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Computer Technology and Copyright- A Review of Legislative and Judicial Developments in Japan

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I. INTRODUCTION

The present Japanese Copyright Law was enacted in 1970\textsuperscript{1} in conformity with the Berne Convention for the Protection of Literary and Artistic Works.\textsuperscript{2} It is designed to be a flexible copyright statute able to cope with new problems that may occur as technology develops. But the development of technology has occurred so fast that it has already become necessary to reexamine and update the Copyright Law. The Law was amended in 1984 to establish a public lending right, for the primary purpose of protecting authors, performers, and manufacturers of phonograph records from public lending businesses as well as to restrict the use of high-speed duplicating machines. The Law was amended again in 1985 in order to make it more suitable to protect computer programs, and further amendment was made in 1986 in order to protect databases and various kinds of cable transmissions to the public. In the process of such legislative development, much effort has been made to clarify the nature and extent of copyright protection in connection with the use of computers. A series of court cases have also helped determine the boundaries of protection.

This article discusses and evaluates the legislative and judicial developments after the enactment of the Copyright Law which apply to computer programs and other computer-related technology. It examines: (1) the 1985 amendment to the Copyright Law enacted to protect computer programs, including the history of


\textsuperscript{2}Japan joined the Berne Union in 1899 and enacted the old Copyright Law in the same year. The Copyright Law of 1899 remained in force until it was replaced by the present Copyright Law of 1970. In 1974 and 1975, respectively, Japan ratified the Brussels Act of 1948 and the Paris Act of 1971 of the Berne Convention.
discussions by government agencies and judicial determinations that led to the amendment; (2) the 1986 Program Registration Law which supplements the existing provisions of the Copyright Law concerning registration; (3) the protection of databases under a new amendment to the Copyright Law; (4) the regulation of software rental business by the establishment of a public lending right in the 1984 amendment to the Copyright Law; and (5) the possibility of broader protection for video game manufacturers through copyright as cinematographic works. Several court decisions demonstrate the ability of the pre-amendment copyright law to protect computer programs against unauthorized reproduction. In the face of fast-moving technology and hot debate, however, legislative action was appropriate to remove confusion. The recent amendment concerning databases also extends the protection of computer-related technology, but a gap in the law still exists since Japanese society lacks effective trade secret protection. The present Copyright Law is flexible enough to cope with various computer-related problems, but continuous efforts should be made, at the judicial or legislative level, to clarify the extent of copyright protection or control.

II. Protection of Computer Programs Under the Copyright Law

A. Discussions of Various Government Committees concerning Protection of Computer Programs

1. Study Conducted by the Subcommittee No. 2 of the Cultural Affairs Agency

The discussion of copyright protection of computer programs began in the early 1970s. In March, 1972, the Cultural Affairs Agency\(^3\) established, within the Copyright Council,\(^4\) the Subcommittee No. 2 (Computer Problems) in order to study various problems that were expected to arise under the Copyright Law in connection with the use of computers, including the protection of computer programs.\(^5\) In its report, the subcommittee summarized the conclusions reached

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3. The Cultural Affairs Agency (Bunkache) is an extraministerial agency of the Ministry of Education which administers copyright law and has the Copyright Council as its advisory body. Copyright affairs are actually handled by the Copyright Section of the Cultural Affairs Agency in accordance with Article 99 of the Ordinance for the Organization of the Ministry of Education (Administrative ordinance No. 387, 1952).

4. The Copyright Council (Chosakuen-shingikai) is an advisory committee established in the Cultural Affairs Agency under Article 107 of the Ordinance for the Organization of the Ministry of Education.

5. The establishment of the subcommittee was based on a resolution made by the Committee on Culture and Education of both Houses of the National Diet when the present Copyright Law was enacted in 1970. The resolution called for a continuous study of the problems arising in the course of development of the means of utilizing various kinds of works of authorship.
at each session. The report examined problems relating to software, the input of works to computers, the output of existing works from computers and works newly created by computers. These conclusions reflect a proper interpretation of the Copyright Law and demonstrate that the 1970 law, before amendment, was capable of protecting computer programs.

Discussing computer programs, the report observed that "there are many programs in which the scientific thought of the program designer is expressed in the arrangement of a series of instructions and the manner of arrangement and the expression of such arrangement exhibit characteristic differences of individual designers" and concluded that "such programs may well constitute works of authorship 'in which thoughts are expressed in a creative way and which falls in the scientific domain' under Article 2, paragraph (2), item (i) of the Copyright Law." The report then examined the nature and extent of copyright protection, the distribution rights in computer programs, the duration of copyright protection, remedies for copyright infringement and other problems. The existing provisions of the Copyright Law are adequate to cover several of these problems. The author of a program is the person who creates it and the provision concerning corporate authorship is applicable to computer programs. The subcommittee felt that when...
a number of persons participate in the creation of a program or when a considerable sum of money is required in the creation of a program, the existing provisions are appropriate. There is no affirmative ground to shorten the duration of copyright for computer programs, distinguishing them from other kinds of works of a scientific nature. Special treatment of programs with regard to remedies for infringement of copyright in computer programs is unnecessary, the report concludes. Finally, the report indicates that system designs, ideas embodied in computer programs, flow charts and program descriptions (if other than ideas prepared in the course of developing computer programs) can be works of authorship, independent of the computer programs to which they pertain, so long as they meet the requirements for works of authorship.

The report states that a program, the programming language of which has been changed, is simply a reproduction of the original program rather than a derivative work. The same conclusion is true with respect to an object code program derived from a source code program. This view on the status of an object code program is shared by several courts, as shown by the three video game cases discussed below.\textsuperscript{10} The report inconclusively states that a program which expresses an existing work in a programming language (such as a program that consists of a series of instructions to show letters or symbols at designated places in order to reproduce Leonardo da Vinci's Mona Lisa) can be regarded as a reproduction of such work.\textsuperscript{11}

Although the subcommittee felt that some amendment of the Copyright Law was advisable, such amendment should not give the copyright owner of a program an exclusive right to work the program, because such a working right is incompatible with the concept of copyright. Copyright is a right to control the use of an expression whereas a working right is a right to control the use of certain process constituting the contents of the expression.

The subcommittee recommended only two additions to the present law. A distribution right should be granted to the copyright owner to remedy the present disadvantages associated with having no right to work.\textsuperscript{12} Also, the report notes that certain formalities, such as deposit or registration, may be desirable in order to facilitate the distribution of computer programs and to avoid duplication of efforts to develop computer programs. Such formalities, however, should be

\begin{itemize}
\item[10.] See notes 22, 25–26 infra and accompanying text.
\item[11.] The definition of "reproduction" under the Copyright Law is broad enough to suggest such a possibility. See note 26 infra.
\item[12.] It should be noted that the establishment of a public lending right by the 1984 amendment of the Copyright Law, as discussed in section IV, infra, benefitted the copyright owners in computer programs.
\end{itemize}
considered independent of copyright protection which is based on the Berne Convention principle of automatic protection.

The report demonstrates that few legislative amendments of the Copyright Law are necessary. Most of the problems discussed in the report which are not solved by the recent amendments should be left for contractual arrangements among interested parties or judicial decisions.

2. Study Conducted by the MITI's Committee on Legal Protection of Software

The possibility for a *sui generis* system for the protection of computer programs was first discussed by a Committee to Study Legal Protection of Software set up by the Ministry of International Trade and Industry (MITI) in June 1971. This committee published an Interim Report on the Legal Protection of Software in May 1972, which observed that neither the copyright system nor the patent system was suitable for the protection of software. It proposed new legislation creating a special registration system for computer programs to facilitate wider distribution of computer programs at lesser costs to users.

The proposed registration system had the following features:

1. A person desiring protection would have to file an abstract of the program with the registering office;
2. The office would register the program and publish the name of the program, the name of the registrant, and an abstract of the program;
3. The applicant would have to deposit a copy of the program with the office, which would keep the program secret for the entire period of protection;
4. Unauthorized copying, use, transfer, lease etc. of a registered program would constitute an infringement;
5. Major remedies for an infringement would be an injunction and damages; and,
6. Infringement would be presumed if the owner of a registered program proves that the defendant's program is identical with the owner's program.

Since the MITI set up the committee, the primary objective of the proposed registration system was to facilitate the wider distribution of computer programs. Immediate action on the proposal was postponed so that developments in other countries could be observed. The proposal was theoretically consistent with the existing system of intellectual property, and certain features were incorporated into the 1985 Copyright Amendment. Future developments, however, would

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14. The copyright system was considered inadequate because copyright does not extend to the working of computer programs, the copyright system does not prevent duplication of investments in developing programs and does not help promote the distribution of programs, and the relatively short life of programs in general is incompatible with the longer duration of copyright protection.
15. See infra Section IV.
demonstrate that copyright protection is more appropriate than *sui generis* protection since computer programs are easily reproducible.

3. *Sui generis Protection under the Program Rights Law Proposed by the MITI's Industrial Structure Council*

Legal protection of computer software became a serious concern in the late 1970s when technical advances rendered computer programs stored in ROM (Read Only Memory) chips or diskettes more easily reproducible. In the United States, a number of law suits were filed to protect computer programs for personal computers and video games from unauthorized copying. In Japan, video game manufacturers brought copyright infringement actions against manufacturers of counterfeit video games.

The Industrial Structure Council, an advisory body to the MITI, instructed the Information Industry Committee to work out a plan for the protection of computer programs. This committee submitted an interim report to Council on December 9, 1983. The report recommended the enactment of a special statute, tentatively called the "Program Rights Law." Although this report proposes *sui


17. See infra Section I.B.


19. The following is a verbatim English translation of an outline of the proposed statute as appeared in Chapter 5, "Recommendation for a New Statute tentatively called the Program Rights Law," of the Report:

(1) *Purpose of the Law:* To promote the protection and use of computer programs in order to facilitate the development, distribution and use of programs and thereby contribute to the development of industry and economy.

(2) *Subject matter of protection:* Computer programs including source programs and object programs should be the subject matter of protection.

(3) *Contents of Rights:*

(i) Right to use shall be established;

(ii) Right of modification (scope should be limited), right of reproduction and right of lending shall be established;

(iii) Moral rights should not be provided for.

(4) *Acquisition of rights:* Rights shall accrue upon creation of programs. (As to the right to use, it may be desirable to make it accrue upon registration of programs.)

(5) *Duration of rights:* It is appropriate to provide a duration of approximately fifteen years. A longer period may be set up upon considering the periods of protection in other countries.
generis protection, it is clear that the system incorporates the essential feature of copyright protection—protection against unauthorized reproduction.

4. Recommendation by the Subcommittee No. 6 of the Cultural Affairs Agency

The debate regarding protection for computer programs continued. In parallel with the MITI's effort, the Subcommittee No. 6 of the Copyright Council studied copyright protection of computer programs and submitted to the Council an interim report on computer software on January 19, 1984. The interim report recommended that the copyright Law be amended in order to make it more suitable for protecting computer programs. These recommendations were eventually reflected in the drafting of the 1985 amendment of the Copyright Law.\(^2\)

such as the United States on the assumption that the period will be shortened by an international agreement.

(6) Registration and deposit:
(i) A system of registration upon formal examination shall be set up;
(ii) Programs shall be accepted for deposit at the time of registration and shall be kept in confidence;
(iii) Summary descriptions of registered programs are published.

(7) Protection of users:
(i) Program descriptions and other matters which serve as guidelines in the transaction of program shall be published;
(ii) Persons who want to sell programs shall bear an obligation to indicate the contents of the programs in accordance with the above guidelines;
(iii) The registering organization shall establish a special deposit system to accept source programs for use when the producers are unable to perform maintenance obligations.

(8) Arbitration system: An arbitration system shall be established to authorize the use and reproduction of programs for a reasonable consideration in the following situations:
(i) When a program is created by using an existing program or a patented invention;
(ii) When it is necessary for the public interest; or,
(iii) When a program is not property works, due measures shall be taken in order to prevent the proprietor's right from being unreasonably harmed.

(9) Measures against infringement of rights: Injunction, restoration of goodwill, presumption of damages and penal sanctions shall be provided.

(10) Settlement of Disputes:
(i) Systems of mediation, conciliation, arbitration and determination shall be established; and,
(ii) The Minister of International Trade and Industry shall appoint program examiners for the settlement of disputes.

(11) Miscellaneous matters:
(i) It shall be made clear that the Copyright Law is inapplicable to computer programs,
(ii) Ownership of rights in programs created by corporate employees shall be clearly provided; and,
(iii) Necessary measures shall be taken in order to standardize computer programs.

Id.


21. More specifically, the subcommittee concluded that: (1) computer programs should be included in the list of works of authorship under Article 10; (2) the requirement for corporate authorship under
B. Protection of Video Game Computer Programs as works of Authorship

While discussions were going on at the government level, the video game industry brought a series of lawsuits seeking protection from counterfeit game manufacturers who copy without authorization computer programs stored in ROM chips attached to the printed circuit boards of video games. Before the MITI and the Cultural Affairs Agency reached an agreement in favor of copyright protection of computer programs, three court decisions were rendered which uniformly held that computer programs are works of authorship entitled to copyright protection.

In Taite K.K. v. K. K. ING Enterprises, decided by the Tokyo District Court on December 6, 1982, the defendant converted its customers' video game machines into the plaintiff's "Space Invader Part II" machines. In the process of the conversion, the defendant first removed the printed circuit board from each one of its customer's video game machines, and then stored the plaintiff's object program into the ROMs attached to or newly added to the printed circuit board. The plaintiff brought an action for damages in the court against the defendant, alleging infringement of the plaintiff's reproduction rights.

The court first recognized that the plaintiff's program was a creative expression of the scientific thoughts of the creator and therefore a work of authorship under the Copyright Law. The court then ruled as follows:

... the plaintiff's object program is a reproduction of the original program, and the act of Denshe Services K.K., not a party to this litigation, of storing the plaintiff's object program into other ROMs, constitutes creation of another reproduction from a reproduction of the original program, and is, therefore, a reproduction in a tangible form of the plaintiff's program, which is a work of authorship.

Article 15 should be modified for computer programs; (3) an author's moral right should be restricted in order to allow modification of programs by users; (4) Given the theoretical and practical problems with a right to control the working of computer programs, care should be taken in this area; (5) modification of computer programs should be clearly defined; (6) an author's reproduction right should be restricted in order to permit fair use of computer programs; (7) adoption of a compulsory license system for the reproduction and modification of computer programs invites difficult problems.


23. The plaintiff alleged that the computer program of the plaintiff's video game was a work of authorship and the object program, which was a conversion of the program's assembly language version into the machine-readable version, was a reproduction of the program and that the defendant's act of storing the plaintiff's object program into the ROMs attached to the defendant's customers' machines was the making of reproductions from a reproduction of the original program.

24. The court observed that:

The plaintiff's program is designed to display the contents of the game on the cathode ray tube of the plaintiff's machine. It was made after analyzing diversified problems and finding their solutions in order to accomplish the above purpose, and is based upon the flow chart prepared in accordance with the solutions thus discovered. It is an expression of a series of instructions
The second case, *Taite K.K. v. Makoto Denshikegye K.K.*, was decided by the Yokohama District Court on March 30, 1983. The plaintiff's video game was called "Space Invader." The defendant manufactured and sold a counterfeit video game called "Super Invader." The plaintiff brought an action for damages against the defendant claiming that the defendant's manufacture and sale of a counterfeit video game constituted an act of unfair competition as well as infringement of the plaintiff's copyright in both the original drawings of the images as works of art and the software program of the game. The court granted damages on the basis of copyright infringement of the software program, but found it unnecessary to rule on the claims of unfair competition or copyright infringement of the original drawings. The court first noted that the plaintiff's program is a creative expression of the programmer's thoughts which falls in the scientific domain and is therefore a work of authorship entitled to protection under the Copyright Law. The court then found that the object program was a copy of the original program and that the defendant's act of storing the plaintiff's object program in ROMs, after changing the names of the game and the manufacturer, was reproduction in a tangible form of the plaintiff's original program.

The third case, *Konami Kegye K.K. v. K.K. Daiwa*, was decided by the Osaka District Court on January 26, 1984. The plaintiff was engaged in the manufacture and sale of a video game called Strategy X. The defendant manufactured and sold printed circuit boards of a video game called Strong X. The plaintiff sued the defendant for an injunction and damages on the grounds of copyright infringement and unfair competition, claiming a copyright in both the computer program of its video game and in the images of the game as a cinematographic work. The court held that the plaintiff's computer program was a work of authorship in the scientific domain, that the object program stored in ROMs attached to the printed circuit board of the plaintiff's game was a reproduction, and that the defendant's act of copying the object program from the plaintiff's ROMs into another ROM with the aid of a ROM reader was reproduction which infringed the copyright in the plaintiff's computer program. The court did not rule on the plaintiff's other claims. The court granted damages on the basis of the plaintiff's lost profit due to the defendant's sale of counterfeit printed circuit boards.

in combination with other information in the assembly language which can be communicated to third parties having expertise. The discovery of solutions and combination of instructions naturally requires logical thinking by the creator, and, therefore, the program as finally completed reflects the creator's individual characteristics, which are different from other programmers. 16 Mutai saishu 26, 36. Article 2(1)(i) of the Copyright Law defines "work of authorship" as "a production in which thoughts or emotions are expressed in a creative way and which falls in the literary, scientific, artistic or musical domain."

*Id.*


These cases make it clear that copyright protection can be extended to computer programs (whether stored in a ROM chip, or embodied in a magnetic tape or a diskette) when the words "work of authorship" and the word "reproduction" are broadly defined by the courts under the Copyright Law of Japan.27 The 1985 amendment of the Copyright Law confirms the correctness of these courts' interpretations. These cases still serve as a guideline for the interpretation of the law on a question not touched upon by the amendment—the status of an object program stored in a ROM chip as a reproduction of the source program.28

C. The 1985 Amendment of the Copyright Law in Order to Protect Computer Programs

In the spring of 1984, both the MITI and the Cultural Affairs Agency prepared conflicting draft bills. MITI was strongly opposed to copyright protection despite the judicial development discussed above and accordingly the Cultural Affairs Agency felt an urgent need for legislative action. The conflict between the two government agencies was finally resolved when an informal agreement was reached on March 16, 1985, under which the MITI withdrew its plan to enact a Program Rights Law and agreed to support copyright protection of computer programs instead. It seems that the MITI was strongly influenced by the world trend for copyright protection which was made clear at a meeting of the Group of Experts on the Copyright Aspects of the Protection Computer Software convened jointly by the Secretariat of the UNESCO and the International Bureau of the WIPO at the WIPO headquarters in Geneva from February 25 to March 1, 1985.29

As soon as an agreement was reached with the MITI, the Cultural Affairs Agency submitted a Bill for a Partial Amendment of the Copyright Law to the 102nd Session of the National Diet in April 1985. It was aimed at clarifying the position that computer programs were works of authorship entitled to protection under the Copyright Law, incorporating into the Copyright Law provisions required by special characteristics of computer programs and thereby assuring more suitable protection of the rights of authors of computer programs.30 The bill was passed by both Houses of the Diet without any changes and promulgated as Law No. 62 of 1985. It became effective on January 1, 1986.

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27. The word 撷写 (meaning reproduction) is defined by Article 2(1)(xv) as "to reproduce (再版) in a tangible form by means of printing, photography, copying (複写), sound recording and visual recording or other method."


The main points of the 1986 Amendment of the Copyright Law can be outlined as follows:

First, the word *puroguramu* (computer program) is defined by newly inserted item in Article 2(1) as “an expression of combined instructions given to a computer so as to make it function and obtain a certain result.”

Second, “article no article” (program work) is added to the list of works of authorship under Article 10(1). Article 10(1) enumerates, as examples, various types of works of authorship; “program works” is added to this list as item (ix).

Third, a new provision is added to Article 10 as paragraph (3) which excludes protection for any programming language, rule or algorithm used for making protected works. These terms are defined as follows: (i) ‘programming language’ (*puroguramu gengo*) means letters and other symbols as well as their systems for use as means of expressing a program; (ii) ‘algorithm’ (*Kaihe*) means methods of combining, in a program, instructions given to a computer. Thus, addition of paragraph (3) to Article 10 is designed to make clear that copyright protection extends only to the form of expression of computer programs.

Fourth, a new provision, added to Article 15 (authorship of a work made for hire) as paragraph (2), provides as follows:

The authorship of a program work which, at the initiative of a legal person, etc. is made by its employee in the course of his duties, shall be attributed to that legal person, etc., unless otherwise stipulated in a contract, work regulation or the like in force at the time of the making of the work.

It was considered necessary to set up a special provision for computer programs because they are not usually made public under the name of the employer. Since the copyright Law provides a longer length of protection of works created by natural persons than for works created by a legal person if longer protection is needed for a given computer program, the authorship should be attributed to the individual programmer rather than his corporate employer and copyright should be assigned to the latter. The presumption under the newly added paragraph (2) to Article 15 can therefore be overcome by providing in an employment contract or a work regulation that the individual programmer retains the authorship.

Fifth, item (iii) is added to Article 20 (right to the integrity of a work) paragraph (2), providing for exceptions to an author’s right to the integrity of his work under Article 20(1).

Sixth, Article 47bis is newly inserted after Article 47 in Chapter II, “Rights of Authors”, Section 3, “Contents of Rights”, Subsection 5, “Limitations of Copyright” (Articles 30 to 50) in order to provide exceptions to an author’s exclusive right of reproduction or adaption. Generally, the owner of a copy of a

31. The Copyright Law provides protection during the life of the author plus fifty years for works created by a natural person Article 51, and protection for fifty years from the date of publication or creation for works created by a legal person Article 53(1).
program work may not make copies if and to the extent necessary for the purpose of exploiting that work in a computer.

Seventh, Article 76bis (Registration of the date of creation) is newly added in order to register the date of creation of computer programs. When the date of creation of a given computer program is registered, the registration creates a presumption that the program was created on that date.

Eighth, a new paragraph is added to Article 113 (Acts deemed to be infringing) in order to impose copyright liability upon a person who, in bad faith and in the conduct of business, uses a pirated program in his computer. Nonetheless such a person is exempt from liability if he proves that the pirated program was acquired without knowledge of the copyright infringement.

Ninth, Article 78bis is newly added to the Copyright Law to provide that the registrations relating to program works shall be governed by the provisions of Section 10, “Registrations,” as well as the provisions of a separate law. The drafter considered it more appropriate to establish a separate registration system for computer programs because they are physically different from other kinds of works of authorship.

The 1985 amendment confirms the broad interpretation of “works of authorship” and “reproduction” given by the three court decisions discussed above. The hot debate between the two government agencies and the resulting confusion in the computer industry prompted the amendment. Although normally the problems dealt with in the new provisions should be left for courts to decide, the legislative clarification will promote the necessary stability in a situation of rapidly changing technology.

III. THE NEWLY ESTABLISHED COPYRIGHT REGISTRATION SYSTEM FOR COMPUTER PROGRAMS

Chapter 2 Section 10, “Registrations” of the Copyright Law as amended in 1985 provides for four kind of registrations in the Copyright Register (Chosakuken teroku genbo): (1) registration of author’s real name under Article 75; (2) registration of the date of first publication under Article 76; (3) registration of the date of creation of a program work under Article 76bis; and (4) registration of the transfer or other disposition of copyright under Article 77. In accordance with Article 78bis, mentioned above, the National Diet, in May 1986, enacted the Law Concerning Special Exceptions for Registrations regarding Program Works (hereinafter referred to as the “Program Registration Law”). This law became effective on April 1, 1987.  

The Program Registration Law consists of four chapters: Chapter 1, “General

32. PURUGURAMU NO CHOSAKUBUTSU NI KANSURU TOROKU NO TOREI NI KANSURU HORITSU, Law No. 65 of 1986. In order to implement this law, an Order to Enforce the Program Registration law (Cabinet order No. 287, 1986) and a Regulation to Enforce the Program Registration Law (Ministry of Education Ordinance No. 35, 1986) have been issued.
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Provisions”; Chapter 2, “Special Exceptions concerning Registration Procedures, etc.”; Chapter 3, “Special Exception concerning the Registering Agency”; and, Chapter 4, “Penal Provisions”. The purpose of the law is to establish special provisions which are necessary for the registration of program works in order to supplement the existing provisions of the Copyright Law concerning registrations. The essential features of the Program Registration Law are as follows:

A special register called the “Program Register” (Puroguramu teroku genbo) is established under Article 2(1) permits all or part of the Program Register to take the form of magnetic tapes or other objects which securely record by similar means.

To identify the contents of a program work, Article 3 requires that an applicant deposit a copy of his program work with the Director General of the Cultural Affairs Agency in accordance with an administrative ordinance. When the date of first publication is registered under Article 76 of the Copyright Law or the date of creation is registered under Article 76bis, the registration is publicized as per Article 4.

The Director General of the Cultural Affairs Agency is empowered to designate an agency called the “Designated Registering Agency” (Shitei toroku kikan) to which he can delegate all or a part of the administration of program registration.33

The Program Registration Law contains a set of provisions, from Article 6 to Article 28, which stipulate, inter alia, the qualifications and standards for designation of a registering agency, the duty to effect registrations and the confidential obligation of the designated registering agency.

Since computer programs are regarded as works of authorship, the authors or copyright owners of computer programs are entitled to the benefit of the registration system under the Copyright Law. However, it should be noted that registration is not a condition for the acquisition, enjoyment or exercise of copyright because Japan adheres to the principle of automatic protection under the Berne Convention. Article 17(2) of the Copyright Law provides that the enjoyment of moral rights and copyright shall not be subject to any formality.

Pursuant to Article 78(1) of the Copyright Law, the Director General of the Cultural Affairs Agency now administers four kinds of registers: the Copyright Register (Chosakukgen teroku genbo), the Publication Right Register (Shuppanken teroku genbo), and the Neighboring Rights Register (chosakurinsetsuken teroku genbo) and the Program Register. Under Article 78(3), any person may inspect or obtain a transcript of the Copyright Register or related documents.

33. This power exists because the capacity of the registration facility within the Cultural Affairs Agency is not sufficient to handle the large number of applications for computer programs expected to be filed. A new legal entity in the form of a foundation called the “Software Information Center” (Sofutouea joho senta) was established in December 1986 in order to serve as the Designated Registering Agency.
The Copyright Law provides for specific legal effects to follow from the various kinds of registrations: Under Article 75(1), when a work of authorship is published anonymously or under a pseudonym, its author may obtain registration under his real name regardless of whether he owns the copyright in the work. When an author’s real name is registered, the registration is published in the Official Gazette pursuant to Article 78(2). When one’s real name is registered, he is presumed to be the author of the work mentioned in the registration under Article 75(3). Registration of an author’s real name can be applied for after his death by a person designated in his will under Article 75(2).

The copyright owner or the publisher of a work published anonymously or under a pseudonym may under Article 76(1) obtain registration of the date of first publication. A work registered in such a manner is presumed by Article 76(2) to have been first published on the date recorded on the register.

Registration of a copyright under Article 77 is important when the copyright is transferred to another or used as security for a debt. Article 77 provides that any of the following transactions cannot be asserted against third parties unless they are registered: (i) transfer of a copyright (other than by inheritance or other form of general succession) or restriction on the disposition of copyright; (ii) use of a copyright as security, transfer of the secured party’s right, modification or extinction of the security interest (other than by merger or extinction of the copyright or the underlying secured obligation) or restriction on the disposition of the secured party’s rights. In view of rather infrequent use of the copyright registration system for ordinary literary and artistic works, one may question the practical importance of the Program Registration Law to the software industry. It is still too early to judge the degree of appreciation of the new registration system by the software industry.

IV. PROTECTION OF DATABASES UNDER THE 1986 AMENDMENT TO THE COPYRIGHT LAW

The third major amendment of the Copyright Law since its enactment in 1970 became effective on January 1, 1987. The 104th Session of the National Diet enacted a Law for a Partial Amendment of the Copyright Law in May 1986 based on a report prepared by the Subcommittee No. 7 (Databases and New Media) of the Copyright council. The amendment is designed to extend copyright protection to databases, to regulate various kinds of cable transmission services for ordinary literary and artistic works, to regulate various kinds of cable transmission services for

34. Law No. 64 of 1986. The Copyright Law was amended in 1984 to establish a Public Lending Right, see text at notes 31–33 supra, and again in 1985 to protect computer programs, see text at notes 18–21 supra.

35. Bunkache (Cultural Affairs Agency), Chosakukken shingikai Dai 7 sheiinkai (databesu oyobi nyumedia kankei) hekokusho (Copyright Council, Subcommittee No. 7 (Databases and New Media) report) (September 1985), reproduced in CHOSAKUKEN KENKYU (Copyright Law), Law No. 13 of 1986, at 107–70.
direct reception by the public including cable television, and to extend neighboring rights protection to organizations engaged in cable diffusion business.

The amendment adds three new provisions to the Copyright Law to make clear that databases which meet the requirements for works of authorship are entitled to protection under the Copyright Law. These three new provisions are: Article 2(1) (xter) defining "database"; Article 12bis protecting databases; and Article 4(4) defining the "making public" of databases.

First, item (xter), newly inserted in Article 2(1), defines "databe su" (database) as "a collection of theses, numerical figures, drawings and other pieces of information organized systematically so that these pieces of information can be searched (kensaku suru) by the aid of a computer." The English word "database" is used in the Japanese text of the law without translating it into Japanese.

Second, Article 12bis (database works) is newly added to the law after the existing Article 12 (compilation works). It provides as follows:

Article 12bis. (1) Databases which possess creativity in the selection or systematic organization of these pieces of information that constitute the databases shall be protected as works of authorship. (2) The provision of the preceding paragraph shall not affect the right of authors of the works which are component parts of databases mentioned in the said paragraph.

The wording of Article 12bis closely follows the wording of Article 12 (compilation works), and before the amendment, databases could be protected as compilation works by Article 12. The report of the subcommittee states that databases are collective bodies of information prepared after collecting, classifying, selecting and storing many pieces of information and are generally regarded as "compilations which possess creativity in the selection or arrangement of the materials" under Article 12(1). It is clear, therefore, that the inclusion of Article 12bis is intended to clarify that databases are works of authorship which are comparable to compilation works under Article 12. However, the amendment inserts, after the term "compilations" in Article 12(1), the phrase "excluding those falling under databases (the same shall apply hereinafter);" Article 12(1) and Article 12bis are thus mutually exclusive.

Third, the amendment inserts a new provision as paragraph (4) in Article 4 (making works of authorship public). Paragraph (4) provides that "Works of authorship in Article 12bis(1) shall be deemed to have been made public when they are placed in a condition to be presented to the public upon their requests by

36. Article 12 provides as follows:

(1) Compilations which possess creativity in the selection or arrangement of the materials shall be protected as works of authorship.
(2) The provisions of the preceding paragraph shall not affect the right of authors of the works which are component part of compilations mentioned in the said paragraph.

CHOSAKUKEN KENKYU (Copyright Law), Law No. 48 of 1970.

way of cable transmission by persons who have the rights provided in Article 23(1) or their licensees." Article 23(1) provides for an author's exclusive right to broadcast or diffuse by cable his work of authorship. Under Article 4(1), a work of authorship is deemed to have been made public (kehye) when it is published (hakko)\textsuperscript{38} or presented to the public under the authority of the copyright owner by way of performance, broadcasting, diffusion by cable, recitation or showing on a screen. The special definition of "making public" (kohyo) for databases was added because most databases do not fall under the definition of "making public" (kehye) provided in Article 4(1) since only a part of a particular database is usually presented or supplied to the public.\textsuperscript{39}

The legislative pronouncement that databases are works of authorship is a significant contribution to the highly computerized society, because copyright control can be extended to the theft of information in computer memory, as shown by two cases mentioned in the conclusion. This is particularly important where trade secret protection under general tort principles is uncertain and very limited. However, it may be more beneficial to producers of databases to enable them to enjoin the use of pirated databases obtained in bad faith, like paragraph (2) of Article 113 established by the 1985 amendment in order to protect computer programs.

V. THE 1984 AMENDMENT OF THE COPYRIGHT LAW AND THE REGULATION OF SOFTWARE RENTAL BUSINESSES

A. The Establishment of a Public Lending Right by the 1984 Amendment of the Copyright Law

The increasing popularity of personal computers has fostered new businesses which lease software, thereby affecting the market of software producers. Producers, however, can protect themselves against the software rental businesses by a public lending right which was newly established by the 1984 amendment of the Copyright Law for the primary purpose of regulating "rent-a-record" businesses.

38. The term "making public" (kehye) represents a concept broader than the term "to publish" or "publication" (hakke). Article 3(1) states that a work of authorship is deemed to have been published (hakke) when its copies are made in sufficient number to meet the demand of the public and distributed under the authority of the copyright owner.

39. When a copyright in a work of authorship is made public, it is subject to a number of limitations set forth in Chapter II, "Rights of Authors," Section 3, "Contents of Rights" Subsection 5, "Limitations of Copyright." For example, a work of authorship which is made public may be quoted under Article 32(1), may be reproduced to manufacture textbooks for use at schools of various grades below college under Article 33(1), may be used in broadcasting school education programs under Article 34(1), may be reproduced for the preparation of questions for a school entrance examination under Article 36(1), may be reproduced in braille under Article 37(1), or may be publicly performed for a nonprofit purpose under Article 38(1).
In 1984, the National Diet enacted a Law for a Partial Amendment of the Copyright Law in order to protect authors, performers and phonograph record manufacturers from public lending businesses including “rent-a-record” businesses, and to cope with high-speed duplicating machines. The 1984 Amendment established a new kind of authors’ exclusive right by adding Article 26bis (Right of Lending) between existing Article 26 (Right of Public Showing and Distribution of Cinematographic Works) and Article 27 (Right of Translation, Transformation, etc.).

The newly added Article 26bis provides that an “author shall exclusively have the right to lend to the public copies (in the case of a work of authorship which is reproduced in a cinematographic work, copies of such cinematographic work are excepted) of his work of authorship (except cinematographic works).” Cinematographic works are excluded from Article 26bis because the existing Article 26 provides for an exclusive right of the author of a cinematographic work to distribute copies of his work, and distribution includes public lending. Article 26bis does not apply to books and magazines other than sheet music. Thus, the public lending right newly established by Article 26bis is applicable only to public lending of phonograph records, computer programs and sheet music, and of some other works which are not books or magazines or cinematographic works.

A definition of “lending” (taiyo) is added to Article 2 (Definitions) as paragraph (8). It provides: “The word ‘lending’ (taiyo) used in this Law shall include any similar acts which grant a right of use, no matter what designation or form this takes.” Therefore an act of sale with a promise to buy back falls under Article 26bis.

B. Legal Actions Taken by Software Houses Against Software Rental Businesses

Software houses have been taking concerted action against unauthorized software rental businesses since the 1984 Amendments came into effect. For example, K.K. Enix and 11 other producers of game programs for personal computers entered into a settlement with K.K. Softmap on August 2, 1985, at the recommendation of the Tokyo District Court. Softmap was engaged in a business of renting cassette tapes, floppy disks and ROM cartridges embodying the

40. The amendment came into force on January 1, 1985, and, at the same time, the Law Providing for Provisional Measures to Regulate Phonograph Record Lending Businesses was abolished. See [1984] 1 EUR. INTELL. PROP. REV. D-22 and [1983] 4 EUR. INTELL. PROP. REV. D-98.

41. The newly added Article 4bis of the Supplemental Provisions provides: “The provisions of Article 26bis shall not apply for the time being to the lending of books or magazines (excluding those consisting mainly of music).”

claimants' personal computer programs and also of selling these copies with a promise to buy back. The claimants asserted that they were the owners of copyrights in the personal computer programs at issue, and they, therefore had the exclusive right to lend copies of these programs to the public. Enix and 111 other petitioners had a 60 per cent share of the market for sales of game programs for personal computers and Softmap had a 50 percent share of the rental business of such programs. The prices of those programs range from 3,000 to 9,000 yen, and the programs were rented for a fee of 10 percent of the sale price per day. The petition had been pending before the Tokyo District Court for more than two years. The parties accepted the terms of settlement recommended by the court because of the establishment of a public lending right by the 1984 amendment of the Copyright Law. The memorandum of settlement provided that the proprietor of a program rental business should not engage in such rental business without a license from software producers, and the latter shall negotiate in good faith with the former for the terms of a license.

In early 1986, four member companies of the Japan Personal Computer Software Association, Inc., Konami Kegye K.K., K.K. Hudson, K.K. Carrylabo and K.K. Kei, filed with the Tokyo District Court a petition for a temporary injunction against K.K. Softmap. The claimants stated that the respondent had been renting copies of the claimants' programs in violation of its promise not to do so under the memorandum of settlement. The claimants further contended that these programs were quite easily reproducible and the respondent was also selling copying instruments and circulating newsletters to solicit its customers to copy the claimants' programs. The claimants pointed out specifically that the amendment of the Copyright Law which came into force January 1, 1985 established a public lending right and the claimants would suffer an irreparable injury if the respondent was not enjoined instantly. The court granted an injunction against Softmap.

The establishment of a public lending right by the 1984 amendment of the Copyright Law for the primary purpose of regulating rent-a-record businesses was also a quite timely legislative action for the benefit of software houses. Software houses, however, have to use collective action to keep the market place under constant surveillance in order to detect and expel illegal activities more effectively.

VI. PROTECTION OF VIDEO GAME IMAGES AS CINEMATOGRAPHIC WORKS

A copyright in a video game as a cinematographic work offers broader protection for the video game than a copyright in the computer program of the game.

When a video game is played, it produces a series of moving images on the picture tube. These images come out of a prefixed program. During every moment of game playing, the player simply selects one of the limited number of images prefixed for his selection. The player does not create these moving images. Article 2(3) of the Copyright Law defines “cinematographic work” (eiga no chosakubutsu) as “a work expressed by a process of producing visual or audiovisual effects analogous to those of cinematography and fixed in a tangible form.” The drafter of the Copyright Law adopted this broad definition in order to include any new works which could be analogized to motion pictures.

In K.K. Namco v. Suishin Kegye K.K., the plaintiff, the manufacturer of a video game called PAC-MAN, recovered damages from the defendant, the proprietor of coffee shops where counterfeit PAC-MAN video game machines were installed for his customers' use, on the ground that the defendant infringed the plaintiff's right of public presentation of its cinematographic work. The court carefully analyzed the plaintiff's video game in order to determine whether it met the requirements for a cinematographic work. The court found that the plaintiff's video game satisfied the three requirements, under Article 2(3), for a work which is not a traditional motion picture to be regarded as a “cinematographic work”; (1) The work is expressed by visual or audiovisual effects to those of cinematography; (2) the work is fixed on a thing; and, (3) it is a work of authorship.

The court held that the defendant was liable for infringing plaintiff's right of public presentation under Article 26 of the Copyright Law. Article 26(1) provides that “[t]he author shall exclusively have the right to present publicly (jeei) and distribute copies of his cinematographic work.” The word jeei (to present publicly) is defined by Article 2(1)(xix) as “to project a cinematographic work on a screen or other material.”

Different versions of a video game may also be protectable as a cinematographic work. When a video game made for commercial use has become very popular, the manufacturer may find that its home or personal use version is made and sold by a third party. Such a version may still be regarded as a reproduction of the cinematographic work of the original game so long as substantial similarity in the form of expression of the display is found between the two versions. For example, on May 24, 1982 Namco filed a suit for copyright infringement against Bandai, who manufactured and sold a hand-held game called “Pakkuri Monster,” alleging that Bandai infringed Namco's reproduction right in its “PAC-MAN” game. The case seems to have been settled or withdrawn without awaiting the court's determination.

Under Article 27 of Copyright Law, the new home version of the video game may also be regarded as a derivative work or a transformation or adaptation of the original game recognized under Article 27 of the Copyright Law. Article 27

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44. 16 Mutai saishu 676, Judgment of September 28, 1984 (Dist. Ct., Tokyo), Japan, 1129 HANJ 120, reprinted in PATENTS & LICENSING December 1984, at 19.
provides that "[t]he author shall exclusively have the right to translate (honysku), arrange musically (henkyoku), transform (henkei), dramatize (kyakushoku), cinemateize (eigaka) or otherwise adapt (honan) his work."

Furthermore, when a popular video game is expected to be in use for a longer period, proprietors of game arcades may want to make the game more attractive and challenging by attaching a tiny printed circuit board called an "enhancement kit" or "speed-up kit" to the original printed circuit board. Such kits distort the original cinematographic work and, therefore, the manufacturer may claim that his moral right, the right to the integrity of his work, is infringed. Article 21(1) of the Copyright Law provides that "[t]he author shall have the right to preserve the integrity of his work and its title against any distortion, mutilation or other modification against his will."

The foregoing discussions have made clear the problems faced by video game manufacturers and their solutions under the Copyright Law. These analyses are important not only for video game manufacturers but also for manufacturers who develop computer-programmed audio-visual equipment for educational, entertainment or other purposes in the future. The contributions made by the video game industry in the development of the copyright law to solve computer-related problems should be highly appreciated.

Many of the problems brought about by computer technology have been dealt with in the new amendments to the Japanese Copyright Law. Furthermore, outside the domain of copyright, the Patent Office has been handling computer software related inventions in accordance with the Standard for Examination of Inventions Related to Computer Programs adopted in 1975 and the Guidelines for Examination of Inventions Related to Microcomputer-assisted Technology. Semiconductor integrated circuits are protected by the Law concerning the Circuit Layout of a Semiconductor Integrated Circuit.

46. These legislative developments have been brought about much to the efforts of the government agency in charge of copyright matters and its advisory body, i.e., the Copyright Council, which consists, inter alia, of copyright specialists and representatives of various interest groups. As an extension of such effort, a new subcommittee was established in March, 1986, within the Copyright Council in order to study the legal status of computer-created works, such as graphic arts, translations and music made with the aid of computers. Nihonkeizai shimbun, Mar. 27, 1986.
47. JAPANESE PATENT OFFICE EXAMINATION STANDARD FOR COMPUTER PROGRAM RELATED INVENTIONS, reprinted in PATENTS & LICENSING, June 1983, at 15.
49. For an English translation, see INDUSTRIAL PROPERTY, September 1985, Laws and Treaties Text 1-001. Enacted by the 102 Session of the National Diet in 1985, this law has removed two possibilities. The one is the possibility of protecting semiconductor integrated circuits under the Copyright Law; the other is the possibility for Japanese semiconductor chip manufacturers to seek protection in the United States by the Semiconductor Chip Protection Act, 17 U.S.C. § 914, claiming national treatment under the Paris Convention for the Protection of Industrial Property, which contains
The most worrisome concern in the highly computerized society is the lack of effective trade secret protection.\textsuperscript{50} Whenever incidents such as the copying of magnetic tapes containing databases and other computer data occur,\textsuperscript{51} the lack of a civil injunctive remedy and of direct penal sanctions is keenly felt. The parties whose data were stolen in such cases should seek database protection under the 1986 amendment of the Copyright Law in order to have the full benefit of civil remedies and penal sanction.

VII. CONCLUSION

Copyright laws should be flexible enough to extend copyright protection to new kinds of works that may emerge as technology develops. It is the role of the courts to interpret copyright statutes to determine the availability or the extent of copyright protection in particular cases brought to them. However, legislative action is necessary from time to time in order to remove legal uncertainties, to remedy shortcomings or to make adjustments among interested parties. The three major amendments of the Japanese Copyright Law discussed here clearly demonstrate the importance of legislative actions. This does not mean, however, that the copyright statute must be so precise and detailed as to lose its inherent flexibility. Authors, the copyright industry and users of works of authorship must always be aware that the copyright statute should leave many of the problems they encounter to their own disposition or solution.


\textsuperscript{51} For example, in October 1970, the magnetic tape containing the names and addresses of approximately 100,000 subscribers of \textit{Nikke: Business}, an economic journal published by Nikkei-McGraw-Hill, Inc. in Japan, was copied by someone while it was under the custody of a computer operating center for feedback and the copy was sold to Japan Reader's Digest for 820,000 yen. Asahi shimbun, Feb. 3, 1971; Mainichi shimbun, Feb. 3, 1971 (evening); Nihonkeizai shimbun, Feb. 3, 1971. More recently, three men, including a section chief of the Japan Federation of Light Associations were arrested for allegedly stealing computer data on some nine million light cars registered throughout the country. It was reported that the three men copied the backup tapes of the original data preserved in case of emergency and sold the copied data to automobile dealers and insurance companies for 20 million yen to 50 million yen. Japan Times, Apr. 11, 1986; Nihonkeizai shimbun, Apr. 10, 1986; Asahi shimbun, April 10, 1986.