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COMPUTER SOFTWARE PROTECTION IN
THE REPUBLIC OF CHINA (TAIWAN)

by CHING-NING S. CHANG*

I. INTRODUCTION

Computer technology has progressed rapidly during the last few decades, and its influence on individuals and society has correspondingly grown. It would be difficult, if not impossible, to develop laws which would appropriately regulate such a changing field. A study of computer law in the United States makes a good example. On December 31, 1974, Congress authorized the Commission on New Technological Uses of Copyrighted Works (CONTU) to study and compile data on computer uses of copyrighted works. The dust did not settle until President Carter signed the 1980 amendments to the Copyright Act into law. The 1980 Act implemented the CONTU recommendation to include protection of computer programs under copyright law. Thus, it took the United States almost six years to decide upon protection for computer software.

Complicated legal problems have emerged following the development of the computer. Among these, software piracy is an issue that has drawn much attention. Piracy has been with us for centuries. The proliferation of computer software has provided greater opportunity to pirate. To make things worse, modern pirates often find it easy to rationalize these activities. The various reasons will be addressed in section II.

Taiwan, the Republic of China (R.O.C.) (as well as several other countries) was thought of as a "pirate country" of computer technology in the early years of computer development. A number of cases of

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* LL.B., Nat'l Taiwan University (1977); LL.M., University of Washington (1982); J.D., Rutgers University-Newark (1986).
counterfeiting and piracy have been cited and bitterly criticized domestically and internationally. This Article presents the difficulties which the Chinese courts were faced with prior to the amendment of Chinese Copyright Law, the legal debates concerning measures of computer software protection, and the problems remaining after the 1985 Amendment.

II. RATIONALIZING PIRACY

Many forms of piracy have in common illegal profit. Rationalizations often given by pirates for their conduct include the following. (1) Most computer software users consider software too expensive. Popular software packages will not decline in price until the introduction of competitive products forces such a decline. Since original producers are greedy, they deserve to be punished. (2) Many software packages can be broken into numerous combinations not initially available, giving buyers more choice in products, probably at lower prices. (3) Private and business users often feel that software companies are too restrictive in their licensing. The attitude of “one copy, one user, one machine” is unrealistic and unworkable. These rationalizations are universal among computer software users around the world.

There may be two additional explanations for the once-rampant pirating in Taiwan. Historically, Chinese scholars, poets and artists always considered it a great honor if someone else used their work, with or without permission, because this was the way their work could be spread from one place to another, and transmitted from generation to generation. Seeking profit was, under most circumstances, considered dishonorable, and would be condemned by peers. This philosophy is still deeply rooted in modern China. It is easy to understand why, even today, some Chinese authors will not assert their rights when their work is pirated. The Chinese Copyright Law, first enacted in 1928, could not remove this belief overnight. This partially explains why the Chinese people are often ignorant about intellectual property rights, including those afforded to computer software developers.

Second, it has not been clear whether computer software was, or should be, protected under Chinese Copyright Law until the law was amended on July 10, 1985 to explicitly cover this area. Before the

5. References to “Chinese Copyright Law” refer to the copyright law as it applies to the R.O.C., and references to “1985 Amendment” refer to the July 10, 1985 amendment.


8. CHINESE COPYRIGHT LAW OF 1964, Art. 1, provided protection for literary works, pictorial graphic and sculptural works, musical and dramatic works, sound recordings, motion pictures and other audiovisual works.
amendment, Chinese courts had difficulties in holding judgment for foreign software producers if they had not obtained a Chinese copyright in the first place. These issues will be discussed in detail in the following sections of this Article.

III. PRE-1985 CHINESE COPYRIGHT LAW

To protect its copyrighted software, Apple Computer Inc. (Apple) brought approximately thirty copyright infringement suits in 1983 in a number of countries, including the United States, Great Britain, West Germany, Italy, Japan, Australia, Korea and Taiwan. Three of these involved Taiwanese companies Guan Haur and Sunrise, and were separately brought in Australia, the United States and Taiwan.9

In Australia, Apple sought to enjoin the sale of Guan Haur's personal computer and software. Apple alleged that Guan Haur's software was substantially similar to Apple's products and therefore violated Apple's rights under copyright law. On December 8, 1983, the Australian court dismissed the petition for injunction, based upon the reasoning that software was not a literary or artistic creation and therefore was not protected under Australian copyright law.10

In the United States, Apple filed a complaint with the International Trade Commission (ITC) to exclude Guan Haur's personal computer and software. The ITC administrative law judge decided on December 9, 1983 that there was an infringement of Apple's rights under United States patent and copyright law, and recommended an exclusion order. The decision was confirmed by the ITC upon petition for review.11

On December 21, 1983, a few days after the above decisions, the Taipei District Court held in Apple's favor recognizing an administrative decision of the Ministry of Interior12 which granted a Chinese copyright to Apple in June, 1982, even though the copyright law did not specifically protect computer software. Guan Haur and Sunrise appealed, but the decision was affirmed.13

10. See Chinese Times (Taipei), Dec. 24, 1983. "In May 1984 this case was overruled by an appeals court. As a result, legislation was passed in 1984 making clear that software is covered by copyright." G. DAVIS, SOFTWARE PROTECTION: PRACTICAL AND LEGAL STEPS TO PROTECT AND MARKET COMPUTER PROGRAMS 282 (1985).
12. The Ministry of Interior is the competent authority of Chinese Copyright Law.
13. The decision of the Taipei District Court in Apple Computer Inc. v. Guan Haur and Sunrise, Geng I Tzyh No. 353 (1983), was affirmed by the High Court, Shanhg Suh Tzyh No. 237 (1984). Sunrise later appealed to the Supreme Court; the appeal was dismissed. Tai Shahng Tzyh No. 2963 (1985).
It is interesting that the Australian court and the other two courts reached opposite results even though the parties involved, facts, and time frame were identical. Moreover, although the ITC and the Taipei court decided in Apple's favor, the ITC based its decision upon United States copyright law,\textsuperscript{14} while the Taipei court decision was based upon an interpretation of Chinese Copyright Law. Since the Chinese Copyright Law did not explicitly protect computer software, the court's decision immediately resulted in strong domestic criticism regarding (1) whether software should be treated as literary work, (2) whether the granting of copyright to Apple violated the copyright law, and (3) whether the court's decision should have been bound by the decisions of the Ministry of Interior granting a copyright to Apple.\textsuperscript{15} See the Appendix for a diagram of organization of the government and judicial system of the R.O.C.

The discussion above illustrates the complications and difficulties associated with international software disputes. Copyright cases often involve not only issues of law but application of the political and economic policies of the countries concerned. In view of the increasing number of international transactions involving computer software and the needs of all parties involved, Chinese commentators have suggested that it is absolutely necessary to establish clear and definite software protection. This has been strongly supported by Taiwanese companies that have developed their own computer products in recent years, because they have also begun to face the threat of piracy.\textsuperscript{16}

\section*{IV. DEBATE ON SOFTWARE PROTECTION}

The Apple case initiated a spirited debate in the academic and political circles of Taiwan. The debate centered around theories or methodologies under which computer software could be protected. These are examined below.

\subsection*{A. CONTRACT AND TORT}

Contractual computer software protection, under Chinese law, is not significantly different from that of other countries. All rights and duties can be made explicit at the time of contracting. A contract cannot bind third parties, however, so the protection becomes ineffective if


\textsuperscript{15} Seminar on Computer Software Protection, Economic Daily News (Taipei), May 8, 1984 [hereinafter Seminar].

\textsuperscript{16} Taipei Industry Daily News (Taipei), Dec. 16, 1985. "A British corp. counterfeited the software products of Multitech Electronics Inc. (Hong Gee), a Taiwanese corp.; both sides have reached an agreement for compensation." Id.
the software is distributed beyond the contracting parties.\textsuperscript{17}

Tort law provides another potential source of protection. Article 184 of the Chinese Civil Code provides a right to compensation for intentional or negligent injury to rights.\textsuperscript{18} There is no express provision in Chinese law to protect trade secrets, so that in the case of software misappropriation by an employee, the employer could rely upon either a contractual right or a damage claim under tort law. Further, since there is no specific prohibition against unfair competition under Chinese law, tort law could provide the basis for a software owner to vindicate his rights. Nevertheless, it is generally agreed that contract and tort laws are unable to provide adequate protection for computer software because of the complexities involved in computer software disputes.\textsuperscript{19}

B. Patent Law

The minority position is that computer software should be protected under patent law. It is contended that computer operating system programs, which are part of the machine (hardware), should be protected under patent law because the disclosure of these programs, as required by patent law, would enhance technological development.\textsuperscript{20} Most commentators and practitioners disagree for the following reasons. (1) An invention is patentable upon a showing of originality, nonobvious advancement and the possibility for industrial use,\textsuperscript{21} yet it is agreed that most programs do not satisfy the requirement of nonobvious advancement. (2) Programs applying only algorithms or logical rules are excluded from patent protection under Chinese law.\textsuperscript{22} (3) It is often so difficult for a patent reviewer to investigate the characteristics of originality and advancement of computer programs that the time required for patent approval may exceed the useful life of programs.\textsuperscript{23} (4) Even if a patent is granted, the exclusive right is guaranteed in theory but not necessarily in practice, because it is always much easier for someone to copy software than it is for the owner to discover and prove the pirating. Thus, patent law would not provide strong protection for

\textsuperscript{17} Seminar, supra note 15.
\textsuperscript{18} Chinese Civil Code art. 184.
\textsuperscript{19} Seminar, supra note 15.
\textsuperscript{21} Chinese Patent Law arts. 1, 2.
\textsuperscript{22} See Tang, Computer Software Protection, Chinese Times (Taipei), Sept. 26, 1983; Seminar, supra note 15.
\textsuperscript{23} Tang, supra note 22.
Chinese Patent Law is currently being amended. It appears unlikely that computer software will be protected under the amended patent law.\textsuperscript{25}

C. COPYRIGHT LAW

Prior to the 1985 Amendment, copyright protection was limited to works that creatively expressed thought or feeling and belonged to the literary, artistic or musical realms.\textsuperscript{26} The rightholder had the exclusive right to reproduce and copy the work, and the right was transferable.\textsuperscript{27} Unless otherwise provided, the copyright continued for a period of thirty years beyond the creator's death.\textsuperscript{28}

In addition to the aforesaid reasons why patent protection is unsuitable for software, there are three more reasons why a majority of commentators are in favor of copyright protection. (1) The requirements for granting copyright protection are much less stringent than those for a patent. It is not costly and time-consuming to obtain a copyright protection in most cases. (2) The term of copyright protection is longer than that of patent protection, which is only fifteen years.\textsuperscript{29} (3) The judicial trend in many countries, including France, West Germany, Japan, the Netherlands, and South Africa, is to protect computer software under copyright law.\textsuperscript{30}

Several commentators have argued that software is neither a literary work nor an expression which can be perceived by human beings, but only an underlying content of computer instruction which may be construed as an idea, and hence that software is not copyrightable.\textsuperscript{31} One commentator has even argued that software should not be protected under any law, since software can properly be construed as discovery of an algorithm, or simply as an abstract of ideas.\textsuperscript{32}

\textsuperscript{24} C.S. Yang, Presentation at the Meeting of Culture and Technology Development held by the National Science Commission of the Republic of China (Aug. 22, 1983).

\textsuperscript{25} See World Journal (New York City), Dec. 20, 1985 (Chinese language).

\textsuperscript{26} CHINESE COPYRIGHT LAW of 1964, art. 1.

\textsuperscript{27} Id. art. 3.

\textsuperscript{28} Id. art. 4.

\textsuperscript{29} Id. art. 6.

\textsuperscript{30} See Baumgarten, Current Issues Concerning Copyright Protection of Software and Data Bases Internationally, 1 COMPUTER SOFTWARE 1984: PROTECTION AND MARKETING, 64 (1984).

\textsuperscript{31} Cheng, Should Computer Software Be Protected Under Copyright Law?, United News (Taipei), Nov. 20, 1984; Tang, supra note 22.

\textsuperscript{32} Cheng, supra note 31.
D. NEW STATUTE

Some commentators have suggested that new law, not copyright or patent law, is required to protect computer software. The main reason given is that computer software, in particular, has special characteristics which distinguish it from other works that have historically been the subject of copyright protection. Moreover, the importance of computer programs as economic goods, and the availability of a wide variety of programs, require a more carefully structured system of protection than is available under copyright law.\[^{33}\] Thus, contract, tort, copyright and patent laws may serve the purpose of protection for the time being, but an independent, new statute will be necessary to meet the prospective complexity of computer development.\[^{34}\] It has been suggested that the Sixth Act of Bulgaria, enacted in 1979, which used several model provisions of the World Intellectual Property Organization\[^{35}\] for the protection of computer software, might be a proper model for the new Chinese statute.\[^{36}\]

V. AMENDMENT OF COPYRIGHT LAW AND POST-AMENDMENT ISSUES

Since the trend in nearly all developed nations has been to protect computer software under existing copyright law, the Chinese legislature began in 1980 to consider amending its copyright law to explicitly protect computer software. After a few years of debate, as well as legal development in other countries,\[^{37}\] the Chinese legislature finally adopted the 1985 Amendment.\[^{38}\] The new era of software protection began.

Article 4 states that Chinese authors enjoy a copyright upon completion of their work. On the other hand, Article 17 of the amended Chinese Copyright Law provides that a foreign national may be eligible for copyright registration if one of the following conditions is met: (1) the work was first published within the territory of the R.O.C.; or (2)

\[^{33}\] Tang, supra note 22.
\[^{34}\] Id.
\[^{35}\] W. SHIH, THEORIES OF COPYRIGHT 311 (1981) [hereinafter SHIH]. The model provisions for the protection of computer software is the fruit resulting from a six-year effort by the World Intellectual Property Organization (WIPO), which since 1982, has been studying the feasibility of a treaty for the international protection of computer software. Id.
\[^{36}\] See Tang, supra note 22.
\[^{38}\] CHINESE COPYRIGHT LAW art. 4. "The authors of the following works shall unless otherwise provided by this Law, enjoy a copyright upon the completion of such works: 1. literary works; . . . . 14. computer programs; . . . ." Id.
according to treaties, law, or custom of the applicant's country, intellectual works produced by R.O.C. nationals are entitled to equivalent rights in that country. However, under the Treaty of Friendship, Commerce and Navigation between the United States and the R.O.C., which provides that each country must treat nationals of the other country as it treats its own nationals, a United States copyright holder enjoys Chinese copyright protection upon completion of his work. Thus, for United States nationals no registration is required.

In addition, the National Anti-Counterfeiting Committee of the R.O.C. (NACC), founded on March 20, 1984, has engaged in a series of actions against counterfeiting and piratical conduct in Taiwan. A pamphlet has been published by NACC, instructing foreign or local entities on how to seek a remedy for piracy through existing channels. It should be noted that anti-counterfeiting efforts of the Chinese administration and legislature have generally been quite successful. According to a United States Customs Office Report, only 2.2 per cent of all the confiscated counterfeit goods in 1984 were from Taiwan, dropped from a maximum of 56.1 per cent in 1982.

Although the 1985 Amendment has assured copyrightability of computer software, a number of issues remain, including the scope of protection, definition of fair use, and infringement standard. Two months after the 1985 Amendment took effect, the Ministry of Interior asked commentators and software producers to submit recommendations for a software infringement standard. It was apparently recognized that neither protection nor remedy was possible without proper standards. Respondents basically shared the view of United States commentators and courts.


In any case, the nationals, corporations and associations of either High Contracting Party shall enjoy, throughout the territories of the other High Contracting Party, all rights and privileges of whatever nature in regard to copyrights, patents, trademarks, trade names and other literary, artistic and industrial property, upon compliance with the applicable laws and regulations, if any, respecting registration and other formalities which are or may hereafter be enforced by the duly constituted authorities, upon terms no less favorable than are or may hereafter be accorded to the nationals, corporations and associations of such other High Contracting Party.

Id. art. IX, 63 Stat. at 1309.


42. See Liu, supra note 7.
The infringement standards extracted from these responses include the following.

1) Idea or expression of idea: An idea is not copyrightable. Hence copying an idea is not a copyright infringement. On the other hand, as held in Apple Computer, Inc. v. Franklin Computer Corp., if other programs can be written or created which perform the same function as another operation system program, then the program is an expression of the idea, and hence copyrightable.

2) Fair use: The use of a copyrighted program for purposes such as criticism, comment, news reporting, teaching, scholarship or research is fair use, not an infringement of copyright. The following factors should be considered in determining whether or not the use is fair use: the purpose and character of the use, the nature of the copyrighted work, the amount and substantiality of the portion used, and the effect of the use upon the potential market.

3) Factual or fictional test: The infringement standard for fictional computer software should be more stringent than that for factual software, because fictional software, such as video games, usually has various forms of expression.

4) Accidental or intentional test: There is no infringement if two software programs are independent works of two parties, even though they may be substantially similar by accident. Thus, both are protected by copyright.

5) Reverse engineering and development investment: Reverse engineering and analysis through disassembly or decompilation of software is not copyright infringement because (a) copyright protects the expression of a work, rather than the underlying ideas which can be copied, so long as the final product is substantially different from the original expression; (b) copying by disassembly or decompilation to gain access to the underlying ideas of a program is a fair use of the copyrighted work; and (c) reverse engineering of computer programs is not a straightforward process, but requires the time, money and effort of skilled programmers, often resulting in better products, and therefore should not be discouraged. It is sometimes difficult, however, to distinguish a product of reverse engineering from an unauthorized copy.

43. 714 F.2d 1240 (3d Cir. 1983).
44. 714 F.2d at 1253.
46. Liu, supra note 7.
The second party's development and investment records, including time
and money spent and research processes, could be used as evidence of
reverse engineering. 49 Due to the complexity of software development,
the standards above should be treated as general guidelines, not defini-
tive rules. Software infringement must often be decided on a case-by-
case basis.

In addition to clarifying the applicable law and setting up some fea-
sible infringement standards, commentators also suggested that the fol-
lowing measures be taken to help resolve legal dispute.

(1) Judges and officials should be educated in computer technology
so that they can appropriately apply this new legal protection. Accord-
ing to a recent survey, many judges and law school students in the
R.O.C. do not have basic knowledge of computers. 50

(2) A special court similar to the Court of Appeals for the Federal
Circuit of the United States should be established to exclusively handle
disputes over intellectual property rights. 51

(3) The system of arbitration should be strengthened, and parties
encouraged to use it to resolve disputes. Arbitration is often a faster
and less costly vehicle since the arbitrator can possess prior knowledge
of the technology involved. 52

(4) Expert witnesses should play a more significant role in inform-
ing courts of technical matters, helping courts determine whether
software infringement has occurred, and confirming the extent of dam-
ages from the infringement.

(5) A system of compulsory licensing should be established. Under
such a system, whoever needed a program could use it lawfully at a rea-
sonable price. The software rightholder could avoid litigation expenses
involved in pursuing pirates. 53

Finally, if software is to be adequately protected in the R.O.C., the
Chinese people must realize that an intellectual property right is no less
important than any other property right. The old Chinese custom of
copying others' work, without permission or payment, is obsolete and
must be replaced by a willingness to protect a valid right. 54

VI. CONCLUSION

Recent advances in computer technology have had a tremendous

49. Liu, supra note 7.
50. Liu, Legal Issues Regarding Computer and the Solutions, NAT'L TAIWAN U.L.J.
(1986).
51. Liu, supra note 7.
52. Liu, supra note 50.
53. Liu, supra note 7.
54. Id.
impact on law. Present laws, including copyright, patent, and foreign investment, need to be properly adjusted. Even the criminal law should be adjusted to address computer crime. The R.O.C. legislature must consider the international effects and trends in other countries, Berne Convention, Universal Copyright Convention, Paris Convention for the Protection of Industrial Property, and various treaties signed by members of the World Intellectual Property Organization. Political pressure or retaliatory legislation could be used by other countries if a country chooses to ignore global interests. For instance, the Cultural Affairs Agency of Japan, while making some amendments to protect software under copyright law, intended to limit the term of protection to fifteen instead of thirty years beyond the creator's death as given to other creative works. Political pressure, as well as a threat of retaliation from the United States, followed immediately. As a result, the Japanese agency eliminated the limitation. The R.O.C. legislature must attend to the modern trend, even though it is not a signatory nation of the above conventions.

The Republic of China is a civil law country. Most Chinese laws were derived from German law. During the last few decades, however, the United States has been playing a key role in the economic and technical development of the world. Chinese commentators have therefore suggested that the legislature and legal scholars pay more attention to United States laws. Several other civil law countries, including Japan and West Germany, have already done this, especially when establishing laws to regulate modern technology.

55. Yang, supra note 24.
56. The Berne Convention for the Protection of Literary and Artistic Works, opened for signature, Sept. 9, 1886, 331 U.N.T.S. 217 (revised a number of times). This international treaty protects the works of authors of most industrial and commercial countries without any formality required other than publication within a country that is part of the Berne Copyright Union. Id.
57. The Universal Copyright Convention of Geneva, opened for signature, Sept. 6, 1952, 6 U.S.T. 2731, T.I.A.S. No. 3324 [hereinafter Universal Copyright Convention]. This is a reciprocal agreement; the signatory nations agree to grant such copyright protection as the signing nation grants to its own nationals. Id.
58. The International Convention for the Protection of Industrial Property, opened for signature, Mar. 20, 1883, T.S. 379, 25 Stat. 1372 (revised a number of times) [hereinafter Paris Convention]. This Convention establishes international patent protection procedures among eighty-eight countries. Each participating state must treat nationals of other member states as it treats its own nationals. Id.
59. See Shih, supra note 35.
60. The Japanese Copyright Act is administered by the Cultural Affairs Agency of Japan.
61. JAPANESE COPYRIGHT ACT, art. 51.
62. See Liu, supra note 50.
63. Id.
In view of the increasing number of transactions between the United States and the R.O.C. involving intellectual property, both countries have agreed, based upon provisions of the Paris Convention to protect each other's intellectual property rights.\textsuperscript{64} An agreement pursuant to the Universal Copyright Convention has also been under consideration.\textsuperscript{65} These agreements would enhance the economic relationship between the United States and the R.O.C.

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\textsuperscript{64} See Central Daily News (Taipei) Feb. 3, 1986 (Chinese language).
\textsuperscript{65} See World Journal (New York City), Apr. 11, 1986 (Chinese language).
APPENDIX

FIGURE 1

GOVERNMENT ORGANIZATION OF THE REPUBLIC OF CHINA

THE CONSTITUTION
NATIONAL ASSEMBLY
PRESIDENT

CONTROL YUAN

EXAMINATION

YUAN

EXECUTIVE YUAN

JUDICIAL YUAN

LEGISLATIVE YUAN

MINISTRY
OF
AUDIT

MINISTRY
OF
EXAMINATION

MINISTRY
OF
PERSONNEL

COUNCIL OF GRAND JUSTICES
SUPREME, HIGH, AND DISTRICT COURTS
ADMINISTRATIVE COURT
COMMITTEE ON THE DISCIPLINE
OF PUBLIC FUNCTIONARIES

MINISTRY
OF
THE
INTERIOR

MINISTRY
OF
FOREIGN
AFFAIRS

MINISTRY
OF
NATIONAL
DEFENSE

MINISTRY
OF
FINANCE

MINISTRY
OF
EDUCATION

MINISTRY
OF
JUSTICE

MINISTRY
OF
ECONOMIC
AFFAIRS

MINISTRY
OF
COMMUNICATION

OVERSEAS
AFFAIRS
COMMISSION

MONGOLIAN
AND
TIBETAN
AFFAIRS
COMMISSION
FIGURE 2
ORGANIZATION OF THE JUDICIAL SYSTEM

COUNCIL OF GRAND JUSTICES
SUPREME COURT—HIGH COURT—DISTRICT COURT
ADMINISTRATIVE COURT
COMMITTEE ON THE DISCIPLINE OF PUBLIC FUNCTIONARIES

indicate system of supervision
indicate system of appeal