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COMMENT

“ISN'T THAT OUR SOFTWARE?”

Timothy Haslach*

I. INTRODUCTION

Today's P.C. and related software are designed for ease of use, hence the term “user friendly” has developed to describe such software. This ease of use allows an employee of a company, for example, to write reports, based upon volumes of data, in a fraction of the time required by conventional means. Once such a report program has been created by an employer or an employee, it can be used repeatedly and can be modified to meet alternative needs. Realization of increased productivity may lead an employee to attempt to sell such a program to competitors or to businesses similar to his employer's. Alternatively, an employer may take a copy of the employee's program and sell it to another company without compensating the employee-author.

In either of the above situations, the key issue concerns the ownership of the employee-developed program. This comment discusses various factors associated with the ownership of software written in the workplace.

II. BACKGROUND INFORMATION

The P.C. is comprised of four basic components: the keyboard, the central processing unit (C.P.U.), the monitor and the printer.¹ There are other components which a programmer may use, but

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* Candidate for J.D. 1988, Santa Clara University School of Law.

1. Keyboards, which resemble the keyboard of a typewriter, are used to enter strings of commands or data into the computer. When the user presses the keys on the keyboard, the keyboard translates the keystrokes into a series of on and off signals which the C.P.U. can read. Thus, when the “A” key is pressed, the keyboard generates a series of on(s) and off(s) (or zeros and ones) which the C.P.U. can read as an “A.” Once the signal is acknowledged by the C.P.U., it may send a signal to a television like monitor or a printer where the “A” will either be displayed or printed.

The C.P.U. is the brain of the computer system where programs of all types are read in a manner similar to that in which the keyboard signals are read. Once a program is loaded into

these four make up the basic components needed to run most software.

A computer program is "[a]n ordered set of instructions which sets forth a process to be accomplished automatically in a computer."² Software is "[t]he physical embodiment of a program."³ This physical embodiment is usually in the form of a floppy disk or magnetic tape. Software is also a general term relating to the "documentation procedures, forms and other soft or intangible information connected with the use of a computer program."⁴

There are many types of computer programs and software used in the business world. Among these programs are system operation programs⁵ and application programs.⁶

III. COPYRIGHT PROTECTION FOR COMPUTER PROGRAMS

Employees who write a computer program may attempt to protect their works through copyright laws. In the past it has not been clear whether copyright protection was extended to computer programs. This section shall review the development of copyright protection and its application to computer software.

Initially, when computer programmers sought copyright protection for their works, they were faced with problems based upon the prerequisites for copyrighting a work. When computer programs were first created, only the intelligible source code of a pro-

the Random Access Memory, or RAM, this reading process will constantly tell the C.P.U. how to react to commands inputted by the keyboard or by other programs.

See generally, TIME-LIFE BOOKS, UNDERSTANDING COMPUTERS, COMPUTER BASICS, at 32 (1985) [cited herein as COMPUTER BASICS].

2. M. DUNCAN & J. A. DAVIDSON, ADVANCED LEGAL STRATEGIES FOR BUYING AND SELLING COMPUTER SOFTWARE, at 13 (1986) [hereinafter cited as DAVIDSON].

3. DAVIDSON, at 13.

4. *Id.* at 13.

5. A system operating program is a "... collection of programs which are essential or useful to the operation of the hardware (the hardware being the computer components themselves)." DAVIDSON, at 14.

6. An application program is a program which, by the aid of the system operating programs or language, can perform pre-designed tasks such as amortizing loans or balancing a checkbook. When a computer programmer creates an application program, it is stored in a form known as source code. Source code is the text of the program which can be read or edited without the aid of a machine. The source code must be translated into a code that the computer can read, known as object code. Object code, unlike source code, cannot be read or edited without the aid of a machine.

The process of translating source code into object code is performed by a sophisticated program known as a compiler. Most programs which are marketed to the public are compiled and stored in object code. This allows the programmer to protect the lines of commands, or code, from being copied by another programmer and sold as a competing product.

gram could be copyrighted.⁷ This allowed the author of a work to protect the actual source code of his program, but it also allowed others to see how the program worked, and to copy it for their own use. Thus, it became apparent that programmers were only protected if their works could be copyrighted in object code, which is unintelligible without the aid of a machine. This problem was remedied, in part, by the 1976 Copyright Act,⁸ but only to the degree that the definition of intelligible work was expanded to include that work which could be comprehended "with the aid of a machine or device."⁹ While this provided some protection, other challenges to the copyrightability of computer programs developed because such programs were not expressly mentioned as protected works under the 1976 Act.¹⁰

The omission of computer programs from the 1976 Act brought much criticism upon Congress and prompted the National Commission on New Technological Uses of Copyright Works (CONTU) to recommend that the President and Congress amend the 1976 Act. The Commission proposed that the Act be amended so ". . . as to make it explicit that computer programs, to the extent that they embody an author's original creation, are proper subject matter for a copyright."¹¹ Congress took the recommendations under consideration and enacted the 1980 amendment to the U.S. Copyright Act.¹² As a result of this amendment, computer programs were finally recognized as proper subject matter for copyright and afforded some protection.

Interestingly, the legislative history of the 1976 Act reveals that the 1980 amendment may not have been necessary in order to protect consumer programs.¹³ The legislative history reveals that while Congress may not have expressly included computer pro-

7. Copyright Act, 1909, Act of Mar. 4, 1909, ch. 320; 35 Stat. 1075 (as amended, 1947) [hereinafter referred to as "1909 Act"].

8. Copyright Act, 1976, Public Law 94-553 1976 (effective January 1, 1978; current version 17 U.S.C. §§ 101 et seq.) [hereinafter referred to as "1976 Act"].

9. 17 U.S.C. § 102(a).

10. 17 U.S.C. §§ 101-118.

11. Goldstein, *Infringement of Copyright in Computer Programs*, 47 U. PITT. L. REV., 1119, at 1123. (1986) [hereinafter referred to as "Goldstein"].

12. Public Law 96-517, § 10(a), 94 Stat. 3028 (1980). See, Goldstein, at 1123.

13. The House Report States:

The history of copyright law has been one of gradual expansion in the types of works accorded protection, and the subject matter affected by this expansion has fallen into two general categories. In the first, scientific discoveries and technological developments that never existed before. In some of these cases the new expressive forms — electronic music, filmstrips, and computer programs — could be regarded as an extension of copyrightable subject matter

grams under the umbrella of copyright protection, the Act was intended to cover these forms of expression as they developed. This intention is consistent with the responsibility of Congress to legislate copyright and patent laws: "[t]o promote the progress of science and useful arts, by securing for a limited time to authors and inventors the exclusive right to their respective writings and discoveries."¹⁴

Unfortunately, the 1980 amendment did not solve all of the problems faced by computer programmers in securing copyright protection. This became apparent in the landmark case of *Apple Computer, Inc. v. Franklin Computer Corp.*,¹⁵ which dealt with the system operating programs which ran the Apple Computer. Defendant Franklin had copied some of the program source code and some object codes from plaintiff. Defendant argued that the program is part of the machine not meant to be communicated to people in a manner protected under copyright law. On appeal, the district court rejected defendant's argument and held that the 1976 Act had been written by Congress to cover operating systems, as well as other programs. The court concluded that there was no difference between the medium of a message and the message itself. Thus, even if the aid of a machine is needed to understand the form of the message that is communicated, copyright law still applied.

In light of *Apple* and the 1980 amendment to the 1976 Act, a computer program, be it in intelligible source code or unintelligible object code, could be copyrighted.

IV. OWNERSHIP OF THE COPYRIGHT

Having established that compiled programs can be protected under copyright law, in whom does the ownership of the copyright vest? The 1976 Act provides that the copyright in a work initially vests in the author or authors of the work.¹⁶ The 1976 Act further states that the authors of a joint work are co-owners of the copyright of the work.¹⁷

Given that the ownership of a copyright vests with the author, a problem arises in the situation where the author is not the person who created the work. Consider, for example, the employee who

Congress had already intended to protect, and were thus considered copyrightable from the outset without the need of new legislation.

H. Rep. 94-1476, 94th Cong. 2d Sess., at 51 (1976).

14. U.S. Const. art. I, § 8, cl. 8.

15. 714 F.2d 1240 (3rd Cir. 1983).

16. 17 U.S.C. § 201(a).

17. *Id.*

writes a computer program at his place of work. The 1976 Act states that in the case of a "work made for hire," the employer, or the person for whom the work was prepared, is deemed the "author."¹⁸ Thus, if a program is written under the guidance and at the behest of the employer, the employer may claim authorship of that program under the "works made for hire" doctrine of the 1976 Act.¹⁹ In addition, the employer who commissions an independent contractor to create a program, may be also be deemed as the author of that program.²⁰

However, the fact that an employer hires a person to create a program or to modify a program for the employer's use, does not mean that the work automatically falls under the definition of "works made for hire."²¹ Where the "work" of an employee or independent contractor meets the requirement listed under the 1976 Act, then the work is labeled as "works made for hire," and "unless the parties have expressly agreed otherwise in a written instrument signed by them. . . ,"²² the employer is deemed the owner of the copyright.

The application of the "works made for hire" section of the 1976 Act is evidenced in *Samet & Wells, Inc. v. Shalom Toy Co, Inc.*,²³ where a toy manufacturer employed an artist to create de-

18. 17 U.S.C. § 201(b).

19. *Id.*

20. However, this may not always be the case. In *Whelan Associates, Inc. v. Jaslow Dental Laboratories, Inc.*, 609 F. Supp 1307 (E.D. Pa. 1985), *aff'd*, 797 F.2d 1222 (1986), the court found that the contributions by the employer were not significant enough to raise the fiction of the employer being the author. Here, though, there was also a prior agreement as to the ownership of the programs.

21. The 1976 Act defines "works made for hire" as:

(1) a work prepared by an employee within the scope of his or her employment; or (2) a work ordered or commissioned for use as a contribution to a collective work, as 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 expressly agree in a written instrument signed by them that the work shall be considered a work made for hire. For the purpose of the foregoing sentence, a "supplementary work" is a work prepared for publication as a secondary adjunct to a work by another author for the purpose of introducing, concluding, illustrating, explaining, revising, commenting upon, or assisting in the use of the other work, such as forewords, afterwords, pictorial illustrations, maps, charts, tables, editorial notes, musical arrangements, answer material for tests, bibliographies, appendixes, and indexes, and an "instructional text" is a literary, pictorial, graphic work prepared for publication and with the purpose of use in systematic instructional activities.

17 U.S.C. § 101.

22. 17 U.S.C. § 201(b).

23. 429 F. Supp. 895 (D.C. N.Y. 1977), *aff'd*, 578 F.2d 1369 (1978).

signs for a toy turtle. The designs were completed and the artist was paid in full. The artist later presented the same designs to another manufacturer who produced the same toy. The original employer brought suit and the court determined that absent express contractual reservations of copyright in the artist, title to the copyright is presumed to be in the person at whose instance and expense the work was created. The court expressly stated that this presumption applies to independent contractors as well as employees.²⁴

In contrast, in *Siegel v. National Periodical Publications, Inc.*,²⁵ a comic strip creator revised and expanded his strip at the request of the publisher who had purchased the strip. The court held the revisions of the strip did not constitute a "work for hire" since the doctrine is only applicable when the employee's work is "produced at the instance and expense of the employer."²⁶ The court's conclusion stemmed from the fact that the comic strip was created prior to the employment relationship and the revisions were only made to accommodate the magazine format.

Under the "works made for hire" definition in the 1976 Act, the work prepared by an employee must be within the scope of his employment to constitute a "work made for hire."²⁷ The difficulty in applying this definition lies in determining the meaning of "within the scope of his or her employment."²⁸

In *Scherr v. Universal Match Corp.*,²⁹ a work is created "within the scope of employment" if the employer possesses the right to direct and supervise the manner in which the work is being performed. The court will look to the following factors to determine whether or not the works are within the scope of employment: a) whose instances, expense, time and facilities are being used; and b) the nature and amount of compensation that the employee receives for the work.³⁰

Using the *Scherr* test, the court's rationale and decision in *Siegel* becomes clearer. Because the comic strip was not created at the instance, expense, and time of the employer, and hence the facilities used were those of the artist, the work did not fall within the

24. *Id.* at 902.

25. 508 F.2d 909 (C.A. N.Y. 1974).

26. *Id.* at 914.

27. 17 U.S.C. § 101, which states in part:

A work made for hire is — (1) a work prepared by an employee within the scope of his or her employment.

28. *Id.*

29. 417 F.2d 497 (C.A. N.Y. 1969), *cert. denied*, 397 U.S. 936.

30. *Id.*, at 502.

definition of the "scope of employment." Although the artist received compensation for the comic strip, it was for work created prior to the employment relationship.

Applying the aforementioned cases to computer programs, it is apparent that, if a program is commissioned by an employer or other person and the work as a whole is created at the instance of the employer, unless there is an express contractual agreement stating otherwise and signed by both parties, the employer is the owner of the copyright. However, the modification of an existing program to suit an employer's needs, does not constitute a "work made for hire" and the program creator may retain ownership of the copyright. In addition, the programmer can rebut the initial presumption that the copyright of a computer program is owned by the employer, if the programmer can show the program was not created within the scope of the employment.

Another interpretation of "works made for hire" is found in the landmark case of *Aldon Accessories, Ltd. v. Spiegle*.³¹ The works in *Aldon* were handmade figures made for an American company by workers in the Far East. Aldon, the American company, registered their copyright for these works and brought suit against Spiegle for infringement of their copyright. The court determined that although the figures were designed and produced by non-regular employees (i.e. independent contractors) of Aldon, the supervision and direction of Aldon was sufficient to establish the works as "works made for hire." Thus, under the 1976 Act, the figures consisted of "works prepared for an employer within the scope of his or her employment."³²

A concise wording of current law regarding "works made for hire" is contained in *Aldon's* jury instructions:

A work for hire is a work prepared by what the law calls an employee working within the scope of his employment. What that means is, a person acting under the direction and supervision of the hiring author, at the hiring author's instance and expense. It does not matter whether the for hire creator is an employee in the sense of having a regular job with the hiring author. What matters is whether the hiring author caused the work to be made and exercised the right to direct and supervise the creation.³³

31. 738 F.2d 548 (C.A. N.Y. 1984), *cert. denied*, 105 S. Ct. 38.

32. *Id.* at 553.

33. *Id.* at 551. *But see*, *Easter Seal Society for Crippled Children and Adults of Louisiana, Inc. v. Playboy Enterprises*, 815 F.2d 323 (5th Cir 1987), where the U.S. Court of Appeals for the Fifth Circuit recently rejected the holding in *Aldon*. Here the court held that

The court in *Picture Music v. Bourne*³⁴ established a seven-part test to determine when a "work for hire" vests the copyright in the employer:

- 1) existence of an arrangement going beyond assignor-assignee relationship prior to the undertaking of the work; 2) payment of wages or other remuneration; 3) right of the putative employer to direct and supervise the manner in which the work is performed; 4) existence of an express contract for hire, especially when the author is to devote his or her services exclusively to the employer; 5) regular working hours; 6) the fact that the work was created in whole or in part at the putative employer's place of business; and 7) the putative employer has the right to suspend or dismiss the creator.³⁵

As previously mentioned, absent express contractual reservation of copyright in the author, title to the copyright is presumed to be in the person at whose instance and expense the work was done. However, an employee may include a provision in an employment contract which reserves to the employee the copyright in the work.

In *Whelan Associates, Inc. v. Jaslow Dental Laboratories, Inc.*,³⁶ an employer agreed that the programs written by the programmer for a dental laboratory would remain in the designer-programmer's ownership. Although the employer defined the information which he wanted to retrieve with the aid of the program, the *Whelan* court found these mere specification insufficient to give the employer ownership rights to the program. The court further held that the employer was unable to assert rights to copyright ownership because of the agreement made prior to the creation of the program. Once an employer and employee expressly contract for ownership of a copyright in material to be created, such a right cannot be asserted later by the party who relinquished it.

The court in *Picture Music*³⁷ set out the criteria for determining whether a program created by an employee for the employer's sole use on the employer's computer and without the instance or guidance of the employer constitutes a "work for hire." The court stated that when such works are created during the employee's off-hours, it is likely that the assignor-assignee relationship does not

only employees and independent contractors who fulfill the requirements of 17 U.S.C. § 101(2) can be "for hire" under the 1976 Act.

34. 314 F. Supp. 640 (D.C. N.Y. 1978), *aff'd*, 457 F.2d 1214, *cert. denied*, 409 U.S. 997.

35. 314 F. Supp. at 646.

36. 609 F. Supp. 1307 (E.D. Pa. 1985).

37. 314 F. Supp. at 646.

exist.³⁸ Because the work is created by the employee for the employee's use, there was no agreement that the employee create such a program for the benefit of the employer. Furthermore, because the employee is not being paid wages by the employer to create such a program,³⁹ the putative employer does not have the right to direct or supervise the manner in which an employee creates such programs.

On the other hand, if the employee had expressly agreed to devote all of his programming services to the employer, any program created thereafter is considered a "work[s] made for hire."⁴⁰ Hence, in this situation, the copyright would rest with the employer.

V. POST-EMPLOYMENT ISSUES

If an employee's work was created within his "scope of employment," and the employee subsequently terminates the employment relationship, would future use of the work in a post-employment situation be considered a compilation of prior works? In other words, when a programmer leaves his place of employment and takes copies of his compiled programs, and subsequently makes alterations to those programs, would his attempts to sell them on the software market infringe any copyrights vested in the prior employer?

In *Collier Engineering Co. v. United Correspondence Schools Co.*,⁴¹ the court held that an employee is not barred from making a new compilation from the original source nor from making use of experience and information gained in past employment. Thus, *Collier* together with *Seigel* suggests that a programmer-employee who modifies previously written programs within the "scope of employment" for use by an employer, may create a new compilation of that program and become the owner of the new program's copyright. This result is justified in light of the responsibility of Congress to create copyright laws to protect the true author in order to promote or foster developments in science and art.⁴²

38. *Id.*

39. This may be complicated if the employee creates the program during regular work hours since during that time period he would be receiving wages from the employer.

40. 314 F. Supp. 640.

41. 94 F. 152 (C.C. N.Y. 1899).

42. U.S. Const. art. 1, § 8, cl. 8.

VI. IDEAS AND EXPRESSIONS

An important issue to consider regarding computer software and copyright law is the fact that copyright law will protect the manner in which an idea is expressed, yet it does not protect the idea itself. "There is no question that copyright does not protect the underlying ideas and algorithms in a program. The question is where to draw the line between "expression" and "ideas."⁴³ In stating this, Davidson explains that a programmer may choose several ways to express an idea by simply using one of the various algorithms to express the same result. The choice of algorithm to achieve the result can be called the "programmer's style." Problems may occur when there are only a limited number of ways to achieve the desired result for any given program.

Davidson's best example of limited programs is the basic input and output program. A basic input and output program is one in which input-output is tailored to specific components, and as a result, can be written in only a finite number of ways. In these instances the programmer is able to copyright the work, but is unable to preclude others from writing similar programs, unless they are copied verbatim. In other words, if there are a limited number of ways to express an idea, without some flexibility, a programmer could hold a virtual monopoly over all basic input-output programs for similar systems.⁴⁴ This result would appear contrary to the general purpose of copyright law.⁴⁵

At first glance, Davidson's conclusion appears to differ with the holding of *Apple v. Franklin*.⁴⁶ However, in *Apple*, the type of program involved was neither short nor limited in alternative ways of writing the operating program.

Other cases have considered the dichotomy between "ideas" and "expressions" in computer programs. In *Apple Computer v. Formula International, Inc.*,⁴⁷ the court considered whether copying the instructions controlling the internal operations of a computer may be given copyright protection. The program was based upon an operating language that did not limit the ways in which the same idea could be achieved. The court determined that these pro-

43. DAVIDSON, at 99.

44. DAVIDSON, at 100.

45. U.S. Const. art. 1, § 8, cl. 8.

46. 714 F.2d 1240.

47. 725 F.2d 521 (9th Cir. 1984). See also P. Lamoree, *Expanding Copyrights in Software: The Struggle to Define "Expression" Begins*, 4 S.C. COMP. & H. TECH. L. J. 49 (1988).

grams were entitled to such protection despite the contentions that they were only ideas or processes (as opposed to expressions), which directly interfaced with the computer and not the user. The court found no distinction in the 1976 Act which would prevent copyright laws from protecting programs designed to interface with a user as opposed to those which simply managed the machine.

VI. USEFUL ARTICLES

Based upon these decisions, there appear to be limits to the protection of copyrightable programs. Under the "useful articles" doctrine, if "an article ha[s] intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information,"⁴⁸ such an article is deemed to be a useful article, and such articles or any part thereof⁴⁹ are not copyrightable.⁵⁰

Although the "useful articles" doctrine has few practical applications to copyright law regarding computer programs, it has been used in the arguments of such cases as *Apple v. Franklin* and *Apple v. Formula*. In both cases, the defendants, Franklin and Formula, asserted that the use of programs to run internal operations of a computer system and the "useful articles" built into a work are copyrightable (i.e. the computer hardware). It was also argued that these specific programs were not meant to be communicated to the user, but rather to be utilized by the hardware or internal memory of the system.

In both cases, the courts did not allow these arguments to subvert the protection of copyrightable programs. Although both courts did not directly mention the "useful articles" doctrine in their holdings, and instead relied on an interpretation of the 1976 Act, this does not preclude a later court from holding to the contrary.

VII. REGISTRATION

Once ownership of copyright is established, it is to the advantage of the owner to register the copyright. The registration of a copyright is essential if the owner is to bring a suit for infringe-

48. 17 U.S.C. § 101.

49. *Id.*

50. *See generally*, *Carol Barnhart, Inc. v. Economy Cover Corp.*, 773 F.2d 411 (2nd Cir. 1985) (utilitarian articles which do not possess artistic features that can be separated from their utilitarian dimension are not copyrightable); *Norris Industries, Inc. v. International Tel. & Tel. Corp.*, 696 F.2d 918 (C.A. Fla. 1983), *rehearing denied*, 703 F.2d 582, *cert. denied*, 104 S. Ct 78, (wire-spoked wheel covers are useful articles in that their artistic and utilitarian uses are one).

ment.⁵¹ According to Davidson, the 1976 Act encourages registration because it grants the copyright owner five major advantages.⁵²

First, an advantage to registration is that it entitles the copyright owner to collect attorney's fees in an infringement action commencing after the date of registration or, if the work is registered in the first three months of publication, after the date of publication.⁵³ This advantage is especially important if an injunction is sought. If an injunction is granted, but without an award of attorney's fees, most owners would be deterred from bringing future infringement actions.

Second, registration of a copyright creates prima facie evidence of ownership.⁵⁴ The existence of a certificate of registration will accelerate the granting of a preliminary injunction or procurement of a temporary restraining order against the infringing party.

Third, the earlier one applies for and receives the certification of registration, the earlier that party is able to file an infringement action. Because the process of certification takes a fair amount of time, the action will be delayed until certification is acquired and thus may not be pursued under the 1976 Act.⁵⁵ Thus, advanced registration would clearly benefit the author in his claims for infringement.

Fourth, by registering in advance, an owner is able to claim statutory damages for any infringement that occurs after the registration.⁵⁶ "In cases where actual damage is difficult to prove, such as where the violations are discovered before extensive damages are caused, but the threat of such damage is large, statutory damages can be useful in addition to attorney's fees to make the infringement action worthwhile."⁵⁷

And fifth, "registration can cure publication with defective notice, and avoid release of copyrighted work into the public domain."⁵⁸ This feature benefits the programmer who fails to place an effective notice of the copyright,⁵⁹ because if the mistake was inadvertent⁶⁰ the registration will effectively cure any mistake which

51. 17 U.S.C. § 411(a).

52. DAVIDSON, at 111-112.

53. 17 U.S.C. § 412.

54. 17 U.S.C. § 410.

55. 17 U.S.C. § 411(a). NOTE: a party might nevertheless be able to bring a common law copyright action if they fail to register.

56. 17 U.S.C. § 504(c).

57. DAVIDSON, at 112.

58. *Id.* See also 17 U.S.C. §§ 405-406.

59. See generally, 17 U.S.C. § 401, regarding "Notice of Copyright."

60. It is unclear if this applies to intentional omissions of notice "unless it was due to

may have occurred in the previous five years.

What result occurs when the copyright is registered in the name of someone who does not have the right of ownership? This situation arises where an employee creates a program that can be classified as a "work for hire," yet applies for registration and receives a certificate for the program. In *Sawyer v. Crowel Publishing Co.*,⁶¹ the court held that a copyright, obtained by an employee for work which was created in connection with his duties as an employee, is held in constructive trust by the employee for the employer. Therefore, if the work falls within the scope of the "works made for hire" doctrine, certification acquired by the employee would benefit the employer.

IX. APPLICATION TO THE EMPLOYEE PROGRAMMER

Generally, the employer is given the initial rebuttable presumption of copyright ownership pursuant to the "work made for hire" doctrine.⁶² The best way for the employer to protect itself from losing the benefit of an employee's compiled program, is through the use of restrictive clauses in the employment contract.

The cost of litigation over copyright ownership clearly justifies the creation of an express contract for employment for the employee-programmer. However, these agreements must be narrowly and specifically tailored. If an agreement is over-broad, it may not be enforceable.

Davidson lists four basic covenants for the employment contract: 1) the duties of the employee; 2) a confidentiality clause; 3) a covenant not to compete; and 4) an assignment of inventions.⁶³ A basic covenant in an employment agreement enumerating the employee's duties is useful when the employee attempts to assert ownership of a copyright the employer regards as a "work made for hire."

The covenant regarding the duties of the employee should include a description of what is within the scope of the employee's duties. The employer should retain the right to amend the contract and change the duties without termination of the agreement, and without execution of the contract, to allow flexibility in the use of his employees.

mistaken legal advice." DAVIDSON, at 112; *Innovative Concepts in Entertainment, Inc. v. Entertainment Enter.*, 576 F. Supp. 475 (E.D.N.Y. 1983).

61. 46 F. Supp. 471, 473 (3rd Cir. 1942).

62. 17 U.S.C. § 201(b).

63. Davidson, at 164-165.

A confidentiality clause protects trade secrets rather than works made for hire. Such an agreement would not block an employee from creating a new compilation or a derivative work based upon information the employee obtained through work experience.⁶⁴ However, confidentiality agreements are generally considered overreaching.⁶⁵ Therefore, such covenants cannot defeat a claim for infringement in situations where the offending work is a new compilation or a derivative work.⁶⁶

A covenant not to compete also concerns trade secret law rather than copyright law. Covenants not to compete are prohibited in several states including California, Michigan, and Minnesota.⁶⁷

An agreement to assign proprietary rights to the employer may be included in an employment contract. For instance: "all works which are copyrightable will be works made for hire within the meaning of the 1976 Copyright Act," or "that the company will own all legally recognized rights in any work product of the employee"⁶⁸

An employer may also be protected through the registration process. A "work made for hire" is presumed to give the copyright to the employer. The employer should complete the registration process as soon as practicable to protect the possibility of an infringement by an employee.

In summary, while the employer may have the right to copyright all works made for hire, it is in their best interest to draft an express employment agreement which the employer, the employer's agent, and the employee all sign. The employer should then register the copyright on all programs made for hire.⁶⁹

In contrast, the employee or independent contractor should have an attorney examine the employment agreement and deter-

64. See, e.g., *Structural Dynamics Research Corp. v. Engineering Mechanics Research Corp.*, 401 F. Supp. 1102, 1111-1112 (E.D. Mich. 1975).

65. See e.g., *Telex Corp. v. I.B.M.*, 367 F. Supp. 258, 315 (N.D. Ok. 1973), *aff'd.* in part, *rev'd.* in part, 510 F.2d 894, 929 (10th Cir. 1973), *cert. dismiss.*, 423 U.S. 802 (1975).

66. *Id.*

67. DAVIDSON, at 193.

68. DAVIDSON, at 196-197. See also 17 U.S.C. § 205 which states that the transfer of the copyright must be registered. 17 U.S.C. § 203 states that all such transfers are theoretically reclaimable after thirty-five years. After this period of time, it is doubtful that the software program would be of any value.

69. There are some practical considerations which may make an employment contract containing such clauses undesirable. One such consideration is "team spirit." If the covenants within the agreement are too restrictive upon the employees, they may feel that they are working in a prison and quit. However, if the covenants are too broad, they will not be effective.

mine the ramifications of such an agreement on the copyrightable works of the employee or the independent contractor.

The employee would naturally insist that the duties section of the agreement be drawn as narrowly as possible. Work done outside the scope or duties of employment should be clearly delineated from "works made for hire."

The independent contractor may expressly reserve the right to all copyrightable material. If the employer requires programs to fulfill a definite need in the market, the independent contractor may prefer to create the program at a reduced cost in exchange for either a royalties agreement with the employer or an agreement to retain ownership of the copyright. The availability of these options would allow the programmers greater benefit from their works and avoid costly litigation to both parties.

Because the employer's attorney usually draws up the employment agreement, the employee would be at a distinct disadvantage if he does not seek independent counsel. Ideally, the employee should be represented by counsel and participate in drafting the agreement. A well-bargained agreement can be drafted to benefit both parties.

Although a court may strike clauses in the agreement for overbreadth, the employee may be held to have signed away rights to copyrightable material which do not fall within the scope of "works made for hire."

Absent an employment agreement, the employee may rely on both statutory and case law to determine copyright ownership. The most favorable distinction is found in *Siegel*. In *Siegel*, the court held that a modification of pre-existing work, at the instance and expense of the employer, does not constitute a work created "within the scope of employment" and is not "work made for hire." Thus, an employee may create programs outside of the regular working hours and adapt them to uses that the employer needs while retaining ownership of those works.

In *Collier*, a former employee who created a new compilation based upon knowledge and experience gained while in an employer-employee relationship did not infringe the copyright. Making copies of programs that employees wrote for the employer may constitute an infringement of the copyright in, for example, a basic input-output program, though this is a very narrow exception. The employee may simply rewrite the program in another form or language to avoid being sued for infringement.

The underlying idea of a program, or algorithm, has been described as a "finite set of well-defined rules for the solution of a

problem in a finite number of steps."⁷⁰ The programmer may take an idea and create his own program as long as the programmer does not directly copy the source code or the object code of the existing program. Any similarities may be attributed to the finite nature of the algorithm.

An employee may argue, absent an express contractual agreement to the contrary, that although the work was created while the employment relationship existed it was not created at the instance of the employer and thus is not a "work made for hire."⁷¹

If the employee is unsure as to whether or not a certain program is covered by the "works made for hire" doctrine, the employee should register the copyright. If copyright litigation begins, the employee will then have prima facie evidence of ownership via the certificate, and the burden will shift to the employer to rebut this evidence. But if a court decides that the program was covered by the doctrine, the employee will be deemed to have held the certificate in constructive trust for the employer.

Finally, the employee should keep copies of the source and object code for all programs over which he has copyright protection. These programs should include a correct notice of copyright and a certificate of the copyright registration. The programmer should also include some "peculiarities" within the program unrelated to the algorithm such as a note concerning the function of certain command lines, because once the program is compiled, the object code will remain difficult to read or change. If a verbatim copy is made, small peculiarities may be used as evidence that the expression was copied by the second party.

X. CONCLUSION

Arguably, the employee is at a disadvantage in most contractual negotiations with an employer. While it may not seem equitable that the employer is presumed to own all "works made for hire," there are certain economic considerations which justify this position.

The employer provides the experience, compensation and tools for the employee to create his works. The experience which the employee receives prior to creating the program is paid for by the employer. An employee who was able to create a program because of his access to the employer's expensive P.C. might not have been

70. LINDSEY, ALEXANDER, LINDSEY ON ENTERTAINMENT, PUBLISHING AND THE ARTS, AGREEMENTS AND THE LAW, § 1918.

71. See e.g., *Siegel, supra*, *Scherr, supra*, and *Shapira, supra*.

able to do so otherwise because the employee would not have been able to afford such a machine. Thus, the employer provides both the means for the programmer to create as well as the need for the program itself.

Finally, if the employer could not retain the ownership of "works made for hire," it would not be economically beneficial for him to have these works made only to loose them to a competitor when the employee leaves.

While the employee is compensated for "works made for hire," he also avoids the expense and costs of marketing, registration, and distribution.

The employee's position may not be as unequal to the employer's position as it may seem. The employee can refrain from creating a marketable program until proper compensation is received.

The employee-programmer also has the advantage of controlling the creative output. An employee may quit a job with an employer, then develop a software program inspired by the experience and knowledge gained from work with the former employer, and subsequently acquire ownership of the copyright. This scenario places the employee in a strong bargaining position with the employer, thus justifying the restriction imposed by the "works made for hire" doctrine from the 1976 Act.

The "works made for hire" doctrine of the 1976 Act fulfills the purpose of Congressional power to enact such legislation because it promotes the development of science and technology. If the "works made for hire" doctrine was not included, many prospective programmers would not be given the experience, tools, or knowledge to create useful developments.

