

ARTICLES

THE RIGHTS OF COMPUTER PROGRAM USERS UNDER JAPANESE AND UNITED STATES COPYRIGHT LAWS

Lee Bendekgey*
Caroline H. Mead**
Shigeru Miki***

I. INPUTTING SOFTWARE: "COPYING" UNDER UNITED STATES AND JAPANESE LAWS

A. Introduction

Both the Japanese and United States legislatures have recognized that the unique characteristics of computer software necessitate special treatment under their respective copyright laws. In recent years, both countries amended their copyright laws to provide that special treatment. The Japanese and United States copyright laws take fundamentally different approaches to the issue of limiting the liability of a purchaser/user of computer software although both laws address themselves to the ways in which the uses of computer programs differ from those of other copyrightable works.

Under the laws of both the United States and Japan, neither the *purchase* nor the *use* of copies of other copyrightable works, such as books or records, is an infringement, whether or not authorized by the copyright owner. The United States Copyright Act's descriptions of the copyright owner's exclusive rights are directed at duplication, adaptation, and public uses such as distribution, public display, and public performance.¹ Similarly, Japan's copyright owner's exclusive rights are focused on duplication, adaptation, and

* Partner, Graham & James, San Francisco.

** Associate, Graham & James, New York.

*** Miki Law Offices, Tokyo, Japan.

1. 17 U.S.C. § 106 (1982).

public performance.² Consequently, a purchaser of a copy of most copyrighted works who uses that copy privately ordinarily would not be an infringer in the United States or in Japan.

One characteristic of computer software not shared by other copyrightable works, however, is the process by which it is used. Using a program involves loading it into a computer's memory where it is recorded until the user erases it, typically by turning off the computer. In effect, the use of a computer program, unlike other copyrightable works, requires the preparation of a copy of the program. The Japanese and United States copyright laws take different views of this "internal" duplication.

Under the current United States Copyright Act, the definition of the term "copies" includes any material object from which a work may be "perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device."³ The input of a copyrighted program into a computer results in the making of a copy, and such input, if unauthorized, may amount to an infringement of the owner's copyright.⁴ In recognition of the special need for computer program owners to freely input programs without liability for infringement and to make the treatment of users/purchasers of computer software approximate that of a user/purchaser of, for example, a book, Congress enacted a new provision, Section 117 of the Copyright Act, which specifically addresses this issue. Section 117 creates exceptions to the copyright owner's exclusive right to duplicate his or her work, which allow inputting and modification of a computer program under certain limited circumstances without triggering liability for copyright infringement.

In Japan, the copyright law grants the copyright owner an exclusive right to duplicate his or her work. The Japanese Copyright Act's definition of "reproduction," however, only refers to copying in "tangible" form.⁵ The Sixth Subcommittee of the Copyright

2. Chosakuken Hō (Copyright Act), Law No. 48 of 1970, arts. 21-28.

3. 17 U.S.C. § 101 (1982).

4. See *Williams Elec., Inc. v. Arctic Int'l, Inc.*, 685 F.2d 870, 876-77 (3d Cir. 1982); and see *Micro-Sparc, Inc. v. Amtype Corp.*, 592 F. Supp. 33, 34-35 (D. Mass. 1984). One commentator has rejected the proposition that inputting a program amounts to copying. See Stern, *Section 117 of the Copyright Act: Charter of the Software Users' Rights or an Illusory Promise?*, 7 W. NEW ENG. L. REV. 459, 462-63 (1985). Stern states that inputting a program is infringement only when the work is placed in the computer in a "fixed" form, "sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration." *Id.* at 462 (citations omitted). Stern points out that copying a program onto a disk or imprinting it onto a silicon chip constitutes such permanent fixation, but states that placing the program into the computer's Random Access Memory ("RAM") is temporary only, and thus no infringing copy is made. Stern's position, however, appears to ignore the user's ability to perceive, duplicate and communicate the RAM copy of the program as long as he or she does not erase it.

5. Chosakuken Hō (Copyright Act), *supra* note 2, at art. 2(1)(xv).

Council, which is a part of the Cultural Affairs Agency of the Japanese Ministry of Education, indicated in its 1984 interim report that the loading of a program into a computer's random access memory does not satisfy this tangible fixation requirement. Thus, a recording on a computer's memory is not restricted copying under Japanese law. Therefore the Japanese copyright law accomplishes the same result as the United States law, with respect to computer software, by providing that the private *use* of a computer program does not infringe the copyright owner's exclusive rights.⁶

As a consequence of these differences in approach, the application of United States and Japanese copyright laws to this issue is most likely to differ in circumstances that do *not* fall within the scope of Section 117. If Section 117 were interpreted broadly to protect essentially all private uses of a computer program, there would be little practical difference between the two approaches.

Each of the relatively few reported court decisions interpreting Section 117 has construed its provisions slightly more generously (from the user's perspective) than the last. Nonetheless, situations may arise in which essentially private uses of a computer program would be lawful under Japanese copyright law but infringing under United States copyright law because they do not fall within the protection of Section 117. This article will summarize the scope of Section 117 of the United States Copyright Act, as it has been interpreted to date, and the aspects of Japanese law which effect comparable results. It will also provide examples of situations that may involve infringements under United States law but presumably are lawful in Japan.

II. SCOPE OF SECTION 117 OF THE COPYRIGHT ACT OF 1976, AS AMENDED

A. The Background of Section 117

In 1974, Congress⁷ created the National Commission on New Technological Uses of Copyrighted Works (CONTU) to analyze the issues relating to applications of the copyright law to new technology. Two years later, Congress passed a new copyright law to replace the 1909 law.⁸ In 1978 CONTU delivered its Final Report (the "CONTU Report"). The CONTU Report emphasized that programs cannot be used at all in a computer without being translated from human-readable form written on paper into machine-readable form; similarly, one cannot use programs on diskettes without first loading them into (that is, copying them onto) the

6. *Id.* at art. 30.

7. Public Law 93-573, Section 201 88 Stat. 1873 (1974).

8. 17 U.S.C. §§ 101-118 (1976) (*amended* 1980), Pub. L. No. 94-553, 90 Stat. 2541 (1976).

memory device in the computer.⁹ In addition, CONTU acknowledged the necessity of adapting programs before using them to account for incompatibility among different computer systems.¹⁰ In view of these factors, CONTU recommended legislation "to ensure that rightful possessors of copies of computer programs may use or adapt these copies for their use."¹¹

Congress responded to these suggestions in the 1980 Computer Software Copyright Act by replacing Section 117 of the Copyright Act with a new Section 117 authorizing copying under two circumstances.¹²

Generally, Section 117, as amended, allows the *owner* of a copy of a computer program to make another copy of the program, provided that the new copy is:

(1) created as an *essential step* in the utilization of the computer program in conjunction with a machine and that it is used in no other manner . . . , or

(2) for *archival purposes* only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.

Any exact copies prepared in accordance with the provisions of this section may be . . . sold . . . along with the copy from which such copies were prepared, only as part of the . . . sale . . . of all rights in the program.¹³

B. Copying Software as an Essential Step in Using the Program

In addition to the duplication that inputting a program necessarily involves, the lack of standardization among programming languages and hardware in the computer industry often prevents the owner of a copy of a program from using it without adapting it to a limited extent. In recognition of this limitation, Congress provided in the new Section 117 that the owner of a copy of a program has the right to create a copy or adaptation of a program as an "essential step" in using it in conjunction with a computer.

One of the few cases to interpret the term "essential step" as used in Section 117, *Micro-Sparc, Inc. v. Amtype Corp.*,¹⁴ permitted the preparation of a copy of a computer program located in a computer's Random Access Memory ("RAM") but disallowed the making of a separate copy stored on another magnetic medium. In

9. CONTU Report at 13.

10. *Id.*

11. CONTU Report at 1.

12. The courts have consistently pointed out that, although there is a lack of legislative history supporting the 1980 Act, since Congress adopted the CONTU recommendations with only minor alterations, the CONTU Report reflects Congressional intent.

13. 17 U.S.C. § 117 (1980) (emphasis added).

14. 592 F. Supp. 33 (D. Mass. 1984).

Micro-Sparc, the plaintiff published its programs in a magazine costing \$3.25 to enable magazine purchasers to input the programs themselves (a task taking up to 30 hours per program) as an alternative to purchasing a disk containing the program for \$20 to \$30. The defendant offered a typing service for purchasers of the magazine; it copied the programs onto a disk for magazine purchasers at a less expensive price than that at which those purchasers could buy disks from the plaintiff. The court held that the "typing" service did not constitute an activity permitted by Section 117 because that section "does not permit a [purchaser of the plaintiff's magazine] to authorize the defendant to put the programs on a disk for him."¹⁵ In short, purchasers of the magazine would be creating a copy in the computer's RAM as an essential step in using the programs, but their preparation of a separate, intermediate copy stored on another magnetic medium, such as a diskette, was prohibited. Because the magazine purchasers did not have the right to make the "intermediate" disk copies, they could not legally delegate that right to defendant's "typing service" business.

In *Apple Computer, Inc. v. Formula International, Inc.*,¹⁶ the defendant's ownership of diskettes which contained authorized copies of the plaintiff's copyrighted programs did not justify the defendant's copying of those programs in permanent form on silicon chips and selling those silicon chips to purchasers of the defendant's computers. In evaluating whether the permanent copying of the plaintiff's programs was an "essential step," the *Apple* court found that Section 117 "implies that the type of copying authorized by the statute must be no more permanent than is reasonably necessary."¹⁷ The court pointed out that copying a program into the computer's RAM is necessary for the use of the program and is temporary; the copy is lost when the computer is turned off. "'Essential' means indispensable and necessary."¹⁸ Making a permanent copy, as did the defendant, was convenient, the court held, but not essential.

The *Apple* court, by construing "essential" copying to be copying which is indispensable and not merely convenient, seems unnecessarily restrictive in light of the stated objective of CONTU which is to permit program users basically the same rights as users of other copyrightable works.¹⁹ In view of this restrictive interpretation of the term "essential step" for purposes of Section 117(1), the owner of a copy of a program could be prevented from copying the program to the extent that such inputting is not essential to the use of the program. For example, reverse engineering for purposes of

15. *Id.* at 35.

16. 594 F. Supp. 617 (C.D. Cal. 1984).

17. *Id.* at 622.

18. *Id.*

19. CONTU Report at 13.

developing a competitive program would probably not be allowed as an essential step in the program's use. Moreover, if *Micro-Sparc* were followed literally, the creation of any intermediate copies of another's software on a diskette or other magnetic medium may not be protected under Section 117.

A more recent decision, however, has somewhat widened the essential step exception. The court in *Vault Corp. v. Quaid Software Ltd.*²⁰ expanded the scope of the exception by permitting a copy to be created as an essential step in the utilization of a program, regardless of the copier's purpose, and even though the express purpose, in that case, was to devise a means of defeating the function of the program. The disinclination of the *Vault* court to limit the essential step exception to uses intended by the copyright owner may indicate a trend toward judicial recognition of the broad range of circumstances, under which a computer program may be copied by being inputted.

C. Copying Software for Archival Purposes

"Computer programs can be stored on a variety of mediums, including floppy diskettes, hard discs, non-erasable read only memory ("ROM") chips, and a computer's [RAM]. Programs may also appear as printed instructions on a sheet of paper."²¹ The archival copy exception under Section 117(2) allows a program owner to make backup copies, but the courts have not yet agreed on the circumstances justifying the making of a backup. In *Atari, Inc. v. JS & A Group, Inc.*,²² the court considered the legality of the defendant's program, PROM BLASTER, which enabled the program user to make "backup" copies of the video games of the plaintiff, Atari, "to protect [the Atari customer's] investment in video game cartridges which 'can easily be ruined.'"²³ The defendant advertised that the purchaser of a PROM BLASTER could "make copies for . . . friends who wish to own archival copies of their favorite games and charge them for the service."²⁴

The *Atari* court held that the storage medium of the program determines whether the archival exception applied; a medium which may be destroyed by mechanical or electrical failure justifies the program owner's protecting himself or herself from loss by making an archival copy under Section 117(2). Atari's game cartridges contained an electronic circuit ("chip") which contained the game program. The data was recorded on these chips in Read Only

20. 847 F.2d 255 (5th Cir. 1988).

21. *Vault* at 264-265.

22. 597 F. Supp. 5 (N.D. Ill. 1983).

23. *Id.* at 7 (citations to defendant's advertisements omitted).

24. *Id.* (citations omitted).

Memory ("ROM"). The parties stipulated that ROMs could never be reprogrammed or erased, and the court based its decision that archival copies were unnecessary on this stipulation.

The dangers to ROMs . . . are *physical* dangers not unlike the risk that a handwritten computer program will be shredded accidentally. . . . Congress did not enact a general rule that making backup copies of copyrighted works would not infringe. Rather, . . . it limited its exception to computer programs which [as CONTU emphasized] are subject to 'destruction or damage by mechanical or electrical failure.' Some media must be especially susceptible to this danger. [The plaintiff] . . . simply offered no evidence that a ROM . . . is such a medium.²⁵

On similar reasoning, the *Micro-Sparc* court held that storage of programs in the plaintiff's magazine did not necessitate the making of a back-up copy, since the cause of possible destruction was not of the nature Section 117(2) was designed to protect against, according to the court's interpretation of the CONTU Report.

The *Vault* court, however, rejected the narrow construction of the archival exception adopted by the *Atari* and *Micro-Sparc* courts. Both of the latter courts focused on CONTU's rationale that protection against destruction was needed specifically in the software area because of the possibility of "mechanical or electrical failure" which was not present for other copyrighted works. The *Vault* court rejected this approach, reading the causes of damage set forth by CONTU to be illustrative only. The court declined to limit the purpose of the owner in making an archival copy. It only limited the use made of the copy. The court saw little need to make the distinction, depending on the medium in which a program is fixed, because of Section 117's limitation on the disposition of archival copies; in this regard, the court noted: "One could not, for example, make archival copies of a program and later sell some to another while retaining some for use."²⁶ The court allowed the use of the defendant's product for the purpose of making archival copies even though its product enabled the user to protect against all types of damage to a copy of the plaintiff's program, not simply electrical or mechanical failure.

Manufacturers wishing to avoid the problems faced by Atari might have been encouraged to design products which store data on ROM in lieu of other, more delicate storage media, to avoid the possibility that competitors would be able to make less expensive copies of the copyright owner's product available to consumers under the auspices of the Section 117(2) archival copy exception. In view of the *Vault* decision, however, it will be easier for program

25. *Id.* at 9 (emphasis in original). (Citations to CONTU Report omitted).

26. *Vault*, *supra* at 260, citing the CONTU Report at 31.

owners to justify making archival copies, regardless of the storage medium, or the purpose in making such a copy.

D. Limitations of Who May Copy Software Under Section 117

CONTU apparently intended Section 117 to allow the owner of a program to copy and adapt it to the extent necessary to permit its use and maintenance by that owner. Congress failed, however, to provide any indication of the intended scope of the term "owner" for purposes of Section 117.²⁷ The first cases discussed below suggest that Section 117 allows only owners in the most limited sense to make additional copies and adaptations of computer programs. Recent case authority, however, suggests that the courts may be inclined to expand the scope of "owners" who may make copies and adaptations, bringing United States law into parity with that of Japan.

In an early case, *GCA Corp. v. Chance*,²⁸ a manufacturer of machines used to process silicon wafers brought a copyright infringement action against several former employees who had formed a competing business and who admitted copying the object code of several operating system programs copyrighted by the plaintiff. The court held that the defendant employees were *not* rightful "owners" granted a statutory right to copy the programs under Section 117. The court emphasized that the competitive purpose of the copying in this case was not intended to be allowed by Section 117.

Another court further restricted the meaning of the term "owner" as used in Section 117 in *Hubco Data Products v. Management Assistance, Inc.*,²⁹ In that case, the defendant developed a method for removing governors on the plaintiff's software which

27. In enacting Section 117, Congress adopted CONTU's proposed language with only one change; the final version grants "owners," as opposed to "rightful possessors," a limited right to copy and adapt their software. See CONTU Report, *infra* at 12-13. The concept of rightful possession is retained in the statute, however, insofar as archival copies must be "destroyed in the event that continued possession of the computer program should cease to be rightful." 17 U.S.C. Section 117(2). This apparently means that if an archival copy is made by the then owner of the copy from which it was made, he or she may not thereafter retain possession of such archival copy after ceasing to be the owner of the copy. Similarly, copies (as distinguished from adaptations) made under Section 117 (1) (as an "essential step in the utilization of the computer program . . .") may be transferred, but "only as part of the . . . transfer of all rights in the program." 17 U.S.C. Section 117. Thus, one must transfer all copies if he or she ceases to be the rightful possessor of the copy of the computer program from which the copies were made. The lessor of a program would apparently be required to transfer archived copies of the program, although the lessor would remain the owner, because he or she would cease to be the rightful possessor of the initial copy. See 2 M. NIMMER, NIMMER ON COPYRIGHT, § 8.08 n. 9.16 (1989).

28. 217 U.S.P.Q. (BNA) 718 (N.D. Cal. 1982).

29. 219 U.S.P.Q. (BNA) 450 (D.C. Idaho 1983).

restricted the memory and peripheral capability of the operating system to turn inexpensive, low-level operating systems into high-level operating systems for a competitive purpose. The method involved creating a copy of the plaintiff's object code, using that printout to locate the governors, and then removing the governors and communicating the higher-level object code to the user's computer. The copying and comparison portion of the procedure could be done completely inside the computer by the software program. The court found that the defendant's unauthorized input of the copyrighted work into a computer constituted infringement of the plaintiff's reproduction right, and was outside the purview of the Section 117 exceptions. The defendant's software package essentially contained a copy of the plaintiff's higher-level operating code. The court held that the defendant was not an "owner" authorized to make copies under Section 117 because it was not the owner of the higher-level operating code.

Most software in the United States is distributed through licensing agreements rather than by sales transferring ownership. Even software distributed in the retail market is typically licensed by means of a "shrink-wrap" license agreement although it is not yet settled whether these licenses are enforceable.³⁰ Assuming such license agreements are enforced according to their terms, the end-user of a licensing agreement might not be deemed to be an "owner" within the allowances of Section 117. Thus, in practical terms, the limitations of Section 117's application to owners would preclude a licensee from inputting any program once such a license terminates for any reason. One recent case, however, discussed in Section D below, suggests that the definition of an "owner," or at least a true owner's ability to delegate his or her rights under Section 117, may be expanding.

E. Delegation of Rights Under Section 117

Section 117 allows the owner of a copy of a computer program to make *or to authorize the making of* another copy or adaptation of that computer program if one of the two statutory exceptions applies. In the earlier cases which addressed this issue, the ability of an owner to delegate his or her rights to copy under Section 117 was narrowly construed. In *Apple, supra*, the defendant (a legitimate "owner" of the plaintiff's software) made permanent copies of the program on chips which it sold to third parties. The court pre-

30. A "shrinking" license agreement derives its name from its visibility through the clear plastic "shrink" wrap which encloses the software. Such licenses ordinarily provide that they become effective upon the user's opening of the shrink wrap. In *Vault, supra*, the court held that Louisiana's shrink-wrap license law, which permitted software producers to prohibit decompilation or disassembly of its software by license agreement, was preempted by federal copyright law, and therefore unenforceable.

scribed a limited definition of "owner," emphasizing that only an "owner-user" of a computer who rightfully owns a copy of a copyrighted program is authorized to make another copy. Such copying must be necessary to allow use of the program in his or her own computer and be for his or her own use. Thus, the copy made by the owner must be for the owner's personal use, must be destroyed when the original is resold, and cannot be made accessible to third parties.³¹

The *Apple* court's holding does not seem consistent with the language of Section 117 which expressly provides that the owner of a copy of a program may authorize another to act on his or her behalf. Notably, the *Apple* court emphasized that it found the defendant's justification for copying under Section 117 to be "a mere subterfuge, a clever ploy" for permanently recording the defendant's programs for sale to the defendant's customers. This perception undoubtedly influenced the court's narrow interpretation of the rights of a program owner to delegate his or her right to make copies under Section 117.

Similarly, in *Micro-Sparc, supra*, the court considered it an infringement for the defendant, the "typing service" described above, to convert the plaintiff's hard-copy programs into magnetic media for use by the defendant's customers. The court noted that the typing service involved the copyright owners' authorizing the defendant to make copies but declined to allow the defendant to invoke protection under Section 117, reasoning that the defendant's activity did not fall within either of the two delineated exceptions.³² And in *Midway Mfg. Co. v. Strohon*,³³ the court emphasized that Section 117 permitted the sale of adaptations only with the copyright owner's consent and disallowed the defendant from selling enhanced copies of the plaintiff's video game.

The *Apple*, *Micro-Sparc*, and *Midway* cases seem to indicate that, when Section 117 was invoked by a defendant in an apparent attempt to allow copying beyond the scope of the purpose contemplated by CONTU, such as to make another's copyrighted programs available at lower prices, the courts would read the statute narrowly.

A narrow interpretation of Section 117 could have serious consequences for a software user wishing to use third-party service organizations in the software industry. For example, based on these decisions, it is possible that Section 117 would be interpreted to prevent the owner of a program copy to provide the copy to a service bureau to input data for that owner. Similarly, a third-party

31. *Apple* at 621-622.

32. *Micro-Sparc* at 34-35.

33. 564 F. Supp. 741, 745 n.2 (N.D. Ill. 1983).

software maintenance company would need to use its clients' software, at least to some extent, to maintain that software for them. A literal reading of these decisions would make the use of the software by such maintenance organizations unlawful because they are not the "owners" of these copies and have not been "authorized" within the scope of Section 117.

A recent case, however, *Foresight Resources Corp. v. Pfortmiller*,³⁴ recognizes the necessity for program owners to be able to authorize copying, or at least adaptation, on a broader basis because

a large number of computer program owners, perhaps the overwhelming majority, are not capable of making their own adaptations to their computer programs. Typically, such users . . . lack the skills and equipment necessary to make [such] adaptations.³⁵

In *Foresight*, a third party obtained a license for one copy of the plaintiff's software. At the request of the third party, the defendant added five files of his own creation to the plaintiff's program to create a program to be used only by the third party.³⁶

The court held that the defendant's enhancements of the program were exempt from the infringement provisions of the Copyright Act because they were "adaptations" within the meaning of Section 117. The court noted CONTU's position that "[t]he conversion of a program from one higher-level language to another to facilitate use would fall within this right [of adaptation], as would the right to add features to the program that were not present at the time of rightful acquisition."³⁷

With regard to the issue of whether the third party's instructions to the defendant constituted "authorization" within the meaning of Section 117, the court referred to *Stern, supra*, which suggests that Section 117 "should not be restricted to prohibit owners from authorizing custom-made enhancements to their copies of copyrighted programs."³⁸ The court concluded that the purchase order describing the work the defendant was to do constituted adequate authorization under Section 117. In contrast, purchasers of the defendant's kit in *Midway* and of the ROM chips in *Apple* had granted no such authorization. The *Foresight* court thus essentially disregarded the limitations on a program owner's right to authorize others to copy his or her program set forth in *Micro-Sparc* and *Atari*.

With respect to the program copyright owner's ability to restrict copying and adaptation of his or her program as a contractual

34. 719 F. Supp. 1006 (D. Kan. 1989).

35. *Id.* at 1010 (citing *Stern*, footnote omitted).

36. Computer programs consist of one or more individual "functions" which are contained in one or more "files."

37. *Foresight* at 1009, citing CONTU Report at 13-14 (emphasis in original).

38. *Id.* at 1010 (citation omitted).

matter, however, *Foresight* contains some internal inconsistencies. The *Foresight* court rejected the plaintiff's contention that the defendant's enhancements violated the licensing agreement accompanying the plaintiff's program. The court stated that restrictions against enhancements in the licensing agreement were of questionable validity and that "[e]ven if the agreement is enforceable, the court does not believe that plaintiff's right to improve or enhance its products is exclusive." The court disregarded the CONTU Report's statement (which it had earlier quoted) that "[s]hould proprietors feel strongly that they do not want rightful possessors of copies of their programs to prepare . . . adaptations, they could, of course, make such desires a contractual matter." This internal inconsistency may mean that the court's pronouncement that copyright owners cannot contractually restrict the modification of copies of their programs may not stand up to further judicial scrutiny. Until such scrutiny is applied, however, the validity of license restrictions pertaining to the modification of individual copies of software will be an open question.

III. USING COMPUTER SOFTWARE UNDER JAPANESE LAW

Under Japanese copyright law, the copy made by inputting a program into a computer's memory would not amount to restricted copying; as noted above, the tangible fixation requirement under the Japanese law's definition of "reproduction" would not be satisfied since the "internal reproduction" in the computer's memory is deleted when the user turns the computer off.³⁹ Thus, neither use nor copying by inputting the computer program are restricted under Japanese law, except under certain circumstances.

The Sixth Subcommittee of the Copyright Council, part of the Cultural Affairs Agency of the Ministry of Education, suggested in its interim report⁴⁰ of 1984 that the Japanese law be revised to provide that certain uses of illegally reproduced copies of computer programs be deemed infringements. In response to these recommendations, Section 2 of Article 113 of the Japanese Copyright Act was enacted in 1985. This section provides that the use of a copy of a computer program reproduced in a computer, in the conduct of a business, is infringing, but only if the user had knowledge of the illegality at the time that the right to use the copy was acquired.

Under the Japanese law, therefore, the issues discussed above relating to United States law may never arise because the owner of a copy of a computer program may legally reproduce a computer pro-

39. See *supra*, note 2.

40. Because no final report was ever promulgated, the 1984 interim report is viewed as the subcommittee's conclusive position.

gram to the extent necessary to use such computer program in a computer. Moreover, copies may be made even if the first copy was illegally reproduced by someone else, unless the user knew of the illegal reproduction when he or she obtained the right to use the first copy, and the copies are made in the conduct of business. Accordingly, private use, or use without knowledge of illegality, of an illegally reproduced copy of a computer program in computer would probably be allowed under Japanese law.

Regardless of whether the conduct of a defendant like those in *Hubco*, *Micro-Sparc*, or *Apple* would be justified in Japan, the purchasers of the products resulting from that conduct would be likely to be free of liability, as long as they did not know of the illegality when they acquired the right to use the program. It is knowledge of illegality that is the pivotal issue under Japanese law, and lack of such knowledge will justify use of illegal copies. Although lack of knowledge of illegality in the United States does not eliminate liability, it does eliminate liability for willful damages. For example, in determining the proper amount of damages where the defendant had conceded copyright infringement liability, the court in *Bly v. Banbury Books, Inc.*⁴¹ awarded \$250 in damages to the plaintiff, who had sought \$50,000. In that case, the defendant had used the plaintiff's software, a program which caused a printer to produce a higher-quality typeface, to print correspondence and advertisements, which involved placing the diskette containing the plaintiff's program into a computer, that is, copying the program inside the computer.

The court rejected the plaintiff's argument that the defendant, a publisher, should be held to a higher standard of copyright observance. Thus, even though the defendant knew it was loading the diskette into the computer, and even though it is clearly established under United States copyright law that such inputting amounts to copying, the court declined to presume that the defendant *knew* it was making such a copy, and thus willfully infringed.⁴²

Although inputting programs might be allowed under Japanese law, it is unclear whether certain adaptations of a copyrighted program would be deemed illegal such that one using the program, with knowledge of the illegal adaptation and in the conduct of business, would be liable for infringement. The Japanese copyright law does not specify whether and to what extent certain adaptations of a program may still be considered a mere use. The ability of a program owner to adapt or enhance the copyrighted work of another is, at least to some extent, limited in Japan in a way that it is not in the United States by the law of moral rights. The Japanese Copy-

41. 638 F. Supp. 983 (E.D. Pa. 1986).

42. *Id.* at 986-87.

right Act grants authors an exclusive moral right to, among other things, preserve the integrity of their work against any distortion, mutilation, or other modification.⁴³ The extent to which adaptation or enhancement of a program may be deemed modification prohibited by the Japanese Copyright Act has not yet been established. However, the relevant provisions of the Japanese Copyright Act clearly prohibit the program's author from objecting to modifications necessary for the use of a program as a particular program or to make more effective use of the program in a computer.⁴⁴

In *Microsoft Corp. v. Shuwa System Trading KK*,⁴⁵ the court held that disassembly of the Microsoft BASIC interpreter into assembly language was an impermissible act of reproduction. The court also rebuffed a "fair use" defense, stating that copies made only for the user's "convenience cannot be excused as a fair use." It is interesting to note that the *Microsoft* and *Micro-Spare* court displayed a similar attitude towards copies made by necessity, which are legally excused, and those made for convenience, which are not. As with the U.S. cases, the Japanese court may have been influenced by the defendant's status as a competitor of plaintiff, rather than a mere software user.

IV. CONCLUSION

In contrast with Japan, the process of loading a copyrighted computer program into a computer's memory for the purpose of using it constitutes "copying" in the United States. Section 117, however, would effectively eliminate any practical distinction between copying in the United States and Japan, as long as a particular use is within its scope. A number of courts have recently attempted to clarify the parameters of Section 117. Generally, these cases involved use by a non-owner for competitive purposes. Recent cases, however, suggest a trend toward a broader interpretation of Section 117. The scope of Section 117's application will determine the practical consequences of these differences in Japanese and United States copyright laws. A narrow interpretation of Section 117 will result in instances of private use of a program copy that will be legal in Japan but infringing if undertaken in the United States. A broader interpretation will bring greater consistencies with respect to computer users' ability to use programs in the two countries.

In evaluating the differing approaches to the rights of program users embodied in the Japanese and U.S. copyright acts, it is impor-

43. Chosakuken Hō (Copyright Act), *supra* note 2, at art. 20(1).

44. *Id.* at art. 20(2)(iii).

45. Tokyo District Court, Jan. 30, 1987. One of the authors of this article, Shigeru Miki, represented Microsoft Corp. in the *Shuwa* case.

tant to keep in mind the underlying issue that they seek to address. In contrast with other copyrightable works, use of a program requires its duplication in a computer's random access memory. In addition, given the differences among computers, use of a program on a particular computer may require modification of the program.

The Japanese copyright act takes a relatively broad brush approach to this issue by apparently excluding "internal reproduction" of a program in a computer's memory from the definition of "reproduction" and by providing that the private use of a computer program does not infringe the copyright owner's exclusive rights.

In contrast, the U.S. copyright act clearly defines "reproduction" to include the loading of a program into a computer's random access memory. It addresses the concerns of program users by defining in relatively detailed terms in Section 117 the extent to which this infringement of the program copyright owner's exclusive rights will be excused.

Unfortunately, the U.S. copyright act's approach may lead to some unfortunate results, at least if courts continue to interpret it as narrowly as in early decisions.

First, the *Micro-Sparc* court seems to have interpreted the phrase, "essential step" to require that the user adopt the least convenient means of using a program distributed in printed form. This approach hardly seems to further the fundamental intent of Section 117 which is, after all, directed at protecting the programs user's rights.

Section 117's limitation to the "owner" of a copy of a computer program is even more troubling. By characterizing a software transfer as a "license" rather than a sale, a program copyright owner may be able to succeed in avoiding the application of Section 117 altogether although it must be acknowledged CONTU and DID indicate that it expected contractual limitations on 117 to be enforceable.

This issue presumably will not arise under the Japanese copyright act since the private use of a computer program does not infringe the copyright owner's rights. Under the circumstances, a user of a program is not infringing the copyright owner's rights, and consequently does not require a license.

A third concern arises in the context of the good faith purchaser of an infringing copy of a computer program. Copyright infringement litigation in the software industry has become increasingly common, and software users might rightfully be concerned about the termination of their right to use a program held to infringe a third party's rights. Under Japanese law, this would not be a source of concern, as long as the user had no knowledge of the illegality. Under U.S. law, the user of an infringing program might

not be considered to be either the "owner" or the "rightful possessor" of a copy of that program who is entitled to the protection of Section 117. Under these circumstances, each time the user loads the infringing program into the computer's memory, he or she would infringe the copyright owner's rights. Thus, a successful copyright plaintiff might succeed in enjoining not only the further distribution of the program but the use of the program by good faith purchasers of program copies.

Whether these concerns will become practical problems depends on how liberally the U.S. courts interpret the provisions of Section 117. Given a broad interpretation, the U.S. copyright act should accomplish essentially the same goals as the Japanese copyright act's corresponding provisions. If the U.S. courts continue to give Section 117 a relatively narrow interpretation, however, many U.S. software users may ultimately have reason to wish that they were in Japan.