pre-existing work.⁵⁴

MOSAIC

Mosaic is a user interface that allows a user to create, control, search, and access information on the World-Wide Web.⁵⁵ The World-Wide Web merges the techniques of networked information and hypermedia documents to create a powerful global information system. The technology of Mosaic and the World-Wide Web combine to offer many new and innovative technical services. Among these are hypertext documents,⁵⁶ hypermedia documents,⁵⁷ networked virtual reality,⁵⁸ intelligent agent gatherers (knowbots),⁵⁹ relational database gateways,⁶⁰ and virtual libraries.⁶¹ The basis of most of these fascinating services, which are offered on Mosaic, are the hypermedia documents.

System Policy and Procedures

The Mosaic system has unwritten rules, when designing, developing, or editing hypertext or hypermedia documents.

⁴⁷H. Rep. No. 94-1476, 94th Cong., 2d Sess. 121(1976).

⁴⁸1 Nimmer on Copyright §6.11 (1989 rev).

⁴⁹1 Nimmer on Copyright §6.01 et seq. (1989 rev).

⁵⁰17 U.S.C.A. § 101 (West 1989).

⁵¹Stewart v. Abend, 495 U.S. ___, 58 USLW 4511, 4515, 14 USPQ2d 1614, 1622 (1990).

⁵²17 U.S.C.A. § 101 (West 1983).

⁵³17 U.S.C.A. § 103(b) (West 1983).

⁵⁴17 U.S.C.A § 101 (West 1983).

⁵⁵World-WideWeb - Summary [electronic bulletin board], cited January 12, 1994, available in Mosaic at <http://info.cern.ch/hypertext/www>.

⁵⁶Id. at hypertext documents.

⁵⁷Id. at hypermedia documents.

⁵⁸Id. at networked virtual reality.

⁵⁹Id. at intelligent agent gatherers.

⁶⁰Id. at relational database gatherers.

⁶¹Id. at virtual libraries.

In addition, because of the way the technology is designed, there is technologically enforced policy designed into the system.

One of the major unwritten policies centers around linking documents, graphics, animations, and recordings. These policies dictate how links are made, what constitutes a link, who can link to which documents, and how linking to documents is ultimately accomplished⁶².

When an author creates a primary document in the Mosaic system, a pathway is established so that when the author points to a graphic or word in the primary document, a secondary work, which may consist of a graphic, animation, or sound recording, will appear on the screen where the primary document was located. This is known as "linking" the primary document to the secondary work. These links can be created a number of times in the primary document, thereby linking the primary document to a number of secondary works. Once a secondary work is linked into the primary document, a new document is created consisting of the primary documents and its links to the secondary work. This linking concept also extends to tertiary works, which are linked to the secondary works.

Mosaic is designed so that any document, graphic, animation, or sound recording on the network can be linked into a primary document. Therefore, when you put your work of authorship, recording, graphic, or animation on Mosaic, you can be linked into another work. However, the system is designed so that when an author creates a primary document and makes links to secondary works, no one except the author can rewrite or relink the primary document. Therefore, Mosaic has an unwritten policy of openness with respect to linking and security with respect to authorship. An author can be linked in to many documents, graphics or recordings, and link to many documents, graphics and recording, but only the author can edit, or link his primary document, to any secondary works.

Hypertext Documents

The Mosaic links are the basis for hypermedia and hypertext documents. Hypermedia documents are documents that are linked to secondary text documents, sound recordings, graphics or animations. Hypertext documents are a basic version of Hypermedia documents because by definition, they are text documents that are linked to other text documents.⁶³ Hypertext documents themselves can provide a number of services, such as: general reference data like encyclopedias;⁶⁴ completely centralized publishing, such as on-line help, documentation, or tutorials;⁶⁵ centralized dissemination of areas which have a limited life;⁶⁶ and collaborative authoring or collaborative design of something other than the hypertext document itself.⁶⁷ All of these services are the result of being able to link primary documents to secondary documents or tertiary documents.

⁶²Id.

⁶³Pamela Samuelson, Robert J. Glushko, Intellectual Property Rights For Digital Library and Hypertext Publishing Systems, Harvard Law Review, volume 6, 1993.

⁶⁴WorldWideWeb - Intended Uses[electronic bulletin board] Cited January 12, 1994, available through Mosaic at <http://info.cern.ch>.

⁶⁵Id.

⁶⁶Id.

⁶⁷Id.

Hypermedia Documents

A hypermedia document is a document that enables an author to link a primary document to text, voice, images, and animations (movies).⁶⁸ In a hypermedia document, you can link text, to other text as in a hypertext document, but you can also link text, graphics or animations to other text, graphics, sound recordings or animations. In a hypermedia document, selecting text or a graphical icon in your primary document can bring a secondary document, movie, graphical icon, or sound recording to your computer.

A discussion of the legal issues of hypermedia documents will include the legal issues in hypertext documents since hypertext documents are a subset of hypermedia documents. Hypermedia documents include various types of authorship. Therefore, hypermedia documents fall into a variety of the statutorily prescribed areas for copyright, such as literary works, graphic works, motion pictures, or other audiovisual works and sound recordings.

Although a hypermedia document could easily be the result of a single work of authorship, hypermedia documents are often joint works, which fall into the statutorily proscribed category of a compilation. The compilation of text, sound, and animation in a hypermedia document all have distinct copyright issues. However, with the ease and flexibility of manipulating works on the computer, there are even more opportunities to erode boundaries of copyright law.

Ownership

Under current copyright law, hypertext documents typically fall into the statutory classification of a literary work. The hypertext literary work may be authored by a single author giving ownership rights to the single author or joint authors, in which case each author would share joint ownership in the work. A hypermedia document, on the other hand, may fall into a number of statutory categories. Usually a hypermedia work will be a combination of a literary work, a sound recording, a graphic work, or an audiovisual work. As in the case of a hypertext document, a hypermedia document can be authored by a single author, giving ownership rights to the single author or joint authors, in which case each author would share joint ownership in the work. In addition, both hypertext and hypermedia documents could be compilations. When a hypermedia work qualifies as a compilation, the ownership rights do not extend to the underlying work, but are in the compilation. However, ownership rights in a compilation, take on a different meaning in the Mosaic environment.

Normally, creating a paper document that cites secondary documents, animations or recordings does not trample on any ownership rights in the underlying work because you are only referencing the documents, graphics, sound recordings or animations. However, in a hypermedia environment, references are not only citations to the document, graphic, animation or sound recording, but are also links to the secondary works that are being referenced. These secondary works become part of the primary document as a result of the hypermedia link, thereby merging the primary document and any linked works into a unitary whole.⁶⁹ As a result, by linking a primary work to any secondary works in the hypermedia environment, a compilation may be created.

When the compilation and all of the underlying works are authored by a single author, there are no copyright rights that have been violated because ownership in all the works reside with the author. However, in a normal scenario the underlying works are authored by a different author, entity or group of people giving ownership rights to that person, entity or group of people. Therefore, by creating the hypermedia links, the author of the primary document has potentially created a compilation that would infringe on the underlying authors exclusive rights to perform the work publicly, display the work, reproduce and distribute the work, and prepare derivations of the work.⁷⁰

These problems are significant when a hypermedia work and its linked secondary documents are created by a single author, but additional issues arise when there is collaborative or "joint" authorship. Joint work in a hypermedia context takes on an entirely new meaning. In one scenario, the joint work can be created by two authors in disparate locations collaborating on a common document. One author could write the text with the other author using his creativity to link to a variety of secondary works. Secondly, a plurality of authors can both write the primary document and create hypermedia links to secondary works. Assuming that each of a plurality of authors collaborates on both the text and creating the hypertext links to the secondary works, all authors jointly would collectively have rights in the collective work and be required

⁶⁸World-WideWeb - Web Overview[electronic bulletin board], cited January 12, 1994, available on Mosaic at <http://info.cern.ch>.

⁶⁹Shapiro, Bernstein & Co. v. Jerry Vogel Music Co., 221 F.2d 569, on reh. 223 F.2d 252 (2nd Cir.1955).

⁷⁰17 U.S.C.A. § 501 (West 1983)

to provide an accounting to the other joint authors. However, joint work in the compilation does not give the authors any rights in the underlying secondary works.

As compilations that are joint works of authorship, hypermedia documents raise a significant amount of copyright issues.

For example, what constitutes joint authorship in a hypermedia work? If two authors do the writing and create the hypermedia links, has joint authorship occurred? Alternatively, if one author writes the text and the second author creates hypertext links, does this second scenario also qualify as joint authorship? In addition to the joint authorship issues, are copyright rights associated with a compilation in a hypermedia environment the same as the traditional rights divided under a compilation. If the copyright rights for a compilation in Mosaic is different, then, are all of the traditional tenets of copyright law out of place? Should the entire hypermedia work be viewed as a computer program, thereby changing the disposition of rights? The rest of this paper looks at each of these issues in turn, assessing a hypermedia document as a joint work, compilation and a computer program.

HYPERMEDIA DOCUMENTS AS JOINT WORKS

In order for joint authorship to exist, each potential joint author must intend, at the time contributions to the work were made, that each be treated as joint authors.⁷¹ Therefore, where there is no evidence from which it could be inferred that an author ever shared notions that they were co-authors, claim of joint authorship can be properly rejected.⁷²

In *Childress v. Claire Taylor*,⁷³ Ms Claire Taylor hired Alice Childress to write a play featuring the character "MOMS MABLEY." It is undisputed that Childress was the author. However, as a result of some of the research, interviewing and general ground work done by Clarice Taylor, Ms Taylor felt that she had a claim of joint authorship in the work.

In addressing Ms. Taylors claim, the court initially looked to the copyright act to define joint authorship, where a joint work is defined as "a work prepared by two or more authors with the intention that their contributions be merged into inseparable or independent parts of a unitary whole."⁷⁴ The court then went on to further define inseparable and interdependent. The court regarded a work as inseparable when its respective parts have little or no meaning standing alone.⁷⁵ On the other hand, an authored work was found to be interdependent when the work has some meaning standing alone, but achieved its primary significance because of their combined effect with other parts of the work.⁷⁶

For our purposes we will look at a hypermedia work being authored in two ways. Several authors can combine to prepare the work with each author performing both writing and creating the hypertext links. Alternatively, one author can do all of the writing and the second author can create the hypermedia links. In the first scenario where both authors are writing and creating hypertext links, it is clear that the work would be considered an inseparable work because the work would have little or no independent meaning standing alone. Therefore, if the two authors intend that the work of authorship be combined into an inseparable unitary whole, the work would qualify as a joint work and, therefore, be afforded all of the copyright rights that are engendered in a joint work.

In the second scenario where the work is written by one person and the links are created by another, the work could not qualify as inseparable because the written text and the linked documents, graphics, or recordings could stand alone as separate works. Therefore, these works would have to qualify as interdependent works, if they are to be considered joint works of authorship. Interdependent works have some meaning standing alone but gain their primary significance from their combination with other works or in the case of hypermedia documents, the links of the primary document to the secondary works. It could reasonably be stated that a hypermedia document would fail the interdependent test, because the primary work and the linked works, do not gain their primary significance from being combined together. Rather, both the primary

⁷¹*Shapiro, Bernstein & Co. v. Jerry Vogel Music Co.*, 221 F.2d 569, on reh. 223 F.2d 252 (2nd Cir. 1955).

⁷²Id.

⁷³*Childress v. Taylor*, 945 F.2d 500, 20 U.S.P.Q.2d 1191 (1991).

⁷⁴Id.

⁷⁵Id.

⁷⁶Id.

and secondary works independently have meaning. Therefore a hypermedia compilation, would only qualify as a joint work in the scenario where it is co-authored and co-linked.

The question then becomes how much of the work is considered the joint work. Is it the primary document, with its hypermedia links or does the joint work protection extend to the secondary document potentially creating a unitary whole in the primary and secondary works. To go even a step further, can we also include any tertiary works linked by the secondary works. Continuing this kind of logic, we could potentially have the primary work and every document, graphic, motion picture and sound recording in the Mosaic system being linked into one unitary whole. However, for a joint work to reside, the authors would have to intend that their works of authorship be combined into a unitary whole. Therefore, to combine all the works on the system would require that all of the authors on the system know every document that they could potentially be linked too. This requirement clearly could not be fulfilled.

HYPERMEDIA WORKS AS A COMPILATION

Remembering that copyright extends to the expression of an idea and not the idea itself.⁷⁷ Does making creative hypertext links to a document provide enough originality to give an individual joint authorship status in the compilation? As mentioned previously, the author can either be part of a team that decides which text, graphics, sound recordings and animations are linked, or could be an individual author who decides how to link another authors primary document.

In *Feist v. Rural Telephone Services Inc.*,⁷⁸ the court reasoned that compilations may possess required originality to qualify for copyright purposes if choices as to selection, coordination and arrangement are independently made by the compiler and entail a minimal degree of creativity.⁷⁹ Therefore, a compilation is eligible for copyright if it features a creative selection, coordination or arrangement. However, the copyright protection in the compilation is limited to particular selection, coordination or arrangement and does not extend to the underlying work.⁸⁰ The court also noted that the originality requirement for a compilation is not particularly stringent,⁸¹ it is only in compilations where the creative spark is so utterly lacking or so trivial as to be virtually nonexistent that the compilation will not qualify for copyright protection.⁸² In *Feist*, the plaintiff *Feist* published a telephone listing by extracting the listing needed from the defendant *Rurals* directory without *Rurals* consent. The court held that *Rurals* white pages were not entitled to copyright and, therefore, *Feist* use of them did not constitute infringement. The court came to this conclusion by first reasoning that if the white pages were copyrightable, they would be copyrightable as a compilation. The court looked to the 1976 Act to define a compilation as "a work formed by the collection and assembly of pre-existing materials or data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship."⁸³ The 1976 Act details three criteria that have to be met for the work to qualify as a copyrightable compilation: 1) a collection and assembly of the pre-existing materials, facts, or data; 2) the selection, coordination, or arrangement of those materials; 3) the creation or arrangement of an "original" work of authorship.⁸⁴ In determining whether the compilation was an original work of authorship, the court focused on the manner in which the facts were selected, coordinated, and arranged.

In *Mosaic*, a hypermedia document could easily fall within the first test enunciated in *Feist* because both the primary works and linked secondary works are pre-existing materials. However, questions can be raised as to whether the selection, coordination, or arrangement of the materials meet the common law standard for originality.

⁷⁷17 U.S.C.A. § 102 (West 1983).

⁷⁸*Feist Publications, Inc v. Rural Telephone Service Company, Inc.* 499 U.S. 340, 111 S.Ct 1282 (1991).

⁷⁹Id.

⁸⁰17 U.S.C.A. § 101 et seq.; Act March 4, 1909, § 1 et seq., 35 Stat. 1075.

⁸¹17 U.S.C.A. § § 101, 102(a,b), 103; Act March 4, 1909, § 5, 35 Stat. 1075; U.S.C.A. Const. Art. 1, § 8, cl. 8.

⁸²See *Feist*, 499 U.S. 340, 111 S.Ct. 1282.

⁸³Id.

⁸⁴Id.

In the scenario where two authors create both the text and determine the hypermedia links there is the potential for the work to be copyrightable as a compilation. In this scenario the work as a whole would be original because the facts could be selected, arranged and combined in a way that makes the compilation an original work of authorship.

The more interesting question is raised when one person does the text and a second person provides the hypermedia links. In this scenario, the important question is whether creating hypertext links is enough of a coordinating arrangement or selection to constitute an original work. Using Feist as a basis, it could reasonably be argued that the ability to link to such a wide variety of documents, graphics, animations, and sound recordings on the Mosaic system would provide an individual with enough opportunity for selection, coordination, and arrangement to meet the minimal level for creativity. In addition, it was noted in Feist that the creativity requirement is not stringent, so linking text to animations, text, graphics, and sound recordings would probably meet the creativity requirement. For example, linking an animation to light upbeat music, as opposed to scary or gloomy music, would convey significantly different messages to a person accessing the animation. Therefore, an author who creates hypermedia links on Mosaic could potentially have his work copyrighted as a compilation.

COMPUTER PROGRAMS

Categorizing a hypermedia work created on Mosaic as a joint work uses the old paradigm of copyright law. There are many who suggest that the entire work comprising the text, sound, and animation should all be categorized as a computer program,⁸⁵ thereby changing the statutory classification of the hypermedia work and the associated copyright rights.⁸⁶ Re-categorizing text, sound recordings, and animations as computer programs would be possible in the Mosaic context because a computer program are any set of rules, instructions, or steps that are performed on a computer. Therefore, animations, sound recordings, and text created in Mosaic would qualify as computer programs because they are rules, instructions, or steps. In addition, case law has dissected the computer programs into literal and nonliteral components.⁸⁷

The nonliteral components consist of the source code, which is the computer language, and the object code, which is the part of the code the computer understands.⁸⁸ In addition to the nonliteral components, the literal components include the surface, structure, and organization of the program as well as the screen outputs or user interface of the program.⁸⁹ The literal components, especially the user interface of the programs, have undergone a great deal of litigation in recent years.⁹⁰ This litigation is centered around the "look and feel" of computer program.⁹¹

Categorizing hypermedia documents in the Mosaic environment as computer programs creates a significant amount of problems.

The greatest of these problems centers around the fact that Mosaic is a standardized system. Therefore, the nonliteral elements of computer programs on the system will be very similar because they would conform to the programming standard set for the Mosaic system.

When an author creates a work in Mosaic, he is not using different code, but rather using standardized code to create different works of authorship. This is a significant problem because, neither the courts nor the legislature have established whether the work the program creates is copyrightable, and if so, whether the owner of the copyright is the

⁸⁵Michael D. Scott, James N. Talbott, *Interactive Multimedia: What is it, why is it important and what do I need to know about it?*, 369 PLL/Pat 275 (1993).

⁸⁶17 U.S.C.A. § 117 (West 1983).

⁸⁷ Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc, 797 F.2d 1222 (3d Cir. 1986), cert. denied, 479 U.S. 1031 (1987).

⁸⁸*Id.*

⁸⁹*Id.*

⁹⁰ W.H. Baird Garrett, *Toward a Restrictive view of copyright protection for non-literal elements of computer programs: recent developments in the federal courts*, 79 Va. L. Rev. 2091 (1993).

⁹¹Apple Computer, Inc v. Microsoft Corp. 799 F.Supp. 1006 (N.D. Cal. 1992), order clarified, 27 U.S.P.Q.2d(BNA 1081 (N.D. Cal. 1993).

programmer, the computer, or the user.⁹² So for example, when an author is creating hypermedia links to a primary document, as far as the computer is concerned, the author is linking standardized computer code from the primary document to the standardized computer code for the secondary work to create one large standardized computer code. Therefore, viewing hypermedia works created in Mosaic as computer codes does not give the author any significant advantages when assessing the nonliteral components.

However, a different conclusion may be reached when looking at the literal component of hypermedia documents, especially when assessing the "look and feel" of the work. The multiplicity of links that can be created within the Mosaic environment allows the author to give his document a unique look and feel. An author can create all graphic links, text links, animation and sound links, or a variety of all of these. When using the old copyright paradigm, these links would be protected as a compilation, but the compilation protects the selection, organization, and arrangement of the underlying work, but does not extend to the underlying works. However, by viewing the hypermedia document as a computer program, a potential plaintiff can argue that the links created in a particular hypermedia document creates a look and feel that is different from every other document that is not linked in the same way. In so doing, the plaintiff would have extended his protection beyond the boundary protected by the compilation. The protection would extend from the primary document through the series of works linked to the primary document. This would dramatically change the copyright rights the author of a hypermedia document would have with respect to the hypermedia work.

CONCLUSION

The protection afforded a hypermedia document may change depending on if you use the old copyright paradigm or a newer copyright paradigm. Assessing a hypermedia document as a compilation or joint work has some advantages, but may limit the coverage in the work. On the other hand, viewing the hypermedia document as a computer program may offer the author more protection in the work. These and many other copyright issues surrounding this technology are still to be decided.

As the Supercomputer highway, the internet, and technologies like Mosaic are developed, they are creating a revolution in the United States. The disposition of intellectual property rights with respect to these new technologies can either help or hinder the advancement of these technologies. Therefore, copyright law has a major role to play in advancing the country into the information era.

⁹²Evan H. Farr, *Copyrightability of Computer-created works*, 15 RUTLJ 63 (1989).

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