Copyright Law and Protection of Computer Programs

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1. Foreword

With the recent development of information processing technology and the expansion of information networks, a highly developed information society is in progress. And the protection of basic technology contributing to this progress has become a foremost issue in international forums as well as in Japan.

New types of intellectual creations have lead to the enactment of entirely new types of intellectual property laws, or they have been incorporated into the existing intellectual property systems. The two legal developments which are noteworthy in Japan are:

1) the protection of computer programs[1] and data bases[2] under the Copyright Act (*Chosakuken-hō*); and

2) the protection of circuit layouts of semiconductor chips under the Act Concerning the Layout of a Semiconductor Integrated Circuit (*Handōtai-Shusekikairo no Kairohaichi ni kansuru Hōritsu*)[3].

Moreover, today in an age of information, new-media related high technology is enabling intellectual creations (especially

literary, musical and audio visual copyrighted works) to be easily and rapidly disseminated throughout the society by the hands of individuals, irrespective of the intention of the creators, and this is posing a new problem in the information society. For example, development and wide spread use of copying machines have made "copying culture" penetrate into the society and are benefiting the general public on one hand, but are also causing innegligible losses to the original creators and disseminators of intellectual creations (e.g. authors and publishers) on the other hand, thus creating conflicts of interests between them. This situation initially caused by usual photocopying machines and magnetic tape recorders (together with their tapes) is aggravated with the recent development of information distributing and duplicating devices such as compact disks (CDs), video cassette recorders (VCRs), video disks (VDs) and digital tape recorders (DATs).

Thus, we are in a situation in which intellectual creations are easily disseminated by the hands of individuals without the involvement of the creators with the spread of information distributing and duplicating technology. However a very serious problem as to how and to what extent we should protect the proprietary interests of the creators, balanced against the interests which the public has in having more access to intellectual creations, is being presented, and we are, in this context, inevitably required to consider the social implication of the development of technology which is bringing about this situation. In the following, with the situation of today's information age in the background, the author will discuss, in connection with the basic

technology of the information society, the protection of computer programs under the Japanese Copyright Act.

2. Protection of Computer Programs

2.1 The Outline of the Japanese Copyright Act

The Copyright Act protects creative expressions of thoughts or sentiments which fall within the literary, scientific, artistic or musical field[4], such as novels, paintings and music[5]. The Copyright Act of Japan and other countries which are parties to the Berne Convention afford an exclusive right called "copyright" (*chosakuken*), which is comprised of a "bundle of rights", to the author (*chosakusha*) of a work (*chosakubutsu*) with respect to the utilization of its expression, as soon as a work is created and without the need for any formalities to be fulfilled. This means that the author solely has the rights to do the following acts (Articles 21 through 28) or authorize others to do such acts (Article 63):

1) to reproduce his or her work[6];
2) to theatrically act or musically play his or her work publicly[7];
3) to broadcast or diffuse by cable his or her work[8];
4) to recite his or her work publicly[9];
5) to exhibit the original of his or her work publicly[10];
6) to present his or her cinematographic work publicly, or to distribute his or her work by using the copies of the cinematographic work[11];
7) to publicly offer his or her work by lending the copies thereof[12];

8) to translate, musically arrange, transform, dramatize, cinematize, or otherwise adapt his or her work[13]; and

9) to utilize a derivative work made by adaptation of his or her original work.[14]

The interests of the author of a work will thereby be protected from unauthorized imitation or utilization of its expression by others. With respect to the protection of computer programs, the author's rights to reproduce (Article 21) and to adapt his or her work (Article 22) are especially important. And, in this regard, "reproduction" (*fukusei*) of a work means duplication of a work in a material form, and "adaptation" (*honnan*) of a work means maintaining the inner form of expression (e.g. the plot of a novel) and rearranging or modifying the outer form of expression (e.g. making a stage drama or a motion picture out of a novel by utilizing the plot of the novel) and thereby creating a derivative work. (*nijiteki-chosakubutsu*). For example, in the case of a novel mentioned above, the stage drama or the motion picture is a derivative work of the original novel, and only the author of the novel has the right to make or authorize others to make such a derivative work. A separate copyright will be afforded to the derivative work, but the original copyright will also extend to the derivative work (Article 28). And if reproduction or adaptation of a work is to be done by a person other than the author of the work, the authorization of the author is required, and if it is done without such authorization, it will be an infringement of the copyright of the original author.

The term of protection of a copyright begins upon creation

of a work and, in principle, lasts until the lapse of 50 years after the death of the author (Article 51). A copyright is transferable to others in whole or in part. However, the author's moral rights such as the right to make his or her work public (*kōhyōken;* Article 18), the right to indicate the author's name on his or her work (*shimei-hyōjiken;* Article 19), and the right to maintain integrity of his or her work (*dōitsusei-hojiken;* Article 20) are inalienable.

The protection of performances, phonograms, or broadcasts or cable-broadcasts is available under the neighbouring rights which are afforded to performers, phonogram makers, broadcast or cable-broadcast entrepreneurs (Articles 89 through 100-4). The neighbouring rights are protected for 30 years form the time of first performance, first fixation of sounds, or first broadcast or cable-broadcast under the Japanese Copyright Act (Article 101).

When infringement of a copyright or a neighbouring right occurs, remedies such as compensation for damages and injunction are available (Article 112). When infringement is likely to take place, preventive measures are also available (Article 112). If a moral right of an author is infringed, measures for the restoration of the author's honour may be claimed in place of or in addition to the compensation for damages (Article 115).

The Copyright Act protects only the expression of a work and does not protect the ideas, thoughts or sentiments underlying the work. Thus they may be freely used by anybody (dichotomy of idea and expression). Moreover, an expression created independ-

ently will not be an infringement of the copyright in a preexisting work, even when the resulting expression is identical with or substantially similar to that of the preexisting work (independent creation). Furthermore, if there is only a limited number of ways to express an idea and the expression of a work merges with the idea, then a work utilizing an expression which is identical with or substantially similar to the expression of a preexisting work is not regarded as an infringement (merger doctrine).

2.2 History Leading to the Legislation of Protection of Computer Programs

Previously, computer software was provided to users by computer makers as part of services accompanying the sales of computers. However, with the spread of universal computers, software came to be transacted separately from hardware, mainly as a result of IBM's unbundling of computer software from hardware in the latter half of the 1960s (1968). Since then, computer software including computer programs, separated from hardware, has come to have more and more important value in the market as an intellectual creation. On the other hand, protection of this intellectual creation against unauthorized copying and free ride in the competitive economic market has been strongly felt. In Japan, the 1985 amendment to the Copyright Act of 1970 made clear that computer programs are works protectable under the Copyright Act. And it is also the world-wide trend to protect computer programs primarily under the copyright law.

2.3 Official Reports in Japan and Movement in the World

In Japan, prior to the 1985 amendment to the Copyright Act, there were already a couple of cases in which the Court stated that video game computer programs are works protectable under the Copyright Act.[15] There were even cases in which the Court stated that the screen displays of video game software are cinematographic works protectable under the Copyright Act, separate from the underlying computer programs.[16] However until 1985, when an amendment to the Copyright Act expressively made clear that computer programs are works protectable under the Copyright Act, there had been a long history of disputes and discussions in Japan as to what would be the appropriate form of law to protect computer programs. Some of the official reports which were published in the meanwhile indicate this situation.

1) Interim Report of the Software Protection Investigation Committee of the Heavy Industry Bureau of the Ministry of International Trade and Industry of 1972; which recommended the enactment of a *sui generis* law to protect computer programs.

2) Report of the Second Subcommittee (Computer Related) of the Copyright Council of the Agency for Cultural Affairs of 1973; which stated that computer programs are expressions of scientific thoughts of the programmers, and thus are copyrightable works falling within the scientific field.

3) The Patent Agency's "Standard for Examination of Inventions relating to Computer Programs (1)" published in 1976 and "Guide-

line for Examination of Inventions relating to Technology Applying Microcomputers" published in 1982; which together suggested that if laws of the nature are used in defining the causal relationship underlying the methodology of a computer program or if a computer program is incorporated into a means for function, it could be patented as a process patent or as an apparatus patent respectively. However, the availability of the Patent Act for protecting economically short-lived computer programs were generally thought to be limited in light of the complex and time-consuming patent examination procedure.

4) Interim Report of the Information Industry Committee of the Industrial Structure Council of the Ministry of International Trade and Industry of 1983, "On Improvement and Enforcement of the Foundation for Software"; which suggested that computer programs be protected under a newly enacted *sui generis* law called "the Program Right Act (Tentative Name)", providing for 15 years of protection and affording to the creators of computer programs a "right to use" the computer programs (*shiyō-ken*). The Report characterized computer programs as economic goods and stressed that rights such as moral rights were unnecessary for protecting computer programs, and concluded that the Copyright Act, which protects cultural attainments, was unsuitable for protecting computer programs. The same movement was seen in Korea and Brazil.

5) Interim Report of the Sixth Subcommittee of the Copyright Council (Computer Software Related) of the Agency for Cultural Affairs of 1984; which confirmed the copyrightability of computer

programs and recommended that an amendment to the existing Copyright Act be made to protect computer programs by taking special characteristics of computer programs into consideration.

At the final phase of the movement mentioned above, a pressure from the United States, which favoured the copyright protection of computer programs, was strongly felt in Japan, and as a result of trade negotiations with the United States, the Ministry of International Trade and Industry finally withdrew its position, which it had held for almost ten years since 1972, to protect computer programs under a *sui generis* law scheme. On the other hand, the stance of the Agency for Cultural Affairs gained impetus and lead to the 1985 amendment to the Copyright Act.

On the world-wide stage, WIPO (World Intellectual Property Organization) once took the initiative in setting forth a frame work for the international protection of computer software, and issued the Model Provisions on the Protection of Computer Software in 1978,[17] and made public the Draft Treaty on the International Protection of Computer Software in 1983.[18] The Model Provisions and the Draft Treaty both recommended a short term protection of computer software under a copyright-law like system, mixed with trade secret protection, and suggested the affording of a right to use computer programs to the creators of computer software. However, finally at the expert meetings held in 1983 and 1985, it was agreed that neither enactment of a *sui generis* law nor conclusion of a special treaty was necessary for the international protection of computer software in light of the

world-wide trend to protect computer software under national copyright laws and the existence of international copyright treaties such as the Berne Convention and the Universal Copyright Convention.

In the meanwhile, the United States made clear to protect computer programs under its revised Copyright Act of 1976 by an amendment thereto in 1980. Also the final report of the National Commission on New Technological Uses of Copyrighted Works (CONTU) issued in 1978 supported copyright protection of computer programs under the 1976 U. S. Copyright Act. In other countries such as the Philippines, Australia, India, Hungary, Germany, France, Britain, Taiwan, Republic of Korea, Singapore, Malaysia, Indonesia and Spain, it is now expressively made clear that computer programs are protectable under their national Copyright Acts. There is also a movement of harmonizing the copyright law protection scheme of computer programs among the countries of the European Communities.(19)

2.4 Specific Copyright Act Provisions Relating to the Protection of Computer Programs

Provisions in the Japanese Copyright Act relating to the protection of computer programs are, in particular, as follows:

1) A computer program is listed as a copyrightable work (program work) in item 9, paragraph 1, Article 10 of the Copyright Act;

2) A computer program is defined in item 10-2, paragraph 2 of Article 2 as "an expression of combination of instructions to be given to a computer so as to make the computer operate to bring about a certain result";

3) Paragraph 3 of Article 10 expressively provides that the protection afforded to computer programs does not extend to "programming language" (*program gengo*), "rules" (*kiyaku*) or "methods of solution" (*kaihō*) contained in the computer programs, and defines those terms;

4) According to Article 15, paragraph 1, as far as an ordinary type of work is concerned, when an employee creates a work in the course of his or her employment upon the initiative of a juridical person or other employer, the author of the work will be deemed to be that juridical person or other employer, if the work is made public in the name of the juridical person or other employer. However, with respect to computer programs, the newly added Article 15, paragraph 2 no longer requires that computer programs be made public in the name of a juridical person or other employer for such juridical person or other employer to be deemed as the author of the computer programs;

5) Item 3, paragraph 2 of Article 20 restricts the author's moral right to maintain integrity of a program work, and allows alteration of a computer program in order to make a computer program which does not operate on a specific computer to operate on that computer, or to make a computer program operate more efficiently on a computer;

6) Article 47-2 allows the owner of a copy of a computer program to reproduce or adapt the computer program (and make copies of the adapted program) to the extent that it is necessary for him or her to use the computer program on a computer. Accordingly, the owner of a copy of a computer program may make back-up copies of the computer program, or may modify the computer program, which does not operate on a computer, to make it operate on that computer. However, if back-up copies or copies of the adapted program made in accordance with these provisions are used for other purposes, or distributed or presented to the public, it will be deemed as an act falling within the right of reproduction or adaptation retained by the author, and will constitute an infringement of the copyright in the original computer program (Item 3, paragraph 1 and item 2, paragraph 2 of Article 49).

Moreover, according to paragraph 2 of Article 47-2, if the owner of such copies (including the original copy) loses ownership of any of such copies for grounds other than destruction, he or she is not allowed to maintain any other copies, unless there is a declaration of intention of the author to the contrary. And if he or she maintains such copies in violation of these provisions, such maintenance will be deemed as an act falling within the right of reproduction or adaptation retained by the author, and will constitute an infringement of the copyright in the original computer program (Item 4, paragraph 1 and item 3, paragraph 2 of Article 49);

7) Article 53, paragraph 3 provides that the term of protection of a computer program whose author is a juridical person or

other employer in accordance with the provisions of Article 15, paragraph 2, lasts until the lapse of 50 years after it is made public, or if it is not made public, until the lapse of 50 years after it is created;

8) The newly added Article 76-2 establishes registration of the dates of creation of computer programs. A computer program as to which such registration is effected will be presumed to have been created on the date of the registration. Moreover, Article 78-2 mandates the enactment of a special Act for the registration of program works, and in response to this Article, the Act Providing Special Regulations for the Registration of Program Works was enacted in 1986. And now under this Act, SOFTIC (Software Information Center, Inc.), a governmentally designated organization, accepts applications for the registration of computer programs;

9) According to the provisions of Article 113, paragraph 2, using an infringing copy of a computer program on a computer for business purposes is deemed as an infringement, if the user knew, at the time he or she acquired the right to use the copy, that the copy was made by an act infringing on the copyright in the computer program. Moreover in accordance with the provisions of Article 113, paragraph 1, importation for the purpose of distribution of any articles which, if they were made at the time of importation, would infringe on a moral right, copyright, publishing right or neighbouring right; or distribution, or possession for the purpose of distribution, of any articles which infringe on any of such rights shall be deemed as an infringement of the

relevant right. Therefore, importation, possession for the purpose of distribution, or distribution of infringing copies of a computer program will also be deemed as an infringement.

3. Specific Discussions on Protection of Computer Programs

3.1 Miscellaneous

In Japan, regardless of various distinctions which can be made with respect to computer programs, such as that between operating system programs (OS) and application programs, there is almost no doubt that all types of computer programs are protected under the present Copyright Act. However, there is a dispute as to the copyrightability of microprograms, and an opinion is heard that microprograms are not copyrightable[20] and that they should rather be protected by a patent together with the microprocessor containing the microprograms.[21] The opinion states that even if microprograms are copyrightable, free choice left to the programmers for combining micro-instructions is so narrow that there is a merger of idea and expression, and therefore microprograms are not protectable under the copyright law.[22]

The mechanical conversion of a source code into an object code by compilers is regarded as reproduction in Japan,[23] and this has also been the opinion of the Court since before the 1985 amendment to the Copyright Act. The Court has stated that an object code embedded on a ROM (Read Only Memory) is a copy of the source code, and that extracting the object code from the ROM and embedding it on another ROM without the authorization of the author of the source code is making of an illegal

copy (illegal reproduction), and therefore is an infringement of the copyright in the source code.[24] However, some maintain that conversion of a source code into an object code should be regarded as "translation" as far as there is a change in the programming language system, and therefore is making of a derivative work. But nevertheless they state that, as only mechanical process and no creative activities are involved in the conversion unlike the ordinary manual translation in which creative activities are involved, no separate right is to be afforded to the translator carrying out the conversion by compilers, and all rights relating to the object code should be given to the author of the source code.[25] Anywhere, when an object code is created directly, the opinion is uniform that the object code so made is copyrightable, because creative activities are involved in the making of the object code.[26]

In Japan, computer programs, which are protected by the Copyright Act, may be embodied on any medium; magnetic tapes, flexible disks, hard disks, ROMs, coding sheets, punch cards and others. However, there is a dispute as to whether storage or loading of a computer program on the internal memory (RAMs; Random Access Memories) of a computer in order to execute the program is to be regarded as reproduction of the computer program or not. The Report of the Second Subcommittee of the Copyright Council issued in 1973 stated that "as the storage is transitory and temporary, it cannot be regarded as reproduction",[27] and the Interim Report of the Sixth Subcommittee of the Copyright Council issued in 1984 seems to follow this position, citing the Second Subcommittee's Report.[28] On the other

hand, one opinion states that, if embedding a program on a ROM can be regarded as reproduction, it cannot be concluded that loading a program on the internal memory (RAMs) of a computer is not reproduction just because it is transitory.[29] Another opinion is that if a program is stored in a lasting way so that it may be available for repeated use in a computer, such storage of a program on the internal memory of a computer can be regarded as reproduction.[30]

3.2 Scope of Protection of Computer Programs

The scope of protection of a computer program presents a very difficult problem. The question is: to what level of abstraction beyond the literal code can a computer program contain an expression protectable under the copyright law? A leading case in the United States, which treats computer programs as literary works, stated that the purpose or function of a program is the idea and what is not necessary for that purpose or function is the expression, and concluded that the overall structure, sequence and organization (SSO) of a computer program are protectable expressions under the copyright law.[31] On the other hand, the Japanese Copyright Act expressively excludes "methods of solution" contained in a computer program from protection (Article 10, paragraph 3, item 3), and in light of these provisions it has generally been stated that steps for solving a problem contained in a computer program are algorithm and are not protectable under the copyright law.[32] Following this position, a recent Tokyo High Court judgement rendering a preliminary injunction order stated that a "sequence of operations" (*shori no nagare*) contained

in a computer program is a "method of solution" (*kaihō*) provided for in Article 10, paragraph 3, item 3 of the Copyright Act and is not protectable.[33] In contrast to the leading cases in the United States, which seem to afford very broad protection to computer programs, the general opinion in Japan is that, just like scientific works (*gakujutsu no chosakubutsu*), computer programs enjoy rather thinner scope of protection than works such as novels, which are given rather broad protection even to their plots and basic structures.[34]

Moreover, Artice 10, paragraph 3, item 2 of the Japanese Copyright Act provides that "rules" (*kiyaku*) contained in a computer program are not granted protection. "Rules" in this context refer to interface specifications that enable, for example, an application program to interface with an operating system program, or communication protocols that enable programs in different information devices to communicate with each other. These are technological specifications which are necessary for the manufacture of compatible machines and for the interconnection of computers provided by different computer makers. These technological specifications are thought to be ideas as such, and therefore not protectable under the Japanese Copyright Act. Furthermore, these specifications need to be standardized for the wide networking of computer systems and for the increased availability of application programs on various different types of computers. In fact, there is a movement initiated by IOS (International Organization for Standardization) and CCITT (Comité Consulatif International Télégrahique et Téléphonique) to standardized communication protocols on the basis of OSI (Open System Inter-

connection) model. Standardization of Unix, an operating system for minicomputers, is also in progress, sponsored by corporate groups such as OSF (Open Software Foundation) and UI (Unix International). However, there is a dispute whether such interface specifications or communication protocols embodied in computer programs are protectable by copyright law or not. And although the general opinion in Japan is, as mentioned above, that they are not protectable in light of the provisions of the Japanese Copyright Act, a country such as the United States, which favours broad protection to be given to computer programs, maintains that interface specifications or communication protocols embodied in computer programs are protectable as integral part of the computer programs, and heated discussions are under way in international forums. In Japan, an opinion is heard that not only interface specifications or communication protocols as such but also part of programs embodying such interface specifications or communication protocols should be denied protection or be given very thin protection, if any, because of the very narrow choice left to programmers in combining program instructions based upon such interface specifications or communication protocols.(35) However, in my opinion, before reaching such a conclusion, legal analysis of computer programs embodying interface specifications or communication protocols has yet to be conducted in more details.

3.3 Reverse Engineering

The essence of computer programs lies in technology, and technology in general progresses step by step and incrementally

on the basis of the achievements accomplished by our predecessors. In this respect, there is a need for access to be allowed to the technology contained in computer programs in order to promote development of better software technology. There may also be a need for knowing interface specifications or communication protocols contained in computer programs in order to develop compatible machines or to realize interconnection between computers. Meeting these needs will promote the advance of software technology and activate the computer-related information market in a way desirable to the users of computer systems. However, in order to meet these needs, computer programs developed by others may sometimes have to be disassembled or decompiled, or otherwise analyzed, and the permissibility of this act of analyzing others' computer programs called "the reverse engineering of computer programs" is disputed and discussed internationally, especially when it accompanies reproduction or adaptation of computer programs.(36)

In Japan, in order to strike a balance between the protection of technology and the promotion and dissemination of technology, technology protection law schemes such as the Patent Act,(37) the Utility Model Act(38) and the Act Concerning the Circuit Layout of a Semiconductor Integrated Circuit(39) expressively permit reverse engineering of the subject-matters protected under those Acts. Now that the Copyright Act has come to protect technology such as computer programs, the same consideration should be taken into account in discussing the permissibility of reverse engineering of computer programs under the copyright law. And although there is no expressive provisions in the Japanese Copyright Act permitting reverse engineering of computer

programs, it should be regarded as fair use, and if the copyright owner of a computer program claims infringement because of his or her computer program being reverse engineered, such a claim should be regarded as an abuse of his or her copyright (Article 1, paragraph 3 of the Civil Code) and should be dismissed in my opinion. However, it should also be noted that, although technological ideas extracted as a result of reverse engineering may be used for any purposes, misappropriation of the expression of the target program should not be allowed, and if this is done, it will, of course, constitute an infringement.

3.4 Proof of Infringement

The burden of proof of copyright infringement lies on the plaintiff. However, it is generally stated that if the plaintiff proves:

1) that the defendant had access to the plaintiff's work; and

2) that the defendant has created a work which is substantially similar to the plaintiff's work,

the infringement by the defendant will be presumed. But with respect to technological products such as computer programs, the following factors should also be taken in account in finding infringement:

1) technological constraints;

2) technological efficiency and economy of computer programs; and

3) the essential nature of technology to converge into better technology.[48]

Therefore, when the defendant can in turn rebut that he or she has used only the idea of the plaintiff's program and, due to the above-mentioned factors, has created a program which has, from practical necessity, become substantially similar to the plaintiff's program, the defendant's liability should be denied, because, in such a case, it can be said that no misappropriation of the expression of the plaintiff's program has taken place. And for this purpose it is often advised that a paper trail evidencing the development procedure should be kept and maintained. Moreover, when a program based on the ideas of a preexisting program is to be developed, a program development procedure called the "clean room method" is sometimes adopted in practice. In this procedure, the analyzing team, which reverse engineers a preexisting programs and extracts its ideas, is perfectly separated from the development team, which develops a program by using the ideas transferred from the analyzing team. In this way, the transfer of an expression of the analyzed program is intercepted, and even when a program which is substantially similar to the analyzed preexisting program is developed, the developer may escape from liability, claiming that it has used only the ideas of the analyzed preexisting program. If this kind of development procedure is adopted and a paper trail evidencing the entire procedure is kept and maintained, it may be a good method for proving independent creation of a substantially similar program and avoiding liability for infringement.

(1) Law No. 62, 1985 (an amendment to the Copyright Act).
(2) Law No. 64, 1986 (an amendment to the Copyright Act).
(3) Law No. 43, 1985.
(4) Works protected under the Copyright Act are defined in Article 2, paragraph 1, item 1: "Work" means a creative expression of thought or sentiment which falls within the literary, scientific, artistic or musical field".
(5) Examples of works protected under the Copyright Act are listed in Article 10, paragraph 1. They are, in particular, as follows:
1. a novel, a drama, an article, a lecture or other literary work;
2. a musical work;
3. a choreographic work and pantomime;
4. a painting, engraving, sculpture and other artistic work;
5. an architectural work;
6. a map, or a drawing, chart, model or other graphic work of scientific nature;
7. a cinematographic work;
8. a photographic work;
9. a program work.

(6) Article 21.
(7) Article 22.
(8) Article 23.
(9) Article 24.
(10) Article 25.
(11) Article 26.
(12) Article 26–2.
(13) Article 27.
(14) Article 28.
(15) Tokyo District Court Decision, December 6, 1982, Mutaishū Vol. 14, No. 3, p. 796, Hanrei Jihō No. 1060, p. 18 [Space Invaders Part II case]; Yokohama District Court Decision, March 3, 1983, Hanrei Jihō No. 1081, p. 125 [Space Invaders case]; Osaka District Court Decision, 26 January, 1984, Mutaishū Vol.16, No.1, p.26, Hanrei Jihō No.1106, p.134 [STRATEGY X case].
(16) Tokyo District Court Decision, September 28, 1984, Mutaishū Vol. 16, No. 3, p. 676, Hanrei Jihō No. 1129, p. 120 [PacMan case]).
(17) WIPO Publication No. 814 (E), 1978.

(18) WIPO document, LPCS/II/3 (February 24, 1983).

(19) See GREEN PAPER ON COPYRIGHT AND THE CHALLENGE OF TECHNOLOGY——COPYRIGHT ISSUES REQUIRING IMMEDIATE ACTION, Commission of the European Communities, Com(88) 172, Final, Brussel, 7 June 1988; and Proposal for a Council Directive on the Legal Protection of Computer Programs, Com(88) 816 Final STN 186, Official Journal of the European Communities, 12 April 1989, No. C 91/4.

(20) Nobuhiro Nakayama, Legal Protection of Computer Software (New Edition), p. 34–37.

(21) Hiroyoshi Uematsu, Program Copyright Q & A, p. 61–63.

(22) Nakayama supra.

(23) Interim Report of the Sixth Subcommittee of the Copyright Council (1984), p. 33–34; Masao Handa, Commentaries on the Copyright Act (4th edition), p. 100.

(24) See cases in Note 15.

(25) Nakayama supra p. 30–32; Uematsu supra p. 42–44.

(26) Interim Report of the Sixth Subcommittee of the Copyright Council (1984) p. 33–34; Handa supra p. 100; Nakayama supra p. 32.

(27) Report of the Second Subcommittee of the Copyright Council (1973), p. 22.

(28) Interim Report of the Sixth Subcommittee of the Copyright Council (1984), p. 48–50.

(29) Isao Noishiki, Reproduction in Computers, Copyright Studies 16, p. 68.

(30) Uematsu supra p. 89.

(31) Whelan Associates, Inc., v. Jaslow Dental Laboratory, Inc., 797 F.2d. 1222 (3 Cir. 1986). See also SAS Institute, Inc., v. S&H Computer Systems, Inc., 605 F. Supp 812 (M. D. Tenn. 1985).

(32) Uematsu supra p. 48, 49–53.

(33) Tokyo High Court Order, June 20, 1990, Hanrei Jihō No. 1322, p. 138.

(34) Interim Report of the Sixth Subcommittee of the Copyright Council (1984), p. 51–52. Nobuo Monya, What are Intellectual Property Rights?, p. 81; Nakayama supra p. 48

(35) Nakayama supra p. 46–47.

(36) See "Reverse Engineering : International Symposium on the Protection of Software in Berlin (I)" in AIPPI Journal, December 1989, p. 267; (II) in AIPPI Journal, January 1990, p. 4; (III) in AIPPI Journal, March 1990,

p. 72, (IV) in AIPPI Journal, May 1990, p. 103; and (V) in AIPPI Journal, July 1990, p. 160; Also see "Reverse Engineering of Computer Programs —— Its Actual Practice and Legal Evaluation", Software Information Center (1990).

(37) Article 69, paragraph 1.

(38) Article 26 providing for the *mutatis mutandis* application of the Patent Act Article 69, paragraph 1.

(39) Article 12, paragraph 2.

(40) Nakayama supra p. 101–102.

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＊本稿は，国際協力事業団及び財団法人比較法研究センターの主催による発展途上国の法律専門家を対象とした国際貿易技術セミナーにおける一連のレクチュアーの中で，私が，日本の著作権法とコンピュータ・プログラムの保護について担当し，そのプレゼンテーションのために自ら英文で用意したペーパーに若干の訂正と補正を加えたものである。本稿は，プレゼンテーションのために用意したものである性質上，またほぼ原文に近い形で紹介するという著者の意図から，依然言い回しその他の上で不適切な点が多々存在することを覚悟の上，国際理解その他の何らかの参考のためにとここに，掲載する次第である。