

PROTECTION OF COMPUTER PROGRAMS UNDER JAPANESE COPYRIGHT LAW

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Prior to the advent of computer programs, Japanese copyright law was of narrow commercial interest. The Cultural Affairs Agency of the Ministry of Education had jurisdiction over this form of intellectual property relating to literary and artistic works. The more powerful Ministry of International Trade and Industry ("MITI") had jurisdiction over commercially important "industrial property," patents and trademarks, relating to technology and industry.

Computer programs jolted this legal picture. To protect its copyright turf, the relatively weak Ministry of Education battled with mighty MITI. The Ministry of Education, supported by strong pressure from the U.S., sought to protect computer programs under the existing copyright law. MITI, on the other hand, proposed a new sui generis form of protection tailored specifically to fit this new type of work. Somewhat surprisingly, and probably due in large part to the U.S. pressure, the Ministry of Education won.¹ In 1985, the Japanese Diet followed the U.S. lead and amended its Copyright Law to protect computer programs as a copyrightable work.

The Japanese copyright statute contains some interesting provisions relating to computer programs. Moreover, since the law's enactment, three important court decisions have interpreted Japanese copyright law as it relates to computer programs. The statute and these three cases are discussed below.

I. STATUTORY LAW

Japan is a civil law country. In Japan, accordingly, statutes have more authoritative weight than court decisions. Moreover, because of differences in the underlying legal system, superficial similarities between U.S. and Japanese law may disguise very fundamental differences. For example, although Japan's antitrust laws are based on U.S. law, antitrust law in Japan actually operates very differently from that in the U.S.

For these reasons, in studying Japanese copyright law U.S. lawyers should not give too much importance to court decisions, and they should be aware that the Japanese legal system is much closer to that of Germany and other European systems than to that of the U.S. That said, however, Japanese law, particularly copyright law, is not mysterious or especially difficult for a trained lawyer to understand, and no one should be scared away from the attempt by unfamiliarity with the Japanese legal system.

¹ See Karjala, Lessons from the Computer Software Protection Debate in Japan, [1984] Ariz. St. L.J. 53, 81.

The computer program-related amendments to the Japanese Copyright Law largely address form rather than substance. They simply make computer programs copyrightable material, and leave general copyright principles to apply unmodified to programs. However, there are a few areas where the drafters of the amendments made special provision for computer programs.

A. Definitions

The amendments to the Copyright Law define a computer program as "an expression of combined instructions given to a computer so as to make it function and obtain a certain result."² The Japanese courts had consistently found that computer programs are "works" protected under copyright law even before the amendments were enacted.³ The amendments make this explicit in Article 10(1)(ix), which adds "program works" to the list of particular examples of copyrightable "works." In Japan, unlike most other countries, a computer program is not a literary work.

B. Interfaces and Algorithms Not Protected

Article 10(3) specifically excludes programming languages, rules, and algorithms from copyright coverage.

The protection granted by this Law to [program works] shall not extend to any programming language, rule or algorithm used for making such works. In this case, the following terms shall have the meaning hereby assigned to them respectively:

(i) "programming language" means letters and other symbols as well as their systems for use as means of expressing a program;

(ii) "rule" means a special rule on how to use in a particular program a programming language mentioned in the preceding item;

(iii) "algorithm" means methods of combining, in a program, instructions given to a computer.⁴

Although the Japanese Copyright Law does not expressly exclude "ideas" from copyright protection, as does Section 102(b) of the U.S. Copyright Act, Japanese courts and commentators have created an idea/expression dichotomy similar to that in U.S. copyright jurisprudence.⁵ Therefore, programming languages, rules (such as interfaces and protocols), and

² Japanese Copyright Law art. 2(1)(xbis).

³ See, e.g., K.K. Taito v. K.K. I.N.G. Enterprises, Dec. 8, 1982, Tokyo District Court, 1060 Hanrei Jihou 18.

⁴ Copyright Law art. 10(3).

⁵ See, e.g., Karjala & Sugiyama, Fundamental Concepts in Japanese and American Copyright Law, 36 Am. J. Comp. L. 613, 649-50 (1988).

particularly algorithms would seem to be excluded from protection as ideas rather than expression, even without the express exclusion of Article 10(3).

This express exclusion, however, is helpful. As many court decisions in the U.S. have demonstrated, it is not always easy to apply the idea/expression dichotomy to computer programs. The specific provision makes Japanese law clearer than U.S. law⁶ in providing that copyright does not protect these program elements.⁷

C. Authorship By Employee

The amendments also modify some provisions of the Copyright Law to deal with the peculiar characteristics of computer programs. One instance of this is Article 15, which applies to authorship of a work made by an employee in the course of his duties. A work must normally be published under the name of the employer in order for the employer to claim authorship.⁸ In the case of program works, however, it was recognized that computer programs are often kept secret and never published, and the requirement was dropped for program works.⁹

D. Modifications

The drafters of the amendments were concerned that normal, legitimate uses and modifications of a program work might be considered an infringement of the moral rights of the program's author or the right of reproduction or adaptation of the copyright owner. Therefore, some specific exceptions were added to the Copyright Law with regard to program works.

First, an author's moral right to preserve the integrity of his work¹⁰ is limited in the case of program works. With program works, any modifications necessary to enable a program

⁶ For an example of one U.S. court that incorrectly held that copyright protection extends to algorithms, see Gates Rubber Co. v. Bando American, Inc., 798 F.Supp. 1499 (D. Colo. 1992) (on appeal to 10th Cir.).

⁷ Even with this clear language, some have tried to argue that copyright protection can extend to these unprotected elements. For example, two Japanese lawyers argued that the term "rules" does not necessarily include all interfaces and protocols, and that most interfaces and protocols are protected under Japanese copyright law. Hirakawa & Nakano, Copyright Protection of Computer 'Interfaces' in Japan, [1990] 2 Eur. Intell. Prop. Rev. 46. They appear to be alone in this opinion. See, e.g., Ozaki, Copyright Protection of Software: The Japanese View, 1990 Computer L. Rep. 950, 959 ("the legislative history [of Article 10(3)(ii)] reveals that interface specifications, including communications protocols, are intended to be included under the definition of 'rules'"); Bando, Partial Amendment of Copyright Law Concerning Computer Programs, 292 Copyright 2, 7 (1985) [in Japanese]; Ohashi, A Legal Analysis of Interfaces, 865 Jurist 92, 94 (1986) [in Japanese]; M. Matsuda, Intellectual Property Rights in the Computer Age 16 (1988) [in Japanese]; N. Nakayama, Legal Protection of Software 42-47 (new ed. 1988) [in Japanese]; Karjala, The Protection of Operating Software Under Japanese Copyright Law, [1988] 10 Eur. Intell. Prop. Rev. 359.

⁸ Japanese Copyright Law art. 15(1).

⁹ Id. art. 15(2).

¹⁰Id. art. 20(1).

to be used on a computer on which it would otherwise be unusable, or to make more effective use of a program work on a computer, are allowed.¹¹ This last phrase may make the exception eat up the rule, since it is hard to imagine any modification that could not be justified as having been made to make more effective use of the program. However, the drafters of the amendments may have intended this result, since there is little need for the moral rights in the case of program works.¹²

Second, the owner of a copy of a program work may make copies or adaptations of that work as necessary to personally use the work on a computer.¹³ This right was included in the law as one of the express "fair use" exceptions to the copyright owner's rights. It was intended to authorize the making of back-up copies and the copying of the program from the memory medium to the computer's internal memory. The exception, however, is narrow, and any distribution of such a copy or adaptation is a copyright infringement.¹⁴

E. Use as Infringement

The amendments also provide that knowing use of an unauthorized copy of a copyrights program work is itself an infringement.¹⁵ Mere use of a copyrighted work is not normally a copyright infringement. Thus, this provision is an example of an attempt to adapt copyright law to make it more meaningful in view of the unique characteristics of program works.

F. Registration

The registration system was also changed to accommodate computer programs. Registration is not a requirement for copyright to arise or to be enforced. Nevertheless, as with other copyrighted works, registration can be made of the true name of the author and of the date of first publication of the work. In the case of computer programs, the fact that computer programs are often not published gave rise to a new section, Article 76bis, which allows registration of the date of creation of a program work rather than just date of first publication.

These registrations are sometimes helpful to forestall problems of proving authorship, date of publication, or date of creation. More importantly, transfers of copyright or security interests in a copyright are not effective against third parties unless the transfer or security interest is registered. The need to register transfers of copyrights for them to be effective against third persons is particularly important under the strict work-made-for-hire rules in Japan.

¹¹ Id. art. 20(2)(iii).

¹² Unfortunately, Japan did not choose the approach taken by the United Kingdom of simply providing that there are no moral rights for computer programs. It remains unclear in Japan just how far the exceptions to the moral rights with regard to computer programs will extend, leaving a potential trap for parties to software licenses and, particularly, software development agreements.

¹³ Id. art. 47bis(1).

¹⁴ Id. art. 49(1)(iii), 2(ii).

¹⁵ Id. art. 113(2).

Under the Japanese Copyright Law, a work is made for hire only if the person who created the work is an actual employee of the person claiming authorship, and if the creator created the work in the normal course of his or her duties.¹⁶ If a work is not made for hire, even if ownership of the copyright in the work is transferred by the author to the commissioning party, that transfer will not be effective against third parties, knowing or unknowing, unless it is registered.

Registration of program works is carried out by a private organization, the Software Information Center (SOFTiC), under the provisions of a special law relating to the registration of program works. Although registration does give rise to some advantages, it has not proven to be particularly popular with computer program authors; relatively few registrations of program works, particularly transfers of copyright in program works, have been registered with SOFTiC.

II. THE MICROSOFT, SYSTEM SCIENCE, AND I.C.M. CASES

With that background to the Japanese copyright statute, it will be easier to understand the three important court decisions regarding the scope of copyright protection of computer programs in Japan. As mentioned above, court decisions are not accorded quite the same weight in Japan as in the U.S. Although opinions issued by Japanese courts are sometimes quite lengthy, the more usual pattern is to write a very short decision. Even in long opinions the legal analysis is usually limited to a few pages, while the analysis in comparable U.S. opinions may run 50 pages or more. Accordingly, the reasoning in Japanese opinions, as is the case in the three decisions described here, is not necessarily articulated as well as in U.S. opinions.

In Microsoft Corp. v. Shuuwa System Trading K.K.¹⁷ the court held that outputting a program in object code format from the Read-Only-Memory ("ROM") of a personal computer, disassembling and analyzing the object code to create a source code listing, attaching labels and comments, and then publishing it was an infringement of the copyright in that object program. The court also held that operating system programs are protected under Japanese copyright law just the same as applications programs.

The Microsoft decision indicates that Japanese courts will extend protection to computer programs in much the same way as the other developed countries, and should dispel fears that Japan would not give adequate protection to computer programs. At the same time, however, the decision shows that the Japanese courts will carefully consider the proper scope of protection that should be given.

The Microsoft court addressed some crucial issues in deciding that the defendants had violated the plaintiff's copyright. The opinion clearly states that publishing a book that translates, interprets, and adds explanatory labels and comments to an object code program is infringement of the copyright in the object code program under the pre-amendment Japanese

¹⁶ Id. art. 15.

¹⁷ Jan. 30, 1987, Tokyo District Court, 1219 Hanrei Jihou 48. See Durney, Protection of Computer Programs Under Japanese Copyright Law, 9 UCLA Pacific Basin L.J. 17, App. 1 (1991) for an English translation of this decision.

Copyright Law. Moreover, it also states that operating system programs are copyrightable material for the same reasons that applications programs are copyrightable material.

The Microsoft court, however, left unanswered some crucial questions posed by the facts in this case, such as: when does a software creator pass the line between a mere adaptation which is an infringement, and an independent work which though based on another work is sufficiently different to be noninfringing?

The Tokyo High Court in the case of System Science K.K. v. Toyo Sokuki K.K.¹⁸ gives a partial answer to this question, holding that only programs with substantial similarity in protected expression will be found to infringe. The court held that many non-literal elements of a program, such as expression limited by hardware constraints, will not be protected.

The System Science court also interpreted the term "kaiho" ("solution" or "method of solution") in Article 10(3)(iii) of the Japanese Copyright Law as having the same meaning as the English word "algorithm." The court held that similarities in the basic algorithm underlying a program should not be considered in determining whether infringement has occurred.

The System Science court found infringement with regard to three out of the four programs at issue. The court clearly was willing to give strong protection in cases of verbatim or near verbatim copying. It was not willing, however, to give the plaintiff the right to exclude one of the programs belonging to the defendants, who were the plaintiff's competitors, from the market simply because it was based on and similar to the plaintiff's program. The court required proof of substantial similarity in protected expression before granting relief.

Under the System Science decision, it seems likely that the Japanese courts will not consider as evidence of infringement any similarities in (a) algorithm, (b) expression limited by hardware constraints, (c) common or ordinary expression, or (d) expression dictated by common sense. These elements of a program are not protected, and similarities in these elements are not evidence of the copying of protected expression from one program to another. Similarities in the literal code of two programs will, by contrast, be considered evidence of infringement.

Because of the brevity of the System Science opinion, one must be careful not to read too much into the opinion. Some commentators¹⁹ were concerned that the System Science decision added a new concept of "originality" in the case of computer programs similar to the high originality standard required by the German courts prior to the European Community Software Directive. While that concern cannot be dismissed out of hand, it seems unlikely that such a requirement was added to Japanese jurisprudence by a few remarks in a single opinion. Rather than establishing a new requirement, it seems more likely that the System Science court

¹⁸ June 20, 1989, Tokyo High Court, 1322 Hanrei Jihou 138. See Durney, Protection of Computer Programs Under Japanese Copyright Law, 9 UCLA Pacific Basin L.J. 17, App. 1 (1991) for an English translation of this decision.

¹⁹ See, e.g., Dairaku, Injunction Against Reproduction of Computer Program, [1989] 7 IP Asia 25; Nihon Keizai Shimbun, Oct. 30, 1989 [in Japanese].

was simply using the term "creativity" to refer to the protectibility of certain elements of a work.

In K.K. I.C.M. v. Mets K.K.,²⁰ the Tokyo District court held that Install Batch Files ("IBF Files") written in accordance with MS-DOS commands and formats were not copyrightable because there was no room for variation in expression, and they thus lacked creativity. The Tokyo High Court²¹ affirmed the District Court decision, but on different grounds. The High Court held that the IBF Files were not computer "programs" within the statutory definition because they were data rather than instruction steps, and thus were not protectible subject matter. As noted above, programs are not considered literary works in Japan, so under the I.C.M. decision, data files and similar computer-related works that are not "programs"²² will probably not be protected by copyright law at all.

III. REVERSE ENGINEERING

Reverse engineering involves the study and research of products available in the marketplace. Commonly engaged in by scientists and engineers around the world, reverse engineering is a time-honored practice expressly permitted by various intellectual property law statutes in many countries.

Recent decisions in the U.S. have held that reverse engineering of computer software is not an infringement of copyright when performed for a legitimate purpose, and the European Community Software Directive permits reverse engineering as well. The Japanese Copyright Law currently does not address this issue, and there have been no judicial decisions turning on this point. However, reverse engineering is commonly engaged in by Japanese software developers and generally accepted as a legitimate practice.

Microsoft Corp. v. Shuuwa System Trading K.K., discussed above, did involve reverse engineering. In that case, the defendant disassembled the plaintiff's BASIC interpreter, added its own explanatory comments and labels, and then published the results in a book that was commercially distributed. The court found that the defendant had infringed the plaintiff's copyright. However, even one of the plaintiff's attorneys stated that it was clear that the court did not rule that reverse assembly was necessarily an act of unauthorized copying, but only that reverse assembly is unauthorized copying when the results of the reverse assembly are used to create a listing of the program which is published as a book.²³ In fact, he noted that the issue of

²⁰ Opinion of February 27, 1991.

²¹ Opinion of March 31, 1992.

²² Or "databases," which are protected under special provisions.

²³In [the Microsoft case], I argued, as the plaintiff's attorney, that the act of reverse assembly is an act of unauthorized copying when you consider together all the acts defendant Shuuwa carried out of reverse assembling the plaintiff's program, creating a source code listing, and then publishing it as a book, and the court accepted that argument. Therefore, it is clear that the court did not categorically hold that all acts of reverse assembly are acts of unauthorized copying, and I should add that reverse engineering was not discussed in that case.

Miki, Currents in Intellectual Property Rights (Part 1), 928 Jurist 79 (1989) [in Japanese].

the legality of reverse assembly was never even an issue in the Microsoft case.²⁴

While there is agreement that reverse engineering is permitted, there is also agreement that if one uses reverse engineering to create a program substantially similar in expression to an original program, the fact that reverse engineering was used does not change the fact that the program is infringing. Reverse engineering does not provide an excuse for copying expression. Superficial changes made by means of reverse engineering techniques in an attempt to disguise the copying of expression will be ignored in finding infringement.

In the near future, the Japanese legal standards concerning reverse engineering may become far more explicit. This past summer, the Cultural Affairs Agency began considering whether to propose legislation concerning software reverse engineering.²⁵ The Agency's first step was to form a consultative committee with academic and industry representatives to study the issue, and its recommendations are expected by the end of 1993. The U.S. Patent and Trademark Office and the U.S. Trade Representative have already voiced concerns about the openness of the process, and have insisted that U.S. companies be given an opportunity to express their views. The U.S. government likely will continue to attempt to influence both the procedure and the substance of the Agency's initiative as it proceeds. The critical issue in U.S.-Japan discussions concerning the initiative will be the similarity of the Japanese reverse engineering provisions to the standards in the U.S. and the European Community.

IV. CONCLUSION

Generally speaking, each country has its own unique intellectual property law system. Even so, the trend toward a single, global market without borders has significantly influenced intellectual property law, leading naturally to harmonization even apart from formal harmonization efforts. This influence has been particularly strong with regard to the protection provided to computer programs under copyright law, and the systems of Japan, the U.S., and the European countries appear to be moving closer to providing harmonized protection of computer programs.

As the scope of copyright protection of computer programs continues to approach a world-wide, harmonized set of principles, the law and court decisions in Japan should be carefully studied and considered. Japan's experience should contribute to finding the most appropriate scope of protection to give to computer programs under copyright law. In particular, the success Japan has had with its express exclusion from copyright protection of programming languages, rules (interfaces and protocols), and algorithms should be instructive to other countries, including the U.S., which have struggled to define the proper scope of protection.

²⁴ Id.

²⁵ The Cultural Affairs Agency reportedly is also considering provisions concerning private copying of software for individual home use and prohibitions on tampering with copy-protected disks.