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# Protecting American Software in Japan, 8 Computer L.J. 111 (1988)

Wean Khing Wong

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# PROTECTING AMERICAN SOFTWARE IN JAPAN

by WEAN KHING WONG\*

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The development of a Japanese software market has captured the interest of American software makers.<sup>1</sup> For American manufacturers seeking exports to Japan, the Japanese software market looks lucrative. According to a 1985 survey, Japanese software sales were growing more than twenty per cent annually, and fourteen top Japanese companies grossed more than  $\ddagger10$  billion.<sup>2</sup> Also, the top twenty software firms grossed an average profit of 6.0 percent. The average gross profit for all the listed Japanese companies was 3.1 percent during this period—indicating that the net profits of the top software companies rose as well.<sup>3</sup> Additionally, because of the expected increased demand for bank online systems and telecommunications projects, the future looks optimistic.<sup>4</sup>

Consequently, a place exists for American software firms in Japan especially since these firms are ahead of their Japanese competitors in software technology.<sup>5</sup> American businessmen entering the Japanese market, however, are concerned about how to protect their software under Japanese law. Under the Japanese legal system, software can be protected by copyright, trademark, patent, unfair competition, knowhow, tort, contract, or criminal law. Excluding patent and copyright law, the rest of these laws do not have express provisions which protect software. This paper will discuss the protection of software under Japanese copyright law as recently amended.

### I. THE JAPANESE COPYRIGHT LAW AMENDMENTS: HISTORY

Japan's recent amendment to its copyright law becomes effective on January 1, 1986.<sup>6</sup> Before this change, debates raged over which of

<sup>1.</sup> See, e.g., JAP. ECON. J., June. 18, 1985, 12, at col. 1.

<sup>2.</sup> Id., Nov. 9, 1985, 11, at col. 1.

<sup>3.</sup> Id.

<sup>4.</sup> Id. at col. 2.

<sup>5.</sup> Calder, Japan, U.S. Complementary in High-Tech Electronics, JAP. ECON. J., Jun. 11, 1985, 24, at col. 2.

<sup>6.</sup> Copyright Law (Chowsakuken Ho), Law No. 48 of 1970, as amended by Law No. 62 of 1985 [hereinafter cited as COPYRIGHT LAW]. This article does not cover computer

two proposed amendments should be adopted. The Ministry of International Trade and Industry (MITI) and the other from Cultural Affairs Agency (CAA) under the Ministry of Education (MOE) sponsored their own proposed amendments.<sup>7</sup>

MITI proposed a sui generis Program Rights Law different from both patent and copyright.<sup>8</sup> The MITI proposal called for a shorter term of protection (fifteen years) than that afforded under the Universal Copyright Convention's minimum (twenty-five years) and that of the Japanese Copyright Law (fifty years).<sup>9</sup> The amendment also departed from the traditional copyright principles by advocating a compulsory licensing system that forces certain copyright owners to sell their usage rights to the public for "fair compensation."<sup>10</sup> MITI considers software production as significantly different from traditional copyrightable material. MITI therefore argues that it would be against public policy to grant copyright protection. The primary reason for this position is because it is inefficient to require a form change for substantially the same product.<sup>11</sup> MITI also does not want to provide a monopoly to creators whose only virtue is in reaching the market first.<sup>12</sup>

Unlike MITI, CAA proposed that Japan follow the worldwide trend of using copyright law as the primary tool of protection.<sup>13</sup> Ordinarily, the more powerful MITI would have won the battle with CAA. However, external pressure from the United States government, the European Economic Community, American industry and associations,

7. Based on the recommendation given in The Sixth Subcommittee, the Draft Interim Report of the Copyright Council (for Computer Software), Jan. 1984 [hereinafter cited as Interim Report], the CAA drafted a bill for the amendment of the Copyright Law. The main points of the draft were carried over almost intact to the actual amendments. See Torri, Legal Protection of Computer Software in Japan, 10 AIPPIJ.150, (1985). Main points of the draft bill could be found in UNESCO/WIPO/GE/CCS/2, Dec. 1984, at 26 or UNESCO/WIPO/GE/CCS/3, Mar. 1985 Annex at 2. MITI published a First Draft outline of the Program Right Law in February 1984.

8. Karjala, Protection of Computer Programs under Japanese Copyright Law, 8 EUR. INTELL. PROP. REV. 105 (1986) [hereinafter cited as Karjala, Protection].

9. Karjala, Lessons from the Computer Software Protection Debate in Japan, 1984 ARIZ. ST. L.J. 53, 58-9 [hereinafter cited as Karjala, Lessons]. See also Note, The Semiconductor Chip Protection Act of 1984, 17 LAW & POL'Y INT'L BUS. 395, 414-20 (1985).

- 10. Karjala, Lessons, supra note 9, at 73-5.
- 11. Karjala, Lessons, supra note 9, at 55-6.
- 12. Karjala, Lessons, supra note 9, at 55-6.
- 13. Karjala, Protection, supra note 8.

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chips. For the protection of computer chips see The Act Concerning the Circuit Layout of a Semiconductor Integrated Circuit, Law No. 43 of 1985, promulgated by the Japanese government on May 31, 1985 and took effect on January 1, 1986. For discussion of the Japanese chip protection scheme, see Gadbaw & Benz, the Semiconductor Chip Protection Act of 1984—Experience in the Utilisation of the Law and the Current International Developments, 8 EUR. INTELL. PROP. REV. 233-237 (1986).

caused the Japanese government to reject the MITI proposal.<sup>14</sup>

## II. OVERVIEW OF THE JAPANESE COPYRIGHT LAW

#### A. CHOICE OF LAW

Because both Japan and the United States are signatories to the Universal Copyright Convention, an American software developer seeking protection in Japan will find that the extent of his protection and remedies is governed by Japanese copyright law in accordance with UCC principles.<sup>15</sup> The UCC expressly provides that the breadth of protection and remedial measures are determined exclusively by the laws of the country where protection is claimed.<sup>16</sup>

In addition, Japan, but not the United States is a signatory to the Berne Convention. Therefore the Convention will bind Japan and other signatories to it in similar fashion as the UCC.<sup>17</sup> In cases where the UCC or the Berne apply and provide broader protection for the author's rights than Japanese copyright law, then the Conventions take precedent over Japanese law.<sup>18</sup>

#### B. THE IMPORTANCE OF PUBLICATION AND THE ISSUE OF REGISTRATION

In order to enjoy the protection of both the UCC and the Berne Convention, it is important that the American software maker pub-

15. Takaishi, Legal Protection of Software under Japanese Law, 5 EUR. INTELL. PROP. REV. 140 (1982) [hereinafter cited as Takaishi, Protection].

16. Takaishi, Protection, *supra* note 15, at 140. The Universal Copyright Convention, art. 17. Universal Copyright Convention of Geneva, Sept. 6, 1952, 6 U.S.T. 2731, T.I.A.S. No. 3324, 216 U.N.T.S. 132, *as revised* in Paris, July 24, 1971, 25 U.S.T. 1341, T.I.A.S. No. 7868, 216 U.N.T.S. 133 (*signed for Japan* Oct. 22, 1971; *entered into force* for the United States July 10, 1974) [hereinafter cited as UCC].

17. Japan is also a signatory to the Berne Convention which has a similar provision in its article 5, and is binding between countries which are signatories to the Berne Convention. Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1986, *amended by* the Paris Additional Act and Declaration (1896), the Berne Convention (1908), the Berne Additional Protocol (1914), the Rome Convention (1928), the Brusseis Convention (1948), and the Paris Convention (1971), 331 U.N.T.S. 217 (1948 text) [hereinafter cited as Berne Convention]. For texts from 1886 to 1971, see generally UNESCO, Copyright Law and Treaties of the World (1982).

18. Copyright Law (Chowsakuken Ho), Law No. 48 of 1970, art. 5. For a discussion of the protections provided under the UCC and Berne Convention to foreign entity, Berne Convention or UCC member, national or corporation of UCC alone, and that of Berne Convention and UCC who are software creators, *see* Takaishi, Protection, *supra* note 15, at 131.

<sup>14.</sup> Contra Karjala, Protection, supra note 8, at n.6 (citing a leading Japanese commentator as saying that the United States role was unrelated to the ultimate adoption of the CAA proposal).

lishes the work in a Berne country (such as Japan or Canada) simultaneously with, or at least not later than, the first publication of the work in the United States.<sup>19</sup>

Protection under the two Conventions remains important because currently, Japanese Copyright Law does not require registration of programs as a prerequisite to copyright protection.<sup>20</sup> The current Japanese copyright law protects a work from the moment of creation.<sup>21</sup> However, the author does have the option of registering with the MOE (Ministry and Education) to strengthen the underlying claim of his copyright considerable protection is gained because a program registered under the system will be presumed to have been created on the date of registration.<sup>22</sup>

However, amendments to the copyright law authorize a later statute to replace the current system with a comprehensive registration system that will require registration.<sup>23</sup> Such a registration requirement will be inconsistent with the Japanese obligations under the UCC (art. III) and Berne Conventions (art. 5(2)), and unenforceable against authors who have complied with the publication requirement and obtained protection under the two conventions.<sup>24</sup>

## C. The Non-Extraterritorial Application of the United States Copyright Act

The United States copyright statute has no extra-territorial reach; if the copyright infringement occurs outside of the United States, the copyright owner cannot invoke American copyright law against the infringer. For example, if a Japanese obtained a computer program in the United States, then returned to Japan to make and sell illegal copies outside of the United States, the United States copyright law cannot be invoked against him, even if the American court has personal jurisdiction over the Japanese defendant.

#### D. CASE LAW PRIOR TO THE ENACTMENT OF THE COPYRIGHT AMENDMENTS

Although Japan is a civil law country and its courts are not bound by stare decisis, Japanese case law is helpful as an indicator of the

<sup>19.</sup> M.B. NIMMER, 1 NIMMER ON COPYRIGHT 4-7 (1986).

<sup>20.</sup> Robertson, Copyright Protection for Computer Programs: The New Amendments, 7 EAST ASIAN EXEC. REPS. 23 (1985).

<sup>21.</sup> Copyright Law (Chowkakusen Ho), Law No. 48 of 1970, art. 51(1).

<sup>22.</sup> Id., at art. 76-2. Copyright Law (Chowkakusen Ho), Law No 48 of 1970, supra note 6, at art 76-2.

<sup>23.</sup> Robertson, supra note 20.

<sup>24.</sup> Robertson, supra note 20.

courts' interpretation of Japanese codes and their willingness to extend copyright protection under certain situations.

Significantly, the first cases involving computer parts came before the Japanese courts on the basis of unfair competition instead of copyright. These cases stemmed from the big success of video games in Japan which resulted in numerous unauthorized copies of the programs stored in the ROMs of the video game machines. The courts held that the appearance of the plaintiffs' video game machine and the pictures were so well known to the public that they had acquired secondary meaning. Therefore, the defendant's imitations could cause confusion as to the source of the goods.<sup>25</sup>

The first court decision addressing copyright, *Taito v. I.N.G. Enterprises*, held that the copying of the object code program in a ROM of a video game computer program is an infringement of the plaintiff's source code copyright.<sup>26</sup> In doing so, the court took the same position that the Report of the Second Subcommittee of the Copyright Council in 1973.<sup>27</sup> Furthermore, several other cases have followed this 1982 decision.<sup>28</sup>

The copyright of the screen displays of video games has also been upheld in two cases.<sup>29</sup> In both cases the courts regarded the screens of the video games as fixed on ROMs.

#### **III. THE AMENDMENTS**

#### A. PROTECTIBLE SUBJECT MATTER

The Interim Report<sup>30</sup> defines software as the collective term for programs, system designs obtained in the process of preparation of programs and program plans, including flow charts and relevant materials

27. Torii, supra note 25, at 152.

28. 1983.3.30 Yokohama District Court, K.K. Taito v. Makoto Denshi-Kogyo K.K.; 1984.1.26 Osaka District Court, Konami Kogyo K.K. v. K.K. Daiwa; as cited in Torri, supra note 25, at 153.

29. 1982.5.24 Tokyo District Court, K.K. Namuko v. Jaksonsord Denshi Kogyo K.K.; 1984.9.28 Tokyo District Court K.K. Namuko v. Suishin Kogyo, K.K.; *discussed in* Torri, *supra* note 25, at 153.

30. Interim Report, supra note 7.

<sup>25. 1979.12.18</sup> Osaka District Court, K.K. Namuco v. K.K. Seibu Nihon Hanbai; 1982.9.27 Tokyo District Court, K.K. Taito v. K.K. Ikoh Enterprise, *discussed in A. Torii, Legal Protection of Computer Software in Japan, AIPPI J., Dec. 1985, at 152 [hereinafter cited as Torii].* 

<sup>26.</sup> Taito Inc. v. I.N.G. Enterprises, Inc., 1060 Hanrei Jiho (Judicial Review) 18 (Dec. 6, 1982), *cited in* Karjala, Lessons, *supra* note 9, at 59, *discussed in* Torri, *supra* note 25, at 153. A year before this Japanese decision, and American court held that a computer program was copyrightable as embedded on a ROM chip. Tandy Corp. v. Personal Micro Computers, Inc., 524 F. Supp. 171 (N.D. Cal. 1981).

such as program manuals.<sup>31</sup>

Under the amendment, a program work is a copyrightable subject matter.<sup>32</sup> A program is defined as "an expression of combined instructions given to a computer so as to make it function and obtain a certain result."<sup>33</sup> It should be noted that the Interim Report considered the program and its output production as independent and separate works.<sup>34</sup> The Interim Report stated that the system and program designs, for example, flow charts and program manuals, which are produced in the process of making a computer program, are independently protected as works.<sup>35</sup>

Regarding program work, the Interim Report suggests that the type, purpose or manner of use of a program should not be the criteria of copyrightability. The only criteria is its creativity and originality.<sup>36</sup> It also suggests that the following are copyrightable: 1) object code; 2) firmware, for example, a program fixed in a ROM incorporated into a machine—because a program is a program regardless of the media in which it is fixed; 3) a part of a program, such as a module, if it can be regarded as an expression of a certain thought,<sup>37</sup> however, a commonly used statement or group of statements is not copyrightable.<sup>38</sup>

#### B. NON-PROTECTIBLE SUBJECT MATTER

The amendments expressly stated that programming language, rules and algorithms are not protectible subject matter. The definitions of these terms are:

1. "Programming language" means letters and other symbols, as well as their systems, for use as means of expressing a program;

2. "Rule" means a special rule on how to use the programming language mentioned in the preceding item in a particular program;

3. "Algorithm" means methods of combining instructions given to a computer in a program.<sup>39</sup>

32. Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 10,  $\P$  (1), (ix).

33. Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6.

34. Interim Report, supra note 7, at 52.

35. Interim Report, supra note 7, at 51-2.

36. Torii, supra note 25, at 156.

37. Toři, supra note 25, at 156.

38. Toři, supra note 25, at 156.

39. Copyright Law, (Chowkakusen Ho), Law No. of 1970, supra note 6, art. 10,  $\P$  (3). See also Torri, supra note 25, at 155.

<sup>31.</sup> Interim Report, supra note 7, at 6 n.1. (This definition is in accordance with the WIPO model provisions).

#### 1. Programming Language

One major difference between the American copyright protection of software and that of the amended Japanese version is that programming languages in the United States have been consistently treated as copyrightable works.<sup>40</sup> While the Japanese commentators generally agreed that programming languages as used above mean source languages like BASIC, FORTRAN and COBOL<sup>41</sup>, the definition of programming language in the amendment is sufficiently ambiguous, leaving the protection of highly advanced programs questionable. For example, in the field of artificial intelligence, most of the application programs, called "tools," often exhibit the characteristics of both a high level computer language and those of a sophisticated application program.<sup>42</sup> However, one scholar argues that these advanced software development tools should be protected by the Japanese copyright statute because their function and design correspond more closely to value-added application programs than to relatively unsophisticated programming languages.<sup>43</sup>

In addition, the broad definition of a programming language in the amendment may prevent protection of some advanced AI databases. For example, those connected with the operation of "expert systems" because of their functional integration with the "language-like" control software of the systems.<sup>44</sup> Furthermore, a "rule of decision" in an expert system operates as a function of the control software and constitutes part of the programming language of the database.<sup>45</sup> Due to the inadequacy of the legal definition in the face of practical reality, the programming language exception may threaten copyright protection for certain highly advanced programs and databases. Until these issues are definitively resolved by either the MOE or a reviewing court, American software makers risk losing copyright protection in this area.

#### 2. Algorithm

#### a. Derivation, Translation

In not protecting algorithms, the Japanese copyright amendment is consistent with that of the American judicial decision. The basis for

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<sup>40.</sup> Apple Computer Inc. v. Franklin Computer Corp., 714 F.2d 1242, 1243-44, 1249-54 (3d Cir. 1983).

<sup>41.</sup> Karjala, Protection, supra note 8, at 107.

<sup>42.</sup> Robertson, supra note 20, 21.

<sup>43.</sup> Robertson, supra note 20, 21.

<sup>44.</sup> Robertson, supra note 20, 21.

<sup>45.</sup> Robertson, supra note 20, 21. For a general understanding of the expert system, see Pfau & Zack, Understanding Expert System Shell, 20 COMPUTERWORLD FOCUS 69 (1986).

this conclusion is that an algorithm is an idea and under both countries' copyright schemes an idea is not copyrightable.<sup>46</sup>

A divergence exists, however, in the approach of the Americans and the Japanese regarding the consequences of the above statement. Under the Japanese view, if B derives the algorithm and flowchart from A's program and B writes a program in another language based on the derived algorithm and flowchart—then B's program is considered a new creation indicating B's originality, and his work may accordingly be considered a new work.<sup>47</sup>

Before the Interim Report's proposal, a copyright infringement could occur if others made a new program by copying existing software, entirely or substantially.<sup>48</sup> Also, the making of a new work as a result of minor modification to an existing work was an unauthorized copy of existing work if such modified version was substantially similar to the original.<sup>49</sup> In addition, the copyright owner had the exclusive right to reproduction, derivation and translation of his work.<sup>50</sup>

The Interim Report's illustration adds a twist to the situation. The resultant scenario seems to be: program owner P alleges that D copied his program even though D's program is in another language. To support his allegation, P: 1) shows the substantial similarities between the two programs' structure and organization, despite their different languages; 2) P introduces expert witnesses who show that each line of the first program can be easily translated into the second language, and, from this viewpoint, D's program can be substantially mapped onto P's; and 3) shows that although it may be an absolute line-by-line translation, the modification is slight.

It is possible to do a line-by-line translation from a lower programming language to a higher programming language, for example, from BASIC to LISP. D will defend himself by indicating that he has derived P's algorithm and flowchart from P's program and worked from there. If D can introduce his own derived flowchart and algorithm, and his worksheet showed how he arrived at his program, he may effectively defuse P's charges. In short, D can avoid an infringement charge despite the substantial similarity between his and P's work. Doubt will linger, however, given the fact that two programs are substantially the same, except the language, whether D had in fact been substantially

<sup>46.</sup> For the Japanese view on this, see Torii, supra note 25, at 153.

<sup>47.</sup> Interim Report, supra note 7, at 68. See Tesler, Program Languages, SCIENTIFIC LANGUAGES, Sept. 1984, at 73-4.

<sup>48.</sup> Takaishi, Protection, supra note 15, at 135.

<sup>49.</sup> Tokaishi, Protection, supra note 15, at 135.

<sup>50.</sup> Japanese Supreme Court decision made on May 24, 1935 in 4 Supreme Court Criminal Report 560 (1935). However, this decision dealt with "works" other than computer software.

copying from P's work despite the production of algorithm and flowchart. On the other hand, since algorithm is the backbone of a program, programs written from the same algorithm will look substantially similar to experts in the field. The following cases show how programs written with the same algorithm resemble direct translation or are substantially similar; and that in a given case a court may choose to err on the side of no infringement. It is unclear what level of proof is required from both parties to the dispute.

Given a similar situation, the American courts have approached the problem differently from that of the Japanese. The consequence is that a software owner enjoys broader protection under the American law. No American cases deal with algorithm defense. However, a defense of using mere ideas has been argued in several cases. When considering infringement, the American courts look to the defendant's access to the original program and the substantial similarity of the two programs. An American case that is factually similar to the Interim Report illustration in Whelan Assoc. Inc. v. Jaslow Dental Labs. Inc.<sup>51</sup> The infringing work involved translating the original program from EDL to BASIC. Though the translation could not be done literally, the court found that Jaslow infringed Whelan's copyright by copying "the structure, sequence and organization" of Whelan's program.<sup>52</sup> The court referred to the "exhaustive comparison" of similarities between the two programs.<sup>53</sup> It also relied on the similarities of the visual output of the two programs.54

The "structure, sequence and organization" of a program comes very close to the definition of an algorithm.<sup>55</sup> However, the court took into consideration the reality that one of the most difficult and expensive parts in creating a program is the development of the structure and logic of a program, rather than coding.<sup>56</sup> In fact, once an algorithm is developed, it is relatively easy to write a program. Clearly it is far easier to derive an algorithm from the original program than to create a new one. To circumvent the algorithm/idea problem, the court distinguished "idea" from "structure" by stating that since there are a variety of program structures through which the idea of efficient organization

<sup>51.</sup> Whelan Assoc. Inc. v. Jaslow Dental Lab. Inc., 609 F. Supp. 1307 (E.D. Pa. 1985), aff'd 797 F.2d 1222 (3d Cir. 1986).

<sup>52.</sup> Whelan Assoc. Inc. v. Jaslow Dental Lab. Inc., 797 F.2d 1222, 1248 (3d Cir. 1986). 53. Id.

<sup>54.</sup> Id. at 1244.

<sup>55.</sup> For a critique of the Court's opinion, see Radcliffe, Recent US Developments in Copyright Law Related to Computer Software, 2 EUR. INTELL. PROP. REV. 44 (1986). Radcliffe suggests that the decision was contrary to a House Report which stated that the actual processes or methods embodied in a program is not protectible copyright subject matter. The House Report would seem more in line with the Japanese amendments.

<sup>56.</sup> Jaslow, 797 F.2d at 1231.

of, for example, a dental laboratory can be expressed, the structure is not a necessary incident to that idea.<sup>57</sup> On the other hand, due to the express language of the Japanese amendments prohibiting the protection of algorithms, it is highly unlikely that the Japanese courts will make a similar fine distinction as that of the *Whelan* court and hold for the plaintiff in a similar case.

Similarly, another American case that is unlikely to be followed by the Japanese courts is SAS Institute Inc. v. S & H Computer Systems, Inc.<sup>58</sup> The Court here found copyright infringement in the appropriation of the structure of a program.<sup>59</sup>

Likewise, E.F. Johnson Co. v. Uniden Corp.<sup>60</sup> distinguishes the idea and expression dichotomy by holding that copying is permissible only if the copyrighted instructions are the "only and essential means of accomplishing a given task."<sup>61</sup>

In E.F. Johnson, the defendant decompiled the plaintiff's "EFJ" object code and wrote the infringing program for a different microprossesor (a Hitachi instead of an Intel microprossesor). The defendant admitted that line-by-line translation of the EFJ program into Hitachi language does not work. So, in applying the substantial similarity test, the court rejected a side-by-side comparison of the codes of the two programs. Instead, it looked to the reproduction of critical features. The court found substantial similarities between them in error sampling technique, method of error detection, the duplication of 38 out of 44 subroutines and identical but unnecessary instructions.<sup>62</sup> The court also noted that the Hitachi microprossesor is more efficient than the Intel and the similarities above in fact reduce the efficiency rate of the Hitachi and are incompatible with the Hitachi design. Furthermore, identical unnecessary lines of code in identical places in the two programs were found to be suspicious by the court. Thus, the court held that the defendant had infringed on plaintiff's program copyright.

It would be interesting to see how a Japanese court would rule in a similar case if the defense were that the defendant derived plaintiff's algorithm and wrote his own program from it. Additionally, defendant would argue that, since algorithms are defined as "methods of combining, in a program, instructions given to a computer,"<sup>63</sup> he necessarily

61. Id. at 1502.

<sup>57.</sup> Id. at 1240.

<sup>58.</sup> SAS Institute Inc. v. S & H Computer Systems, Inc., 605 F. Supp. 816 (M.D. Tenn. 1985).

<sup>59.</sup> Contra Radcliffe, supra note 55, at 45.

<sup>60.</sup> E.F. Johnson Co. v. Uniden Corp., 623 F. Supp. 1485 (D.C. Minn. 1985).

<sup>62.</sup> Id. at 1442-98.

<sup>63.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, *supra* note 6, art. 10, ¶ (3), (iii).

adopted all of the similarities above. The finding by a Japanese court of infringement on the basis of similarities, considering the different microprocessors involved and the same errors in the same lines, indicating copying instead of independent work based on the same algorithm is uncertain: It would depend on whether the Japanese interpretations of the words "method" and "instruction" were similar to those of the American courts.

#### b. Literary Work Analogy

The fundamental divergence between the Japanese and the American approach also lies in the treatment of computer work as literary work. In the United States computer programs have been consistently treated as protectible literary work.<sup>64</sup> The Japanese Interim Report suggests a contrary approach.<sup>65</sup> This difference causes the Japanese to adopt a less protective approach to the rights of the original program author.

A Japanese legal scholar dismisses the Interim Report and indicates that the scope of protection of program is less than that of a novel whose story and plot are protected.<sup>66</sup> He also argues that precedents in conventional literary work cases should not apply to computer program cases because of the differences between the two.<sup>67</sup> The rationale is that computer programs are like other industrial products where standardization is required, as is the interchangeability of application programs (compatability).<sup>68</sup> The balance is between the protection of the author's rights and the total economy of users' social benefit.<sup>69</sup> Such reasoning is reminiscent of the rationale behind the rejected MITI proposal. If the Japanese courts are persuaded by this proposition, MITI may have lost the battle but won the war.

On the other hand, the American courts treat computer programs as literary works.<sup>70</sup> In cases of non-literal copying, the American courts look at the facts of an individual case and may find infringement. The Japanese seem to have glossed over the fine points and require literal copying before an infringement is found. Under the American law, even though the idea of a literary work is not protectible, the plot on

<sup>64.</sup> See Practicing Law Institute, 1 COMPUTER SOFTWARE 17-19 (1984) (M.D. Goldberg, Chairman). See also H.R. 6983, 97th Cong., 2d Sess. 128 Cong. Rec. H5884 (1982); see also Tandy Corp. v. Personal Micro Computers, Inc., 524 F. Supp. 171 (N.D. Cal. 1981).

<sup>65.</sup> Interim Report, supra note 7, at 72.

<sup>66.</sup> Torii, supra note 25, at 156.

<sup>67.</sup> Torii, supra note 25, at 156.

<sup>68.</sup> Torii, supra note 25, at 156.

<sup>69.</sup> Torii, supra note 25, at 156.

<sup>70.</sup> See Tandy Corp. v. Personal Micro Computers, Inc., 524 F. Supp. 171 (N.D. Cal. 1981).

plot device of a literary work is protectible.<sup>71</sup> The computer program algorithm/idea can be analogized to the structure and organization of a program/plot of a literary work.<sup>72</sup> Copyright of literary works can be infringed "even when there is no substantial similarity between the works' literal elements if one copies its plot or plot devices."73 Similar to literary works, copyrights of computer programs can be infringed even absent literal copying of the programs.<sup>74</sup> The Whelan Court found that, in the American Copyright Act of 1976, Congress had indicated that "the structure and organization of a literary work could be part of its expression protectible by copyright."75 Therefore, the Court found that the defendant had violated plaintiff's right to prepare derivative work under 17 U.S.C. 101 by copying the sequence, order or structure of plaintiff's program.<sup>76</sup> Since the Interim Report has expressly refused to grant computer programs the same protection as that enjoyed by literary works, the broad copyright protection given by the American courts is likely to be unavailable in the Japanese courts. For the same reason, the court's ruling in E.F. Johnson, that copying is permissible only if the copyrighted instructions are the sole means of accomplishing a given task, notwithstanding that the infringement is in another language, may not find its Japanese counterpart because the E.F. Johnson rule originated from the literary work area.

#### IV. THE RIGHT OF THE AUTHOR OF A PROGRAM

#### A. WHO IS THE AUTHOR OF A PROGRAM?

In general, the author of a work under the Copyright Law is the person who creates the work.<sup>77</sup> This is modified by article 15 of the Copyright Law in the case of an employee. For program work, the amendment states that:

(2) The authorship of a program work which, on the initiative of a legal person, etc. is made by his employees 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.<sup>78</sup>

This amendment eliminates the former requirement that the work be published under the name of the employer before employer author-

78. Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art.  $\S 2(1)(ii)$ .

<sup>71.</sup> Jaslow, 797 F.2d at 1234.

<sup>72.</sup> Id. at 1248.

<sup>73.</sup> Id. at 1234.

<sup>74.</sup> Id.

<sup>75.</sup> Id. at 1239.

<sup>76.</sup> Id.

<sup>77.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 2(1)(ii).

ship is assured.<sup>79</sup> This is especially helpful to many employers who do not want to make their programs public, but take great pains to maintain them as trade secrets t preserve the confidentiality and proprietary know-how.<sup>80</sup> Admittedly, once a program is made public, it is harder to protect it from being copied by others.

Under the Copyright Law, the moral rights of authorship inhere in the author. Therefore, the employer in this case, as the author, will possess both the moral and economic rights to the program. On the other hand, the publication exception previously mentioned only applies to programs and not to other software. Therefore, design, testing and use documentation such as flow charts, descriptions and manuals remain subject to article 15(1). Thus, an employee who creates software other than programs will be deemed the author unless the software is published under the employer's name.<sup>81</sup> The economic rights to such documentation can be transferred to the employer by contract. Such a transfer should be a standard feature of all employment contracts. However, even when the transfer is made, the moral rights will remain in the employee.<sup>82</sup>

#### **B.** TERMS OF PROTECTION

The amendments provide for the standard fifty years of protection under the Copyright Law. Generally, the works are protected for fifty years after the death of the author.<sup>83</sup> Where an entity is named as author, the period of protection generally is fifty years from publication or from creation if the work is not published within fifty years.<sup>84</sup> When the employer is the author of a program, it is fifty years from publication or creation.<sup>85</sup>

#### C. MORAL AND ECONOMIC RIGHTS OF AN AUTHOR

The Japanese Copyright Law provides the author with economic and moral/personal rights. The economic rights include the exclusive right to reproduce the work and the exclusive right to adapt or trans-

<sup>79.</sup> Karjala, Protection, supra note 8, at 110.

<sup>80.</sup> Robertson, supra note 20, at 22.

<sup>81.</sup> Under article 15(1), an employer may automatically become the author only if: 1) an employee developed the work at the initiative of the employer, 2) the works are developed by the employee within the course of his employment, 3) the work is published under the name of the employer, and 4) no agreements or work rules exist to the contrary.

<sup>82.</sup> Karjala, Protection, supra note 8, at 110.

<sup>83.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 51.

<sup>84.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 53(1).

<sup>85.</sup> Karjala, Protection, supra note 8, at 110.

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late the work.<sup>86</sup> The moral rights include publication, affixing a name to the work and preserving the integrity of the work.<sup>87</sup> The central concern of the moral rights doctrine is the protection of the author's "honor" and "reputation".<sup>88</sup> Not surprisingly, since personal honor is of grave importance in Japanese culture, economic rights are transferable whereas moral rights are not.<sup>89</sup>

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#### V. LIMITATIONS ON AUTHOR'S RIGHTS

#### A. PERMISSIBLE MODIFICATIONS

The amendments limit the scope of the moral rights by permitting modification of programs when it is necessary in order to run the program on computers which would otherwise be unable to run them or in order to increase the effectiveness of the program.<sup>90</sup> However, although the amendment to article 20 limits the moral rights of the author, it does not expressly limit the parties from contracting out of this limitation by express agreement. Therefore, it is probable that parties to a software licensing agreement could stipulate against program modification.<sup>91</sup>

#### B. RIGHTS: PERMISSIBLE REPRODUCTIONS AND ADAPTATIONS

The amended Article 47bis. limits the author's right to prevent adaptations and derivations of his works in the following situations:

Article 47bis.—(1) The owner of a copy of a program work may make copies or adaptations (including the making of copies of a derivative work created by means of adaptation) of the work if and to the extent deemed necessary for the purpose of exploiting that work in a computer by himself, provided that the provision of Article 113, paragraph (2) does not apply to the use of such copies in connection with such exploitation.

(2) If the owner of a copy mentioned in the preceding paragraph has ceased to have the ownership of any of the copies mentioned in that paragraph (including copies made in accordance with the provision of that paragraph) for reasons other than those of destruction, he may not thereafter preserve other copies in the absence of any declaration of the intention of the copyright owner to the contrary.<sup>92</sup>

<sup>86.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, arts, 21-7.

Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, arts. 18-20.
Robertson, supra note 20, at 22.

<sup>89.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, arts. 59-61.

<sup>90.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 20(2)(iii).

<sup>91.</sup> Robertson, supra note 20, at 22.

<sup>92.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 47bis.

Significantly, the right to make copies and adaptations is limited to the owner of the program. A lessee would seem to be barred from even making a back-up copy—not to mention modifying the program—unless he had contracted for such rights in the lease agreement.<sup>93</sup>

On the other hand, this provision is intended to grant licensees of program the right to make necessary backup copies and program adaptations for legitimate operational purposes. The right to "reproduce or adapt" a computer program, however, is limited by a vague and undefined requirement that it be "deemed necessary" to use the program on a computer, and these acts should not infringe the copyrighted work.<sup>94</sup>

The amendment does not clarify the number of program reproductions permissible nor the extent an end user may "adapt" a program without copyright infringement.<sup>95</sup> One author suggests that even though the term of the Japanese amendment is similar to the reproduction and adaptation rules in force in the United States, the far less detailed language in the Japanese amendment suggests that the Japanese draftmen may have preferred a more permissible approach.<sup>96</sup> Therefore, an American software licensor should be aware of the possibility of lesser protection in Japan.

To minimize the risk of losing one's right, even though it is unclear what effect the above amendment will have on contractual provisions in this area, the license should contain: both parties' express agreement of what reproduction or adaptations will be the only ones "deemed necessary" for use on a designated computer at a designated location, and the provision that any other reproduction or adaptation of the licensed software should be expressly prohibited unless the licensor "deems" such reproduction or adaptation to be "necessary" and approves the proposed reproduction or adaptation in writing.<sup>97</sup> Also, the license agreement should describe in detail exactly what adaptations, if any, are in fact "deemed necessary" to use the licensed programs on a designated computer. Furthermore, there should be a provision for penalty in the event of any unauthorized reproduction or adaptation, such as liquidated damages or an immediate suspension of any software maintenance obligation of the licensor.<sup>98</sup>

97. Robertson, supra note 20, at 22-3.

98. Robertson, *supra* note 20, at 23. For highly recommended provisions, in general licenses, *see* Kawashima & Greguras, *Legal Protection of Software in Japan*, 5 INFORMA-TION AGE 29 (1983); Y. MATSUNAGA, SUCCESSFUL LICENSING TO AND FROM JAPAN (1982).

<sup>93.</sup> Karjala, Protection, supra note 8, at 109.

<sup>94.</sup> Robertson, supra note 20, at 22.

<sup>95.</sup> Robertson, supra note 20, at 22.

<sup>96.</sup> Robertson, supra note 20, at 22.

#### VI. INFRINGEMENT

Article 113(2) of the amendment provides that the unauthorized use of a copyrighted program "on a computer in the course of business" constitutes infringement only if the person using such copies is aware of such infringement when he acquired title to use these copies.<sup>99</sup> Notice that under this provision if the buyer learns after purchase that the program was illegally made, he is still free to continue using the program in his business.<sup>100</sup>

Unfortunately, in practice it is hard to detect the use of widely distributed pirated copies.<sup>101</sup> However, one author suggests that it is difficult for the purchaser of a pirated major computer program to be innocent since it is reasonable to expect some investigation by such purchaser, which would most likely put him on notice.<sup>102</sup> Yet, it is not clear whether a purchaser has a duty of inquiry or if so, the extent of such a duty. Also, piracy may be difficult to detect if the programs are widely sold and used in the market under a seemingly valid label and software house. Admittedly, a purchaser of a major program may have the incentive to inquire about its origin in order to ensure after-sale service from the legitimate software maker. Conversely, he may have no incentive to inquire when he is buying small programs for relatively minor work when the price is competitive. This is especially true if he believes that by so doing he will qualify as an innocent purchaser and thereby escape liability.

Notwithstanding the legal question, it is difficult to police illegal use of pirated copies. The situation is made worse by the ease and low cost of making multiple copies. The piracy of computer program is as endemic to the software industry as photocopying is to literary work.<sup>103</sup>

#### VII. LIMITATIONS OF COPYRIGHT: COMPULSORY LICENSES

The Japanese Copyright Laws contain several provisions on compulsory licensing of a work where the author cannot be found, or when he refuses to grant licenses. The compulsory license is similar to an expropriation by the Japanese government of the use of the works,

<sup>99.</sup> Karjala, Protection, supra note 8, at 111.

<sup>100.</sup> Karjala, Protection, supra 8, at 111.

<sup>101.</sup> Karjala, Protection, supra 8, at 111.

<sup>102.</sup> Karjala, Protection, supra 8, at 111.

<sup>103.</sup> In the United States, the software firms had abandoned copy protection—modification of disks to make duplication of them difficult—under mounting consumer displeasure because the resultant disks are harder to use. As an alternative, firms like Lotus and Ashton-Tate chose to sue companies that allowed their employees to copy legitimate programs. Other firms resorted to providing after-sale service like debugging and modification, to legitimate buyers. Elmer-DeWitt, *A Victory for the Pirates*? TIME, Oct. 20, 1986, at 86.

against the copyright owner's wishes, under the royalty set by the Japanese Director General of Cultural Affairs.<sup>104</sup> The provisions that particularly concern us are:

#### A. REPRODUCTION FOR SCHOOL TEXTBOOKS

Article 33 of the Copyright Law provides that published works may be reproduced to manufacture textbooks for use at elementary, secondary or high schools approved by the Ministry of Education (MOE) or compiled by it to an extent deemed necessary for school education. The amount of compensation paid to the copyright owner in this case is fixed annually by the Director General of the Cultural Affairs Agency (CAA) who considers the purpose of article 33(1), the nature and the purpose of the work reproduced and the ordinary rate of royalty.<sup>105</sup>

Thus, the MOE may consider that certain programs, flowcharts, manuals of instruction and other software items are highly valuable to the education of its students in software technology and it would look to the most current software to lend a competitive edge to its students. Under this rationale, the MOE will conceivably force a copyright owner to license his valuable right to MOE for publication in school textbooks. The unilateral royalty compensation set by the Director General of CAA is likely to be inadequate. In fact, the "ordinary royalty" of article 33(2) given to the copyright owner is not likely to include the damage caused by such widespread publication.<sup>106</sup>

Once a program or any software is widely published in school text books there is little protection for the copyright owner under the existing copyright law. Furthermore, the practical impossibility of policing individual copying and use within the home or business means that the copyright owner loses the value of his copyright. Needless to say, the more valuable and advanced a particular software is, the higher its "educational" value becomes. This in turn increases the temptation to expropriate the item with a seemingly adequate compensation which in fact does not cover the damage caused to the copyright owner.

Admittedly, the Interim Report has contemplated reproduction and distribution of source programs in an educational organ in order to "provide concrete examples of produced programs at the time of training for programming."<sup>107</sup> Though the Interim Report suggested that

<sup>104.</sup> See Karjala, Lessons, supra note 9.

<sup>105.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 33(1).

<sup>106.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970 supra note 6, art. 33(2).

<sup>107.</sup> Interim Report, *supra* note 7, at 79. Article 35 of the Copyright Law art. 35 provides that a person in charge of teaching in a non-profit school or other educational institutions say "reproduce a work already made public if and to the extent deemed necessary" for teaching purposes.

strict restrictions be imposed on the reproduction, that it may not improperly injure the interest of the copyright holder, and that reproduction will be permitted in very limited cases, the new amendments do not address both articles 31 and 33. Consequently it remains to be seen how this will be resolved in the future.

# B. COMPULSORY LICENSE TO TRANSLATE UNDER ARTICLE V(2) OF THE UNIVERSAL COPYRIGHT CONVENTION

Because Japan is a contracting state of the UCC, Japanese publishers can resort to the compulsory license to translate under article V(2)of the Convention.<sup>108</sup> The Japanese law implementing this provision is Law Concerning the Exceptional Provisions to the Copyright Law, required upon the Enforcement of the Universal Copyright Convention.<sup>109</sup> Under article 5(1) of that law, if a Japanese translation of a writing protected by the Copyright Law under the UCC has not been published by the owner after seven years of its first publication, or a published translation is out of print, a Japanese national may publish such a Japanese translation. To do so, he must obtain permission from the Director General of the CAA showing that (1) he has requested and been denied, authorization by the owner of the right to translate, to make and publish the translation, or (2) after due diligence on the national's part, he was unable to find the owner of the right. The Japanese licensee will have to pay the owner or deposit into his account the whole or a part of the compensation approved by the Director General which is "just and conforms to international standard."<sup>110</sup>

Thus, even if the copyright owner refuses to grant a particular Japanese national the right to translate his work, the copyright owner will be forced to do so by the Japanese government at a compensation rate approved by the Director General. By 1980, only one case had granted a compulsory license.<sup>111</sup>

Despite the fact that the rapid advance of the software field can make a particular software obsolete by the seventh year after its first publication, an American software author may nevertheless want to protect his software. He would be well-advised to translate his software package into the Japanese language. The software package includes manuals; documentation; user interface, e.g. video screen display that

<sup>108.</sup> T. DOI, THE INTELLECTUAL PROPERTY LAW OF JAPAN 237 (1980).

<sup>109.</sup> Id.; Law No. 86, 1956 [hereinafter cited as Law].

<sup>110.</sup> DOI, supra note 108.

<sup>111.</sup> Doi, *supra* note 108, at 238. (Nanundo, a publisher, petitioned the Cultural Affairs Agency for a compulsory license to publish an article under the Universal Copyright Convention, and was awarded the license contingent upon the yen equivalent price of the article, the number of copies, and a percentage royalty figure).

allows the user to interact with the program; and any other component in the software package that is susceptible to translation.

Apart from the added legal protection, a software maker is wellserved in translating his software package into Japanese because this will ease his entry into the Japanese market. One main reason that foreign companies are not doing well in Japan is the dissatisfaction of Japanese consumers with the insufficiency of Japanese-language manuals accompanying the products.<sup>112</sup>

While the software package may need protection, the programs themselves do not: currently there is no computer language written in Japanese. Accordingly, source codes cannot be translated into Japanese. Furthermore, the development of a Japanese program language is highly unlikely because of the difficulty of adapting the Japanese language to program use.

At least one major American software company, Lotus Development Corporation, has planned to develop Japanese-language software as a first step in entering the Japanese market.<sup>113</sup>

### C. COMPULSORY LICENSE UNDER ARTICLES 67 AND 70-WHERE THE COPYRIGHT HOLDER CANNOT BE FOUND

Article 67 of the Copyright Law provides that when a work has been made public or has been offered to or make available to the public for a "considerable period of time," then the work may be exploited under a compulsory license issued by the Commissioner of the CAA if after "due diligence" the copyright owner cannot be found.<sup>114</sup> The Commissioner fixes the ordinary rate of royalty.

The Interim Report considers a compulsory license system for reproduction and adaptation of a program.<sup>115</sup> This provision is of possible concern to a software author because article 67's "considerable period of time" may be less than the seven year compulsory licensing period. So the software may still be valuable as it is, or with some modification or adaptation by the compulsory licensee. To prevent any problems, a software maker should prominently display his name and address on the software, and should explore means of informing the Japanese public if the name, address, branch office, or business change. Article 70 of the Copyright Law provides for the procedure to be followed by the CAA Commissioner when reviewing a compulsory licensing application.<sup>116</sup> Among other things, art. 70 provides for notice to the owner,

<sup>112.</sup> Jap. Econ. J., May 19, 1985, at 5.

<sup>113.</sup> Jap. Econ. J., June 18, 1985, at 11.

<sup>114.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 67.

<sup>115.</sup> Interim Report, supra note 7.

<sup>116.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 70.

and hearing.<sup>117</sup> Significantly, the Commissioner of CAA will not issue such a license if it is evident that the author intends to halt forever the publication or other exploitation of his work.<sup>118</sup> Upon the issuance of the license, the Commissioner is required to give public notice in the Official Gazette and give notice to the parties concerned.<sup>119</sup> The author seems to have more procedural safeguards under these articles than under any of the other compulsory licensing procedures discussed herein.

#### D. SUMMARY ON COMPULSORY LICENSING

Arguably, any software author who publishes his work in Japan implicitly accepts the Japanese compulsory licensing provisions. He should not complain if those provisions are used against him.

Since the compulsory licensing provisions apply only to works already made public<sup>120</sup>, a software copyright owner may choose to keep his work as a trade secret rather than public, in order to circumvent the potentially harsh results of these provisions. This is especially advantageous because he would then enjoy the protection of both copyright and trade secret law.<sup>121</sup>

Also worth noting is the Interim Report's belief that a broad general compulsory license for reproduction, adaptation, or otherwise of programs should be within limit of the UCC and Berne Conventions, which permit only developing countries to establish a broad compulsory license system concerning reproduction and translation of works.<sup>122</sup> Such a limit would be found in the Berne Convention article providing that an author's right to exploit his work may be restricted only if a reproduction of his work does not conflict with "normal exploitation" of the work and does not "unreasonably" prejudice the legitimate interest of the author.<sup>123</sup> A software author should be ready to invoke this provision when faced with compulsory licensing proceeding.

<sup>117.</sup> Id. Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 70.

<sup>118.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 70(3)(i).

<sup>119.</sup> Id. Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 70(3)(i).

<sup>120.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, arts. 33(1), 35, 67.

<sup>121.</sup> It is possible to have both protections concurrently. See Takaishi, Protection, supra note 15, at 138. See also, Patent and Know-How Licensing in Japan and the United States (Doi & Shattuck eds.) (1977).

<sup>122.</sup> Interim Report, supra note 7, at 83.

<sup>123.</sup> Berne Convention, supra note 17, art. 9, para. 2.

#### VIII. REMEDIES

There is no change in the remedies section under the amendments. The remedies available to the software author are:

#### A. INJUNCTION

The software author can ask a court to issue an injunction to suspend an infringement of copyright or an infringement of the author's moral rights.<sup>124</sup> The injunction can be used to prevent an anticipated infringement and to dispose of the means of an infringement, as well as to suspend the results created by the infringing act.<sup>125</sup>

It is usually not practical to pursue a permanent injunction because it often takes several years to obtain the final order for a permanent injunction.<sup>126</sup> By this time the software author would have been severely damaged by the proliferation of pirated software during the interim years. Furthermore, by the end of the litigation, the particular software may have become obsolete due to rapid development of software technology.

The copyright owner can, instead, pursue a provisional injunction order by posting bond.<sup>127</sup> Such an order may be obtained by an exparte procedure commencing on the same date of the application. The granting of a provisional injunction depends on the consideration of relevant factors such as necessity of immediate relief, and the clarity of the factual and legal issues involved.<sup>128</sup>

#### B. DAMAGES

The copyright owner is entitled to damages for the infringement of the owner's copyright or moral rights. To recover damages, the owner must, under tort theory, prove the intent or negligence of the infringer; prove injury to his rights; allege the amount of damages; and show a causal link between the damages and the infringing act.<sup>129</sup>

It is often difficult to establish the amount of damages. The Copyright Law contains provisions that help to alleviate this difficulty. Under the Copyright Law, if the infringer makes a profit as a result of the infringement, the amount of profit is presumed to be the amount of damages.<sup>130</sup> Alternatively, the owner may consider damages to be

<sup>124.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 112(1).

<sup>125.</sup> Kawashimo & Greguras, supra note 98, at 5.

<sup>126.</sup> Kawashimo & Greguras, supra note 98, at 5.

<sup>127.</sup> Kawashimo & Greguras, supra note 98, at 5.

<sup>128.</sup> Kawashimo & Greguras, supra note 98, at 5.

<sup>129.</sup> TAKAISHI, The Perspective from Japan on Software Protection, 17, paper presented at the Int'l Bar Assoc., section on Bus. L. Conf., Singapore, (1985).

<sup>130.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 114(1).

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equivalent to the amount which the owner would normally have received as a result of the exercise of the owner's right.<sup>131</sup> If the owner can prove that the actual amount of damages exceeds either of the amounts above, the owner can recover such amounts if proven.<sup>132</sup> The owner whose moral rights were infringed may request reparation to his reputation by requiring either a published apology, or by indemnification of damages as compensation for mental suffering.<sup>133</sup>

#### C. CRIMINAL SANCTIONS

The infringer of a copyright or moral right is subject to imprisonment of not more than three years, or a fine of not more than 300,000yen. If a corporation infringes the above rights, both the corporation and the person who actually committed the infringement are subject to those sanctions.<sup>134</sup>

#### D. OTHER REMEDIES

Under unjust enrichment theory, an owner may seek return of the gains the infringer received as a result of the infringement, if such gains remained in the hands of the infringer.<sup>135</sup>

#### XIV. CONCLUSION

The software copyright field is a fast developing legal area throughout the world. This trend is associated with the rapid technological developments in the software field. The United States, a world leader in software development, is at the forefront of establishing legal software protection.

The recently amended Japanese Copyright Law is clearly less protective of the author's copyright than is the corresponding copyright protection under American law. It is likely, therefore, that Japanese courts will be reluctant to adopt the more liberal American judicial decisions in areas in which the Japanese copyright law is either lacking or ambiguous. Further development of the Japanese model of software copyright protection remains to be seen.

In the meantime, a software author should look to other areas of Japanese law, in addition to that of copyright, for stronger copyright protection. Other relevant areas of Japanese law include: patent, unfair competition, know-how, tort, contract and criminal law.

<sup>131.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 114(2).

<sup>132.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 114(3).

<sup>133.</sup> Copyright Law, (Chowkakusen Ho), Law No. 48 of 1970, supra note 6, art. 115.

<sup>134.</sup> Kawashima & Greguras, supra note 98, at 27.

<sup>135.</sup> Civil Code, arts. 703-4, discussed in Takaishi, Protection, supra note 8, at 136.

The software licensor should also be aware of the Japanese Antimonopoly Act if the licensor wishes to restrict exploitation of the work to Japan. $^{136}$ 

<sup>136.</sup> Prohibition of Private Monopoly and Maintenance of Fair Trade Act (Law No. 54, 1947) art. 6(2); see also Kawashima & Greguras, supra note 98, at 30.