Resolving Claims to Ownership of Software and Computer-Stored Data - The Importance of Temporary Restraining Orders and Preliminary Injunctions, 5 Computer L.J. 1 (1984)

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RESOLVING CLAIMS TO OWNERSHIP OF SOFTWARE AND COMPUTER-STORED DATA—THE IMPORTANCE OF TEMPORARY RESTRAINING ORDERS AND PRELIMINARY INJUNCTIONS†

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I. INTRODUCTION

The last decade has witnessed substantial growth in what has been termed the "high tech" industries. Indeed, in the areas of software and data processing in particular, growth has been undeniably spectacular.[1] Despite the recent nationwide recession, the $1.2 billion on-line database industry is growing at the rate of thirty percent annually,[2] and the personal computer market has blossomed into a $6.1 billion a year industry.[3]

An unfortunate cancer on the development of these lucrative markets, however, is the greatly increasing incidence of software theft, either outright or through copying. It is estimated that between twenty and thirty percent of industry revenue is siphoned off annually through piracy and resale of software by people other than the legitimate owners thereof.[4] This boom in software piracy has been facilitated by the rapid proliferation of available programming and the difficulty often involved in detecting a copied program.

By its prevalence, such piracy has thrown into bold relief a number of economic effects that can only adversely affect the marketplace in the long run. Preeminent among these effects is the relatively brief economic life expectancy of any particular piece of useful software—pirated copies can become pervasive so quickly that the incentive for prospective customers to pay retail prices for such programming greatly decreases.[5] As a result, vendors of original software are motivated to initially over-price their products in order to factor the likelihood of diminished revenues due to piracy into their return on investment equations. Even this tactic, how-

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1. *See generally* Schmidt, *Legal Proprietary Interests in Computer Programs: The American Experience*, 21 JURIMETRICS J. 345 (1981).

2. Blyskal, *Technology for Technology's Sake?*, FORBES, May 9, 1983, at 196.

3. NAT'L OTC STOCK J., April 25, 1983, at 5.

4. *Id.*

5. *Id. See also* Wall St. J., Sept. 6, 1983, at 2, col. 3.

ever, does not fully compensate the originating vendor due to the ever-present possibility that programs pirated incompletely may be of such poor quality that their use may serve to generate a bad reputation for the original work.[6] This, in turn, can only work to harm the potential for the originating vendor's present and future marketing of the software products.

The legal profession and the courts clearly have an obligation in what has become a pitched battle with the pirates to provide maximum legal protection for the creators and proprietors of databases and software products. Given the extreme volatility of the marketplace in these industries, the necessity for ensuring swift and decisive action to staunch the unauthorized copying and dissemination of software and computer-stored data cannot be overly emphasized. Unfortunately, many lawyers and, indeed, many courts have a basic lack of understanding not only of the technology, but also of the law in these areas.

At present, the temporary restraining order and preliminary injunction offer the most effective legal weapons to limit the losses that a vendor may incur once piracy has been discovered. The delays inherent in obtaining relief (by proceeding through a plenary trial) will more often than not be longer than the market life of the product in question, with the result that "legal relief" will otherwise be rendered both costly and impractical. Accordingly, hardware and software designers are constantly attempting to devise a viable technique to protect against piracy before it occurs and thereby avoid having to resort to legal action to enforce their rights. Nonetheless, temporary relief measures, when used in conjunction with federal copyright law and state trade secret law, currently present the best protection for software products and databases.

This Article explores the scope of the protection that has been afforded software products and computer-stored data to date and prescriptively details how and why temporary restraining orders and preliminary injunctions should be used to enforce the rights of proprietors of such property. First, a brief discussion of the legally significant technical distinctions between the various forms of modern programming, upon which some modern judicial decisions granting or denying relief to plaintiffs have apparently turned, is undertaken. Second, the nature and extent of copyright law protection, both historically and presently, is reviewed. A comparison is made between the federal copyright and state trade secret protection of software and computer databases. Third, the advantages of temporary restraining orders (TRO's) and preliminary injunctions

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6. *Id.*

are considered and the standards for their use are described. Particular attention is paid to the requisite criteria for the granting of a TRO or preliminary injunction. Finally, several tactical suggestions for the plaintiff and defendant involved in a temporary injunction contest are offered.

II. COMPUTER TERMINOLOGY

In discussing the legal protection of computer software and databases, a basic acquaintance with various technical terms is essential to an understanding of the issues with which recent court decisions in this area have dealt. This is especially important given that several decisions have turned on distinctions between the different types of computer programs. While these distinctions are purely technical in nature, the developing case law has nonetheless imbued them with a legal significance of which attorneys who deal with software and database protection should be aware.

A. SOFTWARE

Software is a generic term encompassing all types of programs that are executed by a computer, whether their purpose is to solve a specific problem, schedule and initiate the execution of other programs, or constantly check the computer's circuitry for malfunctions. The term "computer software," as used in the Copyright Act of 1976, includes not only programs but descriptions thereof and other supporting documentation. All such materials, as well as the programs themselves, constitute a designated type of "literary work" and are thus copyrightable.[7]

B. COMPUTER PROGRAM

A computer program is a set of serial instructions that directs the computer to perform certain tasks.[8] The user typically writes programs in "high level" programming languages that use words and symbols to command the computer to perform various simple and complex functions, ranging, for example, from basic addition and subtraction to differentiation and vector integration.[9] Since a computer cannot actually understand words, phrases, or symbols,

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7. 17 U.S.C. §§ 101, 102(a) (1982).

8. The 1976 Copyright Act's definition of computer program is set forth at 17 U.S.C. § 101 (1982), as amended: "[a] set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."

9. Of course, foreign languages other than English are being used as well, in the same way, although English is still the most widely used source from which programming language commands are drawn.

other special machine programs known as "compilers" and "transla-tors" translate the user-written instructions into a form of "machine" instruction that can be executed in the computer's cir-cuitry. Since this circuitry is basically composed of a large number of switches, each one of which is only capable of being on or off at any given point in time, every program is eventually reduced to a lowest level "object code," which is expressed in binary numbers. This is a series of ones and zeroes that instructs the various switches to close or open, respectively, thus executing the pro-gram.[10] Hence, computer programs may be written in either high level languages taking the form of words and phrases, or low level languages such as assembly language and object code.

C. SOURCE AND OBJECT CODE

Source code generally refers to any mnemonic system repre-senting large numbers of machine instructions, such as the high level languages BASIC, COBOL, and FORTRAN, which use com-mands resembling English words and symbols. Programs written in source code are entered into a computer via a variety of input de-vices (e.g., terminal keyboard, hard disk, floppy disk, magnetic tape, or punched cards) and then translated by a compiler into an inter-mediate assembly language. Note that although assembly language is much less sophisticated than the high level languages noted above, it is still considered a form of source code. Finally, the origi-nal program is translated from assembly language into machine readable language, composed solely of binary numbers. Instructions existing in machine language are referred to as being written in "ob-ject code." While it is possible for programmers to write assembly language or even object code directly, the usual and more efficient practice is to write programming in high level source code due to the greater ease with which it may be read, checked, and corrected.[11]

D. DIFFERENCE BETWEEN APPLICATION AND OPERATING PROGRAMS

Application programs are normally written in high level pro-gramming languages and are designed to perform specific user-ori-

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10. *See* Apple Computer, Inc. v. Franklin Computer Corp., 545 F. Supp. 812, 813-14 (E.D. Pa. 1982), *rev'd*, 714 F.2d 1240 (3d Cir. 1983).

11. *Id.* at 822 n.15. *See also* GCA Corp. v. Chance, 217 U.S.P.Q. (BNA) 718 (N.D. Cal. 1982) where it was argued that because the translator produces a direct transla-tion of source code into object code, this establishes a predictable one-to-one relation-ship between the two codes that preserves the programmer's original source of authorship.

ented tasks, such as maintaining and updating records, performing a series of calculations, or creating word processing capability. Operating programs, in contrast, perform functions internal to the computer such as scheduling the execution sequence of application programs, initiating the actual execution thereof, and directing the output to the proper output terminal device.[12]

E. READ ONLY MEMORY (ROM)

A ROM is a silicon chip on which a computer program in object code form is photochemically imprinted as a pattern of binary on/off switches. When activated in a given sequence, these switches serve to give machine instructions to the computer, to which the chip itself is permanently wired. This results in the execution of the program. Often the activation sequence of the switches can be varied, allowing the computer to function in several different modes. The computer program is imprinted photochemically; therefore, it is permanently stored on the chip and is not lost even when the power is turned off. Since the information stored in the ROM cannot be changed by the user of the computer, the name is apt: *read only* *memory*. That is to say, no new information can be added or "written" onto it.[13] A ROM is often characterized as being "firmware" because it combines software (the program) and hardware (the physical silicon chip) to control a computer.[14] A more recent development is the EPROM, an erasable programmable memory that can have its memory contents erased and reprogrammed.

F. DATABASE

A database is a body of information organized in a logical manner such that it can be accessed either randomly and selectively or sequentially by a computer. For example, a mailing list of customers constitutes a database from which names might be accessed by city, income level, or alphabetically, among other criteria, depending on how the database is structured.

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12. Apple Computer, Inc. v. Franklin Computer Corp. 545 F. Supp. 812, 814 (E.D. Pa. 1982), *rev'd*, 714 F.2d 1240 (3d Cir. 1983).

13. *See id.* at 813. *See also* Apple Computer, Inc. v. Formula Int'l, Inc., 562 F. Supp. 775 (C.D. Cal.), *aff'd*, 725 F.2d 521 (9th Cir. 1984).

14. Apple Computer, Inc. v. Franklin Computer Corp., 545 F. Supp. 812, 824 (E.D. Pa. 1982), *rev'd*, 714 F.2d 1240 (3d Cir. 1983).

III. SOFTWARE COPYRIGHT PROTECTION

A. HISTORICALLY

Until January 1, 1978, the availability of copyright protection was governed by the Copyright Act of 1909. Under this legislation, it was not at all certain whether computer software was copyrightable. While some programs were accepted for registration as "books," the courts were split as to the nature and scope of copyright protection to be accorded this type of work.[15] In 1974, Congress set up the National Commission on New Technological Uses of Copyright Works (CONTU), whose mandate was to consider software and technology problems in the context of the Copyright Act. The several conclusions that resulted were embodied in the 1978 CONTU Final Report.[16] Salient among these was that flow charts,[17] source code, and object code constitute works of authorship in which copyrights subsist.[18] As a consequence, said the Commission, copyright protects a program so long as it remains fixed in a tangible medium of expression, but does not protect the electro-mechanical functioning of the machine "performing" the program. The commission went on to say however that:

> [t]he copyright status of the written rules for a game or *a system for the operation of a machine* is unaffected by the fact that those rules direct the actions of those who play the game *or carry out the process*. Nor has copyright been denied to works simply because of their utilitarian aspects. It follows, therefore, that there should be likewise no distinction made between programs which are used in the production of further copyrighted works and those which are not.[19]

In contrast, Commissioner Melville B. Nimmer asserted in a concurring opinion that:

> *it may prove desirable* to limit copyright protection for software to those computer programs which produce works which themselves qualify for copyright protection. . . . A program designed for a computer game would be copyrightable because the output would itself constitute an audio visual work. . . . On the other hand, programs which control the heating and air-conditioning in a building, or which determine the flow of fuel in an engine, or which control traf-

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15. Apple Computer Inc. v. Formula Int'l, Inc., 562 F. Supp. 775 (C.D. Cal.), *aff'd*, 725 F.2d 521 (9th Cir. 1984).

16. NATIONAL COMM. ON NEW TECHNOLOGICAL USES OF COPYRIGHT WORKS, 1978 FINAL REPORT [hereinafter cited as CONTU FINAL REPORT].

17. Flowcharts are used to logically diagram a proposed procedure for solving a problem by computer and constitute a preliminary step toward the actual writing of a program in source code by a programmer.

18. CONTU FINAL REPORT, *supra* note 16, at 21.

19. *Id.* (emphasis added).

fic signals would not be eligible for copyright because their opera-
tions do not result in copyrightable works.[20]

While some doubt existed as to the proper interpretation of the
1978 CONTU Final Report, due to the divergent viewpoints ex-
pressed by Commissioner Nimmer above and by Commissioner
John Hersey in his dissent,[21] any ambiguity has since been clarified
by the recent decision of the U.S. Court of Appeals for the Third Cir-
cuit in *Apple Computer, Inc. v. Franklin Computer Corp.*[22]

B. THE COPYRIGHT ACT OF 1976

With the passage of the new Copyright Act of 1976[23] (1976 Act),
the subject matter of copyright protection was considerably broad-
ened. Even though the legislative history[24] and the actual text of
the 1976 Act suggested as much,[25] computer programs were not spe-
cifically enumerated as works eligible for such protection and, until
1980, their copyrightability remained problematical. In that year,
however, Congress amended the 1976 Act by adding a broad defini-
tion of what constitutes a computer program.[26] It was later held in
Williams Electronics, Inc. v. Artic International, Inc.,[27] that
"copyrightability of computer programs is firmly established after
the 1980 amendment to the Copyright Act, [and] we need not con-
sider the scope of prior Acts . . . ."[28]

While there is presently little dispute that source code programs
constitute copyrightable subject matter and are thus protected
under the 1976 Act,[29] the copyright status of programs either written
in or translated into object code has only recently begun to

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20. *Id.* at 26-27 (emphasis added).

21. *Id.* at 27-37.

22. 545 F. Supp. 812 (E.D. Pa. 1982), *rev'd,* 714 F.2d 1240 (3d Cir. 1983).

23. 17 U.S.C. § 101 (1982).

24. *See, e.g.,* H.R. REP. NO. 1476, 94th Cong., 2d Sess. 51, *reprinted in* 1976 U.S.
CODE CONG. & ADMIN. NEWS 5659, 5664.

25. Section 102(a) of the 1976 Act states that copyright can protect "original
works of authorship fixed in any tangible medium of expression, now known or later
developed, from which they can be perceived, reproduced, or otherwise communi-
cated, either directly or with the aid of a machine or device." 17 U.S.C. § 102(a)
(1982).

Section 101 explains that, "a work is 'fixed' in a tangible medium of expression
when its embodiment in a copy . . . is sufficiently permanent or stable to permit it to
be perceived, reproduced, or otherwise communicated for a period of more than tran-
sitory duration." 17 U.S.C. § 101 (1982).

26. *See supra* note 8.

27. 685 F.2d 870, 215 U.S.P.Q. (BNA) 405 (3d Cir. 1982).

28. 685 F.2d at 875.

29. *Franklin,* 545 F. Supp. at 822 n.15.

crystallize.[30]

As exemplified by the trial court in *Apple Computer, Inc. v. Franklin Computer Corp.*,[31] where a preliminary injunction was denied, many courts were originally uncertain as to the nature of the technology employed in micro computers — i.e., should it be treated as a form of expression and thus be subject to copyright law, or as a usable idea or process properly protectible under patent law? As a result of their reluctance to treat object code as a form of expression and a work of authorship, and the ROM as a tangible medium of expression, the courts were hesitant to grant preliminary injunctive relief at all, even where a defendant's culpability in copying a plaintiff's works was obvious.[32]

Although the *Franklin* court denied a preliminary injunction against the defendant's admitted appropriation of fourteen of plaintiff's object code programs, believing that such programs were not expressions directed to a human audience and were thus of doubtful copyrightability, the Third Circuit reversed.[33] The court concluded, *inter alia*, that computer programs, whether in object code or source code, are "literary works" within the meaning of the 1976 Act and are protected from unauthorized copying whether from an object code or a source code version. The court further held that computer programs in object code embodied in a ROM are properly copyrightable.[34] Of central importance, the court rebuffed the defendant's principal contention that Apple's operating system programs consti-

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30. Although the Copyright Office at present regularly accepts applications to register software comprised of source code, source code with object code, or object code alone, the registrations issuing for applications including object code are denoted "Rule of Doubt" registrations, based on the Copyright Office's inability to examine such works completely to determine whether there has been copyrightable authorship. *See* Copyright Office Guide Letter (Lit.) R-70 (July 1981). Such registrations have been upheld by various courts. *See, e.g.*, Tandy Corp. v. Personal Micro Computers, Inc., 524 F. Supp. 171 (N.D. Cal. 1981); Williams Elecs., Inc. v. Artic Int'l, 685 F.2d 870 (3d Cir. 1982); BPI Sys. v. Leith, 532 F. Supp. 208 (W.D. Tex. 1981); American Intelligent Mach. Corp. v. Basic Computers, Inc., COPYRIGHT L. REP. (CCH) ¶ 25000, (E.D. Va. 1981).

31. 545 F. Supp. 812 (E.D. Pa. 1982).

32. *See, e.g.*, Data Cash Sys. Inc. v. JS&A Group, Inc., 480 F. Supp. 1063 (N.D. Ill. 1979) (object code in a ROM is not protected by copyright since it is not a "copy" of the source code readable with the naked eye; therefore, defendants' admitted copying thereof is not actionable), *aff'd on other grounds*, 628 F.2d 1038 (7th Cir. 1980).

33. 714 F.2d 1240 (3d Cir. 1983).

34. Indeed, object code contained in a ROM has been held to be "fixed in a tangible medium," 26 PAT. TRADEMARK & COPYRIGHT J. (BNA) at 41, and characterized as a "tangible means of expression." *Id. See also*, Stern Elecs. Inc. v. Kaufman, 669 F.2d 852, 855 n.4 (2d Cir. 1982); Tandy Corp. v. Personal Micro Computers, Inc., 524 F. Supp. 171, 173 (N.D. Cal. 1981).

tuted either "processes," "systems," or "methods of operation" and were thus uncopyrightable; the court noted "[t]he mere fact that the operating system program may be etched on a ROM does not make the program either a machine, part of a machine or its equivalent."[35] Thus, the court could see no reason to afford less copyright protection to operating program instructions than to those of an application program.

The court's more favorable view towards expanding the scope of protection afforded by the 1976 Act, as amended, to software was buttressed by two earlier district court cases. In *Apple Computer, Inc. v. Formula International, Inc.*,[36] the plaintiff, Apple, sought to preliminarily enjoin the defendant from selling computer kits known as "Pineapples" that utilized operating programs embodied in either ROM's or diskettes. The defendant's programs were identical to programs copyrighted by Apple. Apple's ROM's had a copyright notice either printed on each ROM itself or printed immediately next to the ROM on the circuit board to which it was fixed. Each Apple diskette in issue bore a copyright notice on its face. While conceding that the conversion of a source code program into object code does not deprive the program of copyrightability *per se*, the defendant asserted that operating programs, because they are designed and intended to be used to control computer operations and not directly to produce the visual image or "expression" that the user discerns, were excluded from protection.[37] Relying on the text of the 1976 Act, as amended, the legislative history, and public policy considerations, the court rejected the distinction sought by the defendant and stated that since all computer programs are designed to operate so as to ultimately produce some useful communication to the user, *all* are protectible by copyright.[38]

The same ultimate conclusion was also reached in *Midway Manufacturing Co. v. Strohon*,[39] wherein plaintiff sought to prevent the

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35. *Franklin*, 714 F.2d 1240, 1251 (3d Cir. 1983).

36. 562 F. Supp. 775 (C.D. Cal.), *aff'd*, 725 F.2d 521 (9th Cir. 1984).

37. *See supra* notes 19-20 and accompanying text.

38. The court explicitly denied any distinction between application and operating programs for purposes of copyrightability:

> Either all computer programs so embodied are within the terms "idea, procedure, system, method of operation" and are excluded [from copyright protection; *see* 17 U.S.C. § 102(b)], or all of them are outside those terms and thus protectible. There is nothing in any of the statutory terms which suggest a different result for different types of computer programs based upon the function they serve within the machine.

26 PAT. TRADEMARK & COPYRIGHT J. (BNA) at 42.

39. 26 PAT. TRADEMARK & COPYRIGHT J. (BNA) 165 (N.D. Ill. 1983). Other cases holding that a ROM-based object code program that is used to create visual displays for arcade games is protectible against copyright infringement are: Midway Mfg. Co.

sale of defendant's modification kit for use in plaintiff's popular PACMAN video game. The kit consisted of five ROM's which, when substituted for certain of plaintiff's ROM's, resulted in a similar maze-chase game but with different visual characters. The court rejected the defendant's argument that ROM's, as silicon chips, are themselves a form of computer circuitry (i.e., hardware) and therefore utilitarian objects for which copyright protection is unavailable, and held plaintiff's object code to be copyrightable whether stored in a ROM, or on a tape or disk.[40] After deciding that a computer program connected with a video game is protectible *separately* from the game's "audiovisuals" (display images and sounds), the court went on to enjoin the defendant only from further infringement of the PACMAN object code. No infringement was found of plaintiff's PACMAN characters because defendant's audiovisuals were not substantially similar thereto, even though both were in part derived from the same object code.

Of tangential interest, the advent of the video game, as found in arcades and played on home computer systems, has given rise to the issue of whether or not the creative effort of the player in playing the game is comparable to writing or painting, since every person playing will be presented with a different sequence of images. In *Midway Manufacturing Co. v. Artic International, Inc.*,[41] the defendant argued that each performance was effectively the work of the player and not the game's inventor. In ruling against the defendant, the Seventh Circuit held that since video games are fully protectible as audiovisual works, the defendant's sale of printed circuit boards that speeded up the rate of play infringed upon the copyright owner's exclusive right to prepare derivative works. The lower court's granting of a preliminary injunction was thus upheld.

Duplication of a solid state chip by a competitor has been held to be an infringement of copyrighted object code.[42] Indeed, relief from infringement of object code has been granted to a plaintiff

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v. Artic Int'l, Inc., 547 F. Supp. 999 (N.D. Ill. 1982), *aff'd* 25 PAT. TRADEMARK & COPYRIGHT J. (BNA) 524 (7th Cir. 1983); Atari, Inc. v. North Am. Philips Consumer Elecs. Corp., 672 F.2d 607 (7th Cir. 1982); Atari, Inc. v. Amusement World, Inc., 547 F. Supp. 222, 215 U.S.P.Q. (BNA) 929 (D. Md. 1981); Midway Mfg. Co. v. Dirkschneider, 543 F. Supp. 466 (D. Neb. 1981); Williams Elecs., Inc. v. Artic Int'l, Inc., 685 F.2d 820, (3d Cir. 1982); Cinematronics, Inc. v. K. Noma Enter. Co., No. 81-439 (D. Ariz. May 22, 1981).

40. Midway Mfg. Co. v. Strohon, 26 PAT. TRADEMARK & COPYRIGHT J. (BNA) 165 (N.D. Ill. 1983).

41. 25 PAT. TRADEMARK & COPYRIGHT J. (BNA) 524 (7th Cir. 1983).

42. Williams Elecs. Inc. v. Artic Int'l, 685 F.2d 870, 877 (3d Cir. 1982). In response to such activity, Senator Charles Mathias (R-Md.) introduced the Semiconductor Chip Protection Act, S. 1201, on May 4, 1983, which seeks to extend copyright protection to semiconductor chips and the masks used to manufacture them.

where only the source code was federally registered as a copyright, the court noting that "[b]ecause the object code is the encryption of the copyrighted source code, the two are to be treated as one work; therefore, copyright of the source code protects the object code as well."[43]

IV. INTERACTION BETWEEN COPYRIGHT AND TRADE SECRET PROTECTION

Under the doctrine of federal preemption, whenever Congress, through legislation, manifests an intent to regulate a specific field of commercial activity, such action is construed to prevent the states from promulgating their own legislation or regulations in that field. Consonant with this doctrine, all state law covering the subject matter of copyright, or any exclusive right within the scope of copyright as defined in the 1976 Act, is preempted thereby.[44] Because copyright protection for an original work does not extend to any "idea, procedure, process, system, method of operation, concept, principle, or discovery,"[45] the 1976 Act serves only to protect the computer programmer's "expression."[46] Therefore, the underlying ideas, algorithms, concepts, and principles that are expressed by software programmers must be protected by another means. The other means most often utilized is the law of trade secrets as developed by the states.

There are several advantages in using state trade secret law, either alone or in tandem with copyright law.[47] First, trade secret

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43. GCA Corp. v. Chance, 217 U.S.P.Q. (BNA) 718, 720 (N.D. Cal. 1982). *Accord*, Apple Computer, Inc. v. Formula Int'l, Inc., 562 F. Supp. 775 (C.D. Cal.), *aff'd*, 725 F.2d 521 (9th Cir. 1984); Hubco Data Prods. Corp. v. Management Assistance, Inc., No. 81-1295 (D. Ind. Feb. 3, 1983). *See also*, Atari, Inc. v. JS&A, Inc., No. 83C8333 (N.D. Ill. Dec. 6, 1983) where the court enjoined the sale of a device enabling purchasers to make copies of Atari home video games, holding that the defendants did not have the legal right to sell such devices under the copyright laws.

44. 17 U.S.C. § 301(a) (1982). The legislative history of the 1976 Act suggests, however, that state "misappropriation" doctrine remain available for use against database misuse. *See* H.R. REP. No. 1476, 94th Cong., 2d Sess. at 132. Nonetheless, in Synercom Technology, Inc. v. University Computing Co., 474 F. Supp. 37 (N.D. Tex. 1979), the court held that the use of state misappropriation doctrine to protect input formats from copying was federally preempted. In contrast, application of the tort of conversion against employees who absconded with their previous employer's software was upheld by the Alabama Supreme Court in National Surety Corp. v. Applied Sys. Inc., 418 So.2d 847 (Ala. 1982) (computer programs are convertible despite their status as intangible personal property).

45. 17 U.S.C. § 102(b) (1982).

46. 17 U.S.C. § 102(a) (1982).

47. Most courts reject the argument that affixing the copyright notice to a work thereby waives or estops the availability of trade secret protection. *See, e.g.*, Man-

protection is at least potentially perpetual, being terminable only by discovery of the secret by others, whereas the duration of copyright is statutorily limited to the author's life plus fifty years.[48] Moreover, the employee non-disclosure agreement and other mechanisms of trade secret protection are relatively inexpensive to prepare and implement compared to the costs incurred in pursuit of a copyright registration. Perhaps the most significant advantage, especially in the area of computer software, is that copyright and trade secret law can effectively dovetail when used together, since unpublished programs can be protected by copyright at the same time that the underlying ideas and concepts are being accorded trade secret treatment.

V. TEMPORARY INJUNCTIONS

In meeting the challenge of an infringement of copyrighted software or unlawful disclosure of trade secrets, the temporary injunction in either of its two incarnations possesses a number of advantages to a client seeking relief.

First, the award of a temporary injunction ensures that a client will receive faster relief than would otherwise occur if a plenary trial were pursued directly. Also, the costs incurred in seeking and obtaining an injunction will be significantly lower. This latter characteristic alone makes such a course of action especially beneficial to smaller, less affluent clients. Most importantly, the award of an injunction may cause the infringing party to believe that the case is over and, in that manner, can serve as a catalyst for settlement. Seeking an injunction on behalf of an injured client has other salutary effects as well; it will satisfy the client's urgent and often emotional plea for relief, the strengths and weaknesses of the client's case will be learned quickly at the outset, the court will typically grant an earlier trial date and other docket preferences, and the client will likely be much more alert and willing to participate in the preparation of his case. The award of an injunction will also encourage the development of a healthy respect on the part of competitors for the client's vigilance in protecting its software and databases. Finally, where the full extent of the damage to the client's interests by the infringing party is not known, an injunction

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agement Science Am. Inc. v. Cyborg Sys., Inc., 6 COMPUTER L. SERV. REP. (CALLAGHAN) 921 (N.D. Ill. 1978); Technicon Medical Information Sys. Corp. v. Green Bay Packaging, Inc., 211 U.S.P.Q. (BNA) 343, 347 (E.D. Wis. 1980), *certified question on appeal*, 215 U.S.P.Q. (BNA) 1001 (7th Cir. 1982).

48. 17 U.S.C. § 302(a)(1982). If the copyright owner is a corporation, copyright protection of the work endures for a term of 75 years after the year of first publication. *Id.*

can operate to freeze the damage in its early stages and thus limit it significantly.

In the federal courts, the issuance of temporary injunctions is governed by Rule 65 of the Federal Rules of Civil Procedure. Temporary injunctions appear in one of two forms: the temporary restraining order and the preliminary injunction. Another form of injunction, the permanent injunction, is issued as a final order by the court after a trial of the action on the merits has been concluded.

A. FEDERAL TEMPORARY RESTRAINING ORDER STANDARDS

A temporary restraining order, under Rule 65(b), is a court order of limited duration issued to preserve the status quo pending a hearing on an application for a preliminary injunction. Under Rule 65(b), unlike any other form of injunction, the TRO can be granted without notice to the adverse party provided specific facts as shown by affidavits or the verified complaint indicate that immediate and irreparable harm to the movant will result before the adverse party can be heard in opposition. Another prerequisite to the issuance of an ex parte TRO is that the movant's attorney make a written declaration to the court as to why the adverse party was not contacted.

Although the court may issue a TRO for a shorter period of time, the maximum duration of such an injunction is ten days from the date of issuance. For good cause shown, however, the court may, in its discretion, extend the TRO for a like period not exceeding ten days. Once a TRO is granted, a defendant, on two days' notice to the party who obtained the TRO, or upon such shorter time as the court may prescribe, can move to have the order dissolved or modified. Where an adverse party has had time to file a verified answer with an accompanying affidavit before the application for the TRO is filed, the foregoing time limitation on the TRO's obtained in ex parte proceedings does not necessarily apply. Moreover, whereas the grant of an ex parte TRO requires that a hearing for the issuance of a preliminary injunction be set at the earliest possible date, a "noticed" TRO is not so constrained. While the granting of an ex parte TRO is not appealable, a noticed TRO, like a preliminary injunction, *can* be appealed under 28 U.S.C. § 1292(a)(1).[49]

Whether a TRO is procured ex parte or after notice, Rule 65(c) requires that the moving party first post a security bond to protect

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49. *See*, *e.g.*, Morning Telegraph v. Powers, 450 F.2d 97 (2d Cir. 1971), *cert. denied*, 405 U.S. 954 (1972). Despite this general rule, a TRO that was extended beyond the ten day period was treated as a preliminary injunction and determined to be appealable. Telex Corp. v. IBM, 464 F.2d 1025 (8th Cir. 1972).

the restrained party in the event it is later determined that the order was improvidently granted.[50] The provision of such bond ensures that the defendant will receive compensation for any damage it suffers on account of being wrongfully enjoined.

B. FEDERAL PRELIMINARY INJUNCTION STANDARDS

A preliminary injunction, under Rule 65(a), is a court order issued to preserve the status quo pending an adjudication on the merits of a claim for permanent injunctive relief. The purpose of such a remedy is to prevent the occurrence of irreparable injury, thereby preserving the ability of the trial court to render an efficacious decision after a trial on the merits. Unlike the TRO discussed above, a preliminary injunction may not be issued without notice to the adverse party.[51] This implies that a hearing will be held at which the party sought to be enjoined will be given an opportunity to oppose the motion for preliminary injunction.

The party seeking a preliminary injunction should accompany its motion with either affidavits or with live testimony at the hearing, substantiating its right to relief. Since the moving party has the burden to demonstrate the propriety of relief, the affidavits must establish the existence of four elements generally understood to be necessary before a movant can prevail. In particular, it must be shown that:

1. there is a substantial likelihood that the movant will eventually prevail on the merits;[52]
2. the movant will suffer irreparable injury unless the injunction issues;[53]
3. the threatened injury to the movant outweighs whatever dam-

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50. *See* Steinberg v. American Bantam Car Co., 173 F.2d 179, 181 (3d Cir. 1949).

51. FED. R. CIV. P. 65(a)(1), (c).

52. In the Tenth Circuit this element appears to be interpreted somewhat less stringently than the words imply:

> The touchstone for obtaining [preliminary injunctive] relief is a showing of irreparable harm coupled with a substantial likelihood of success on the merits. . . . However, where irreparability exists and the balance of hardships tips in favor of a movant, the probability-of-success requirements may be somewhat relaxed: "[I]t will ordinarily be enough that the plaintiff has raised questions going to the merits so serious, substantial, difficult, and doubtful as to make them a fair ground for litigation and thus for more deliberate investigation."

Community Communications Co. v. City of Boulder, Colorado, 660 F.2d 1370, 1375 (10th Cir. 1981), *cert. denied*, 456 U.S. 1001 (1982).

53. In copyright infringement cases, irreparable harm is presumed where the plaintiff can show probable success on the merits; in such cases, the defendant has the burden to rebut this presumption. *See, e.g.*, Midway Mfg. Co. v. Artic Int'l, Inc., 547 F. Supp. 999, 1014 (N.D. Ill. 1982); Midway Mfg. Co. v. Bandai-America, Inc., 546 F. Supp. 125, 142 (D. N.J. 1982); Midway Mfg. Co. v. Dirkschneider, 543 F. Supp. 466, 483

age the proposed injunction may cause the opposing party;[54] and

4. the injunction, if issued, would not be adverse to public interest.[55]

In the software context, irreparable harm to the movant has been found in a variety of forms, including: the disincentive of persons to play plaintiff's video game once the rate of play was speeded up by the addition of defendant's "speed-up" kit;[56] the likely disappearance of the market for the software or video game before the court can hear the action on its merits;[57] the inability to accurately determine the diminution of revenues resulting from the loss of existing and prospective customers;[58] and the loss of the movant's competitive advantage through disclosure of its trade secret to a competitor.[59]

Whether a plaintiff is required to post a security bond prior to the issuance of a preliminary injunction in his favor is totally within the court's discretion. While the court has wide latitude to take judicial notice of a plaintiff's financial status and set no bond, the parties may themselves also stipulate as to the amount of a bond.

Provision is made under Rule 65(a)(2) whereby either party, or the court on its own motion, may move that the trial of the action on the merits be advanced and consolidated with the hearing on the application for preliminary injunction. In that event, the court will only need to enter a permanent injunction should the plaintiff prevail. Consolidation is especially timely when both parties have had

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(D. Neb. 1981); Atari, Inc. v. North Am. Philips Consumer Elecs. Corp., 672 F.2d 607, 620 (7th Cir.), *cert. denied*, 103 S. Ct. 176 (1982).

54. For example, in Midway Mfg. Co. v. Artic Int'l, Inc., 547 F. Supp. 999, 1014 (N.D. Ill. 1982), the court, in awarding plaintiff a preliminary injunction, noted that plaintiff's substantial investment in its video games would be otherwise jeopardized, whereas defendant's infringing "speed-up" kit was not a significant part of its business.

55. Several decisions granting preliminary injunctions have noted that the public interest is served when the "creative expression" of plaintiffs is economically rewarded. See Midway Mfg. Co. v. Artic Int'l, Inc., 547 F. Supp. 999, 1015 (N.D. Ill. 1982); Midway Mfg. Co. v. Bandai-America, Inc., 546 F. Supp. 125, 155 (D. N.J. 1982). If the piracy and copying of others' works were freely permitted, few companies would be willing to invest in the development of new software. Such a reaction would indisputably be contra the public interest. See Midway Mfg. Co. v. Dirkschneider, 543 F. Supp. 466, 484 (D. Neb. 1981).

56. This was held to irreparably harm the plaintiff's reputation for high quality games. Midway Mfg. Co. v. Artic Int'l Inc., 547 F. Supp. 999, 1014 (N.D. Ill. 1982).

57. Midway Mfg. Co. v. Bandai-America, Inc., 546 F. Supp. 125, 154 (D. N.J. 1982).

58. Com-Share, Inc. v. Computer Complex, 338 F. Supp. 1229 (E.D. Mich. 1971), *aff'd*, 458 F.2d 1341 (6th Cir. 1972).

59. Modern Controls v. Andreadakis, 578 F.2d 1264 (8th Cir. 1978).

full opportunity to develop their case and no real necessity exists for further discovery.[60] A request for a jury trial, however, will serve to prevent such consolidation.

Finally, where a TRO or a preliminary injunction has been issued and is then violated by a defendant, that party may be held in contempt. A citation for contempt will usually significantly affect the outcome of the trial, especially in terms of how the court fashions the ultimate relief to be granted.[61]

C. STATE PRELIMINARY INJUNCTIONS

Although the factors determinative at the state level of whether preliminary injunctive relief should issue on a movant's application substantially parallel the standards set forth above, significant variation exists from state to state. Consequently, the individual state's case law must be researched and carefully analyzed to ensure the effective presentation of the plaintiff's motion for preliminary injunction.[62]

VI. LIKELIHOOD OF SUCCESS ON THE MERITS

Given that a plaintiff's likelihood of success on the merits at trial is such a cardinal criterion in the decision whether to grant or deny a temporary injuction, a brief examination of this aspect in the copyright and trade secret contexts is instructive.

A. COPYRIGHT

1. *Elements*

To show its likelihood of success at trial, a plaintiff suing on a claim of copyright infringement and seeking a temporary injunction has the burden to prove that the allegedly infringing works do not have their origin independent of plaintiff's works and that an infringement has in fact occurred.[63] Specifically, the temporary in-

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60. *See, e.g.*, Sunstrand Corp. v. Hydro Tech Corp., 204 U.S.P.Q. (BNA) 677, 683 (D. Colo. 1979) (application for a TRO denied and preliminary injunction hearing consolidated with plenary trial).

61. *See, e.g.*, Tour and Study, Inc. v. Hepner, No. 13107/79 (N.Y. Sup. Ct. Dec. 20, 1979), *aff'd*, No. 8538139 (N.Y. App. Div. Aug. 21, 1980) (former employees who violated a preliminary injunction were permanently enjoined for three years).

62. With respect to pendent non-federal claims brought in federal court, the question has arisen as to whether state or federal law should govern the grant or denial of a preliminary injunction. The circuits are split on this issue. *See* Black & Yates, Inc. v. Mahogony Assocs., 129 F.2d 227 (3d Cir. 1941), *cert. denied*, 317 U.S. 672 (1942). *But see* Frank v. Wiltshek, 209 F.2d 493 (2d Cir. 1953). *Accord*, J. MOORE & J. LUCAS, 7 MOORE'S FEDERAL PRACTICE 65.18(1) (2d ed. 1982).

63. Midway Mfg. Co. v. Dirkschneider, 543 F. Supp. 466, 482 (D. Neb. 1981).

junction movant must establish:

    a)   ownership of a valid copyright;

    b)   access to the copyrighted works by the defendant; and

    c)   copying by the defendant, by showing substantial similarity to the general idea contained in the plaintiff's work.[64]

With respect to the first element, the certificate of registration[65] provides prima facie evidence of both copyright ownership and copyright validity.[66] The defendant, consequently, has the burden of overcoming these presumptions.[67]

The evidence of access by a defendant to a copyrighted work need not be direct in order for the plaintiff to satisfy this second factor. For example, the wide dissemination in the marketplace of a plaintiff's video game has been viewed as substantial, albeit indirect, evidence of access by an infringing defendant.[68] Indeed, when the similarities between works are so striking that it is impossible to make a finding of independent creation, the existence of copying may be inferred without direct proof of access.[69] The plaintiff, however, carries a heavy burden to show the court that his work and the alleged infringement are strikingly similar. That is, he must demonstrate that "such similarities are of a kind that can only be explained by copying, rather than by coincidence, independent creation or prior common source."[70]

While the simple appropriation of another person's idea can never constitute copyright infringement,[71] where a comparison of source or object code between works yields only a relatively small number of differences, copying may be readily deduced.[72] Alterna-

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64. GCA Corp. v. Chance, 217 U.S.P.Q. (BNA) 718, 719 (N.D. Cal. 1982).

65. Registration of the copyright with the Copyright Office, or the refusal of same thereby, is prerequisite to the filing of an action for copyright infringement in the federal courts. 17 U.S.C. § 411(a) (1982).

66. 17 U.S.C. § 410(c) (1982). The 1976 Act protects "original works of authorship fixed in any tangible medium of expression." 17 U.S.C. § 102(a) (1982). As to the requisite standard of originality, the 1976 Act notes only that the work to be copyrighted must owe its origin to the creator (author) rather than to a copy of a prior source. If the registrant is determined to have committed fraud on the Copyright Office in this regard and harm or prejudice has been caused the defendant as a result, such findings will operate to erect a bar to any infringement cause of action. Midway Mfg. Co. v. Bandai-America, 546 F. Supp. 125, 142-43 (D. N.J. 1982).

67. Midway Mfg. Co. v. Artic Int'l Inc., 547 F. Supp. 999, 1007 (N.D. Ill. 1982).

68. Atari, Inc. v. Amusement World, Inc., 547 F. Supp. 224, 225 (D. Md. 1981).

69. Midway Mfg. Co. v. Dirkschneider, 543 F. Supp. 466, 482 (D. Neb. 1981).

70. Id. at 482 n.10 (quoting Testa v. Janssen, 492 F. Supp. 198, 203 (W.D. Pa. 1980)).

71. See supra note 25.

72. See, e.g., Midway Mfg. Co. v. Artic Int'l Inc., 547 F. Supp. 999, (N.D. Ill. 1982) (it was determined that as between 10,000 bytes (characters) of information contained in each of plaintiff's and defendant's ROM's, all but 488 bytes were the same).

tively, if such a comparison discloses the existence of common errors in the codes of plaintiff and defendant, this may also suffice for a determination of copying.[73]

2. Remedies

Since the risk always exists that a defendant will destroy its infringing software or databases prior to the commencement of the discovery process, the most useful initial remedy for copyright infringement is to seize and impound the infringing works.[74] Authority to take such action may be requested at the hearing on the application for a TRO or preliminary injunction. The plaintiff should seek an ex parte order enjoining the destruction, alteration, or removal of any and all documents, data stored on computer tapes or other storage devices, and all other items pertinent to claims of infringement that are lawfully discoverable.[75]

B. Trade Secrets

In order to prevail on the "likelihood of success" criterion for the granting of a temporary injunction against trade secret misappropriation, a plaintiff must establish the following elements:[76]

    a)   the existence of a trade secret;

    b)   defendant's acquisition of the trade secret through a confidential relationship; and

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73. *Id.* at 1005. Defendant's PUCKMAN video game contained the same error at the printed circuit board level as found in plaintiff's PACMAN game.

74. In Dirkschneider, 543 F. Supp. 466 (D. Neb. 1981), the court granted the request for an ex parte TRO and ordered the impounding of defendant's games. Where the defendant's actions constitute copyright infringement, prejudgment seizure is expressly authorized by § 503(a) of the 1976 Act, which states that "[a]t any time while an action is pending, the court may order the impounding, on such terms as it may deem reasonable, of all copies . . . claimed to have been made or used in violation of the copyright owner's exclusive rights." 17 U.S.C. § 503(a) (1982).

Such seizure and impoundment are provided for without the necessity of a pre-seizure hearing under the rules adopted by the U.S. Supreme Court. 21 U.S. 533 (1909), *amended by* 307 U.S. 652 (1939) and 383 U.S. 1031 (1966). Copyright seizures have been held not to violate the first or fifth amendments to the federal Constitution. Jondora Music Publishing Co. v. Melody Recordings, Inc., 362 F. Supp. 494 (D. N.J. 1973), *vacated on other grounds*, 506 F. 2d 392, (3d Cir. 1974), *cert. denied*, 421 U.S. 1012 (1975).

75. *See*, *e.g.*, Union Management Corp. v. Kappers Co., 336 F.2d 199 (2d Cir. 1966). For further discussion of useful plaintiff's tactics, see *infra* notes 90-91 and accompanying text.

76. *See* Sundstrand Corp. v. Hydro Tech Corp., 204 U.S.P.Q. (BNA) 677, 683 (D. Colo. 1979). *See also* Berryhill, *Trade Secret Litigation: Injunctions and Other Equitable Remedies*, 48 U. COLO. L. REV. 189 (1977).

c) defendant's use of the trade secret without authorization from the plaintiff.

The determination of whether a trade secret existed is based upon a consideration of several indicia. The subject matter of the trade secret must have been used in the plaintiff's business; in addition, it must have provided him with a discernible opportunity to obtain an advantage over competitors who did not know how to use it.[77] As a secret, it must have been known only to its owner (and those of his employees in whom it was necessary to confide) and cannot have been public or general knowledge in the plaintiff's trade or business.[78] The trade secret need not have been patentable, however, in order to qualify for trade secret status.[79] Other significant factors indicative of the existence of a trade secret are the value of the trade secret information to the businessman and his competitors, the amount of effort or money expended by the businessman in developing the trade secret information, and the ease or difficulty with which the trade secret information could be properly acquired or duplicated by others.[80]

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77. *See, e.g.*, Stanley Aviation Corp. v. United States, 196 U.S.P.Q. (BNA) 612, 617 (D. Colo. 1977). The Restatement definition of trade secret, from which the elements in the related text are drawn, includes "[a]ny formula, pattern, device or compilation of information . . . ," RESTATEMENT OF TORTS § 757, comment 6 (1939). Such an ambit would appear to be sufficiently broad to encompass software and databases. *See* Cybertek Computer Products, Inc. v. Pinckney Whitfield, 203 U.S.P.Q. (BNA) 1020 (Cal. 1977). The availability of trade secret protection for computer-stored information, however, is not universally approved. Courts may accord such protection to any compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know and use it. *See, e.g.*, International Data Corp. v. Infomart, Inc., 3 COMPUTER L. SERV. REP. (CALLAGHAN) 1163 (C.D. Cal. 1971). Other cases have been decided contra. *See, e.g.*, Republic Sys. & Programming, Inc. v. Computer Assistance, Inc., 322 F. Supp. 619 (D. Conn. 1970) (no trade secrets in database of present and prospective customers), *aff'd*, 440 F.2d 996 (2d Cir. 1971); Keystone Floor Prods. Co. v. Beattie Mfg. Co., 360 F. Supp. 588 (E.D. Pa. 1973) (dictum) (no trade secrets in database showing sales, dollars, customers, and product lines).

78. Sundstrand Corp. v. Hydro Tech. Corp., 204 U.S.P.Q. (BNA) 677, 683 (D. Colo. 1979). *See also* Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 475 (1974).

79. For example, various business opportunities often present themselves to a company and may constitute trade secret material per se. Even though such opportunities may be of questionable feasibility to the company, an employee nonetheless has no right to exploit any such opportunities after leaving the company's employ. *See* Tlapek v. Chevron Oil Co., 407 F.2d 1129 (8th Cir. 1969) wherein geologist X devised a unique plan for the development of an oil and gas area, while employed by Y. After Y rejected X's plan, X left Y's employ and began developing the area according to the plan he developed, at a profit. When Y sued for loss of a corporate opportunity trade secret, Y was awarded X's profits. Chevron Oil Co. v. Tlapek, 265 F. Supp. 598 (W.D. Ark. 1967), *modified*, 407 F.2d 1129 (8th Cir. 1969).

80. RESTATEMENT OF TORTS § 757 (1939).

Apropos of the second element, access by the defendant to the trade secret must be established in order to prove its misappropriation. A defendant has been held to have gained access by enticing a knowledgeable employee away from the company owning the trade secret,[81] or by bribing an employee of a third party customer of the plaintiff to steal the latter's software outright.[82]

Although efforts at systematic enticement and successful wholesale enticement of a company's executive and skilled employees have resulted in substantial damages being awarded,[83] most courts have held that the general skills and experience of an employee cannot be restrained from use in future employment.[84] Where an employment relationship involves a contract prohibiting the disclosure of the employer's software trade secrets, however, the employee subject to the contract has a legal duty not to divulge the trade secrets.[85] Of course, non-disclosure contracts between parties not involved in an employment relationship, such as lessors and lessees, or vendors and vendees, are valid and enforceable as well.[86] It should be noted, though, that individuals who occupy the position of director, officer, or "key employee" of a company are held to bear a fiduciary duty to act in the best interests of their employer always, regardless of whether or not a written contract exists to this effect.[87]

As with copyright infringement, evidence of trade secret misap-

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81. *See* Telex Corp. v. IBM, 367 F. Supp. 258 (N.D. Okla. 1973), where the employee who was hired by defendant took a copy of the source code with him to defendant's place of business. Defendant then utilized the misappropriated material to develop its own software that it subsequently sold, together with the IBM source code copy, to a third party.

82. *See* University Computing Co. v. Lykes-Youngstown Corp., 504 F.2d 518, 529, *reh'g denied*, 505 F.2d 1304 (5th Cir. 1974).

83. *See, e.g.*, Telex Corp. v. IBM, 367 F. Supp. 258, 317-27, (N.D. Okla. 1973), *aff'd in part, rev'd in part*, 510 F.2d 894 (10th Cir. 1975). *See also* C. Albert Sauter Co. v. Richard S. Sauter Co., 368 F. Supp. 501, 505-08 (E.D. Pa. 1973) (defendant's successful enticement of 80% of plaintiff's executive and skilled employees resulted in an award of treble damages and attorneys fees).

84. *See, e.g.*, Lessner Dental Laboratories, Inc. v. Kidney, 16 Ariz. App. 159, 492 P.2d 39 (1971); CMI Corp. v. Takob, 209 U.S.P.Q. (BNA) 233, 237 (W.D. Okla. 1980).

85. *See* Structural Dynamics Research Corp. v. Engineering Mechanics Research Corp., 401 F. Supp. 1102, 1111 (E.D. Mich. 1975).

86. *See* Com-Share, Inc. v. Computer Complex, Inc., 338 F. Supp. 1229 (E.D. Mich. 1971), *aff'd*, 458 F.2d 1341 (6th Cir. 1972).

87. In Hyman & Co. v. Velsicol Corp., 123 Colo. 563, 233 P.2d 977 (1951), *cert. denied*, 342 U.S. 870 (1951), the court stated that a group of scientists, engineers, technicians, and others who had left their former company to form a new, highly successful enterprise were "key personnel." As such, they were held to have violated their fiduciary duty and were required to turn over $1.5 million in profits to their former employer. "Key personnel" are those who have "worked together for many years," possess the "knowledge and competence" required to produce a competing product,

propriation is frequently indirect and circumstantial. Often, in copying software, a defendant will blindly copy latent errors, arbitrary code segments, deviations, or quasi-mistakes that operate to raise a strong inference to the court that the defendant's product is not the result of independent development.[88] Since trade secrets, especially in the software context, are generally developed only after a significant investment of corporate resources over an extended period of time, their misappropriation will generally serve to eliminate the requirement of any such initial investment by the culprit. Evidence of such a "head start" by a competitor in the development of its software — the lack of an investment of time and resources commensurate with the software's complexity — can be indicative of misappropriation of a trade secret.[89]

VII. TACTICAL CONSIDERATIONS

A. PLAINTIFF'S CASE

Since one of the plaintiff's goals in seeking a TRO is to focus the attention of the court on the urgency of its case and the need for expedited action, a motion for expedited discovery should be filed at the same time that the motion for a TRO is made. In addition, where a claim is made for copyright infringement, a certified copy of the plaintiff's copyright registration should be attached to the complaint when it is filed. As noted above, this registration constitutes prima facie evidence of the validity of the plaintiff's ownership of the copyright.

In pursuing a TRO or preliminary injunction, time is often of the essence in the preparation of affidavits, documents and exhibits. With this in mind, plaintiff's attorney should give consideration to assembling a team of people to facilitate and expedite such preparation. In addition to the attorney, the team should include a client representative to help prepare or coordinate the preparation of affidavits, help gather the evidence, and teach the technology to the at-

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and have the "understanding" needed to serve the industry. *Id.* at 617, 233 P.2d at 1005.

88. *See* Structural Dynamics Research Corp. v. Engineering Mechanics Research Corp., 401 F. Supp. 1102, 1117 (E.D. Mich. 1975). For a discussion on the use of indirect evidence in the determination of copyright infringement, see *supra* notes 68-73 and accompanying text.

89. In Analogic Corp. v. Data Translation, Inc., 371 Mass. 643, 358 N.E.2d 804 (1976), *X* had developed a high speed data module for employer *Y* at a cost of $100,000 over 18 months. *X* then left *Y*'s employ and had a competing module after only two months and an investment of $2,500. *See also* Telex Corp. v. IBM, 367 F. Supp. 258 (N.D. Okla. 1973), (defendant set 18 month schedule to develop same project that IBM had taken five years to complete).

torney and others. A technical consultant is also needed to assist in the understanding of the technology involved and in determining the type of discovery needed for the overall prosecution of the case.

When structuring arguments in a software copying case, plaintiff's attorney would do well to assert that plaintiff is not seeking to enjoin the defendant from marketing programs that perform the same function and purpose as do plaintiff's programs; rather, plaintiff seeks only to stop the marketing of programs that perform in the "exact same manner" as his own.[90] Where it is possible to say so truthfully, plaintiff should explicitly state that the defendant's software is identical in *virtually every detail* to his own.[91] Such a declaration is tantamount to an accusation of outright copying by the defendant.

B. DEFENDANT'S CASE

Defendants, once they have notice of an action pending against them, should seek to create a team of individuals similar to the one suggested for the plaintiff, in order to better organize their defense.

In their efforts to defeat a plaintiff's motion for a TRO or preliminary injunction, defendants should always make use of affidavits or live testimony whenever possible, rather than rely on simple denials or conclusionary statements through their attorneys. This tactic will lessen the likelihood that all criteria for the issuance of a temporary injunction will be met by the plaintiff to the court's satisfaction.

Defendants, in their arguments, should attempt to have the duration of the injunctive relief, if granted, restricted to as limited a period of time as possible. In one case, an injunction was successfully limited to the period of time in which the proprietary material could be independently duplicated.[92]

Finally, defendants confronted with the prospect of a temporary injunction against unlawful use of a trade secret should seek to have the plaintiff define exactly what trade secrets allegedly have been misappropriated. In the event an evasive or vague answer is received, defendants should move for a court order compelling full identification of the trade secrets in issue and, in the interim, move

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90. *See* Apple Computer, Inc. v. Formula Int'l, Inc., 562 F. Supp. 775 (C.D. Cal.), aff'd, 725 F.2d 521 (9th Cir. 1984). As observed in CONTU FINAL REPORT, *supra* note 16, at 21, "[o]ne is always free to make the machine do the same thing as it would if it had the copyrighted work placed in it, but only by one's own creative work rather than by piracy."

91. Midway Mfg. Co. v. Dirkschneider, 543 F.Supp. 466, 483 (D. Neb. 1981).

92. *See* Analogic Corp. v. Data Translation, Inc., 371 Mass. 643, 358 N.E. 2d 804 (1976).

to stay any further discovery.[93]

VIII. CONCLUSION

The incidence of piracy will almost certainly increase because of the intense competition associated with the explosive rate at which the software and database industries are burgeoning. Until computer engineers develop and implement an infallible technique to obviate attempts to infringe or misappropriate proprietary material, the courts will remain the only viable recourse for software creators and publishers seeking redress for and limits on their losses. More particularly, the TRO and the preliminary injunction, when used in conjunction with copyright law and the state law of trade secrets, will continue to offer the optimal means for securing effective legal relief within a reasonable period of time after an instance of piracy is discovered.

As more lawsuits are brought against pirates of software and databases, it is hoped that more courts will develop insight and sophistication regarding the issues typically involved and, as a result, their reluctance to grant temporary injunctive relief in these cases will diminish. This would certainly be a welcome development, for the continuing preservation in the United States of the entrepreneurial drive to innovate in the software area could ultimately demand no less.

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93. *See, e.g.,* Chemical and Indus. Corp. v. Druffel, 301 F.2d 126 (6th Cir. 1962).