Copyright Protection of Foreign Computer Software in the People's Republic of China: Significant Progress in Two Years

Philip H. Lam
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I. INTRODUCTION

In 1990, the People's Republic of China ("PRC") enacted its first comprehensive copyright law.1 The PRC's copyright law, however, did not adequately protect foreign computer software until 1992.2 This Article argues that the PRC made significant progress in foreign computer software protection in only two years. Such progress is remarkable, especially in light of the PRC's cultural, social, and political history.

The PRC's progress is significant to the well being of the global economy in general, and to the well being of the U.S. economy in particular. Amidst increasing global competition, U.S. business dominance in areas such as aerospace, pharmaceutical, visual and audio recordings, and computers continues to erode.3 Nothing, however, damages such industries and, thus, the national economy faster than piracy of intellectual property. While such products require time, talent, and substantial research and

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development to create, they require little effort to duplicate. The International Intellectual Property Alliance ("IIPA") estimated that U.S. $12-15 billion of sales were lost to piracy of U.S. copyrighted products in 1992 alone. According to Senator Dennis DeConcini, such piracy "adversely affects our balance of trade, our GNP [Gross National Product] and our standard of living." The Senator further believes that "a significant portion of the U.S. trade deficit would be erased" if the rampant piracy of U.S. creativity in foreign markets was brought under control.

Among the various types of pirated intellectual property, computer software is the most vulnerable because it is effortless and inexpensive to duplicate. The economic losses to the computer software industry, therefore, are staggering. As personal computing gains world-wide popularity, instances of piracy drastically increase. In 1989, Germany, the PRC, and Saudi Arabia led the long list of "problem" countries.


5. Intellectual Property, Industry Calls for Stiffer Enforcement of Anti-Counterfeiting Laws Abroad, 1992 DAILY REP. FOR EXEC. REG., ECON. & LAW (BNA) No. 190, at D-11 (Sept. 30, 1992) [hereinafter Intellectual Property]. Whether such lost sales actually took place is questionable. For instance, in the PRC, the estimated number of pirated copies likely would not have been sold at the U.S. manufacturers' prices. In 1992, the average monthly income in the richest city in China was U.S. $90, thus costing the average worker about three months' salary to buy an average-priced software product. Market Reports: China—Guangdong Economy 1992 NAT'L TRADE DATA BANK, Apr. 23, 1992.


7. Id.


10. In urging heightened criminal penalties for software piracy, an industry representative attributed an annual loss of more than $1 billion in sales to domestic and international pirates. Video Game Executive Urges Congress to Make Computer Software Piracy a Felony, PR Newswire, Aug. 13, 1992 available in LEXIS, News Library, PRNEWS File [hereinafter Video Game Executive].

11. "Problem countries" are those that fail to protect U.S. intellectual property within their jurisdictions, either by lack of legal protection, want of prosecution, or both. In 1989, software piracy in Germany cost the United States $1.44 billion. St. Clair, supra note 4, at D-11. In the same year, the IIPA estimated that the overall loss of protected properties to pirates in the PRC amounted to $418 million; $189 million in Saudi Arabia; $135 million in South Korea; and $123 million in India. Other "problem" countries on this list included
To plug this drain on the national economy, the United States effectively has used the "Special 301" powers\(^\text{12}\) vested by the Trade Act of 1979 to force offending countries to protect U.S. intellectual property.\(^\text{13}\) In 1989, the U.S. Trade Representative ("USTR") placed the PRC, a major trading partner and the largest potential software market in the world, on its Special 301 "priority list."\(^\text{14}\) Hard-fought negotiations between the countries ensued, resulting in the PRC's 1990 enactment of the Copyright Law.\(^\text{15}\) In the following two years, the PRC began drafting regulations and forming an administrative agency.\(^\text{16}\) Still unsatisfied with the legislation, however, the United States demanded further concessions, including the PRC's accession to the Berne Convention for the Protection of Literary and Artistic Works\(^\text{17}\) ("Berne Conven-

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the Philippines, Taiwan, Brazil, Egypt, Thailand, Nigeria, and Malaysia. Copyright Pirates, \textit{supra} note 3, at 510.


The "Special 301" power mandates the U.S. Trade Representative to identify problem countries on the "priority countries list" by May 30 of each year, and to initiate an unfair trade practice investigation by June 29. If negotiations in the ensuing six months (subject to a three-month extension) yield no agreement, the President may levy tariffs against the non-conforming countries. Copyright Pirates, \textit{supra} note 3, at 511.

13. \textit{Intellectual Property}, \textit{supra} note 5. "Section 301 authorizes and in some cases mandates unilateral United States retaliation if another nation is in breach of a trade agreement or engaging in unjustifiable, unreasonable or discriminatory conduct." \textsc{Ralph H. Folsom} \textsc{et al.}, \textit{International Business Transactions} 588 (2d ed. 1991).

14. \textit{USTR Designates China, India, and Thailand Most Egregious Violators Under Special 301, 8 Int'l Trade Rep. (BNA) 648 (May 1, 1991)}.


17. Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886 [hereinafter Berne Convention] \textit{as amended by} Paris Additional Act and Declaration (1896), Berlin Convention (1908), Berne Additional Protocol (1914), Rome Convention (1928), Brussels Convention (1948), Stockholm Convention (1967), the Paris Convention (1971). Under the Convention, each signatory country must afford the same copyright protection on literary and artistic works to nationals of other signatory countries as it does to its own nationals.

Although the convention does not specifically include computer software in its protection, many opine that the convention's language, "every production in the literary, scientific[,] and artistic domain, whatever may be the mode or form of expression," is broad enough to encompass the new technology. Manfred Kindermann, \textit{Computer Software and Copyright Conventions}, 3 EUR. \textsc{Intel. Prop. Rev.} 6, 8 (1981); \textit{see also} Max
tion”) on copyright protection. In January 1992, the PRC conceded to all U.S. demands. Thus, as of 1992, foreign software interests could look to the PRC’s copyright law and regulations for protection.

Legal protection against piracy comes in two phases—the legal definition of an offense and the prosecution of the offender. While effective protection requires both, the definition of an offense must come first. This Article examines the sufficiency of the PRC’s legislative progress in defining a copyright offense.

This Article also focuses on the current state of the law in the PRC, as well as on the reasonable expectations of signatories to the Berne Convention. To explore these issues, Parts II through V examine the evolution of the PRC software copyright protection from its 1990 Copyright Law to its accession to the Berne Convention in 1992. Part VI highlights the pitfalls and shortcomings of the current laws and regulations governing software protection, and asserts that certain changes must be made to achieve more effective protection. Finally, Part VII concludes that, while the PRC has made significant strides toward meaningful protection of computer software in merely two years, it must now turn its attention to the prosecution and enforcement phase to ensure adequate protection.

This Article, however, will not discuss the appropriateness of the PRC’s decision to use copyright law to protect computer software. For many years, the choice of copyright law as the legal means of protection has stirred up vigorous and persistent debates throughout the world. The PRC government already has chosen copyright law protection, similar to that of the United


States, over trade secret, patent, contracts, and even *sui generis* statutes.\textsuperscript{21}

**II. THE HISTORY OF COPYRIGHT LAW IN CHINA**

**A. Before the Founding of the PRC in 1949**

The ancient Chinese, having invented paper making and printing,\textsuperscript{22} needed to protect authors' copyrights in a commercial setting. Prior to 1068 A.D., during the Northern Song Dynasty, a court prohibited the "unauthorized engraving and making of" an edition of plates printed by the Imperial College of the Nine Classics.\textsuperscript{23} Later, in the Southern Song Dynasty, the ancient book *Dongdu Shilue* bore a copyright marking, imparting notice of rights by stating, "Registered with the superior authorities—no reprints allowed."\textsuperscript{24} Statutory prohibitions, however, did not exist until the late Qing Dynasty.\textsuperscript{25}

In 1910, the Emperor enacted the *Da Qing* Copyright Law ("*Da Qing*"), the first written statute on the subject.\textsuperscript{26} The *Da Qing* statute protected literature, art, pamphlets, calligraphy, photographs, sculptures, and models; it also dealt with ownership, inheritance, works of joint authorship, commissioned works, oral works, and translations.\textsuperscript{27} The period of protection generally

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\textsuperscript{21} For a detailed discussion, see Arthur R. Miller, *Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?*, 106 HARV. L. REV. 977 (1993). Seventeen years after the National Commission on New Technological Uses of Copyrighted Works ("CONTU") recommended use of copyright law to protect computer technology, the main advocate from CONTU, Professor Arthur Miller, still fends off criticism of the recommendation. *See also* Fuller, *supra* note 19 (noting that in 1989, a senior official at the U.S. Agency for International Development still argued for a *sui generis* (of its own kind) statute for the protection of software in the PRC).

\textsuperscript{22} NIMMER ET AL., *supra* note 20, at 4. The inventions of paper making and printing with movable type date back at least 2000 and 900 years, respectively. Another archeological discovery, however, evidences printing with such technology as far back as the Tang Dynasty, between 704 and 751 A.D. *Id.*

\textsuperscript{23} *Id.*

\textsuperscript{24} *Id.*

\textsuperscript{25} Pronounced as Ch'ing. This was the last dynasty in China, succeeded by a brief period of the Northern Warlord government, and then by the Nationalist (Guomindang or Kuomintang) government, which retreated to Taiwan after the 1949 defeat by the current Communist government. *Id.* at 6.

\textsuperscript{26} *Id.* at 5.

\textsuperscript{27} For a more detailed discussion of the rights, exclusions, and legal proceedings under the statute, *see id.* at 6.
lasted thirty years after the death of the citizen author. The statute was so advanced for the time that the subsequent Northern Warlord and Guomindang governments modeled their statutes after it in 1915 and 1928, respectively. Nevertheless, with the founding of the communist Chinese government in 1949, all existing statutes were quickly repudiated.

B. 1949 to 1978: A Period of International Isolation

Before the PRC broke its international isolation with its innovative "ping-pong diplomacy" in 1971, the PRC lacked copyright protection for all authors due to the demise of the intellectuals' political power. Furthermore, beginning in 1957, all copyright protection proposals came to a halt; any efforts to protect the intellectuals were the equivalent of political suicide under Mao Tze-Dong's anti-intellectual regime. Chairman Mao's deep contempt for and distrust of intellectuals and the Cultural Revolution of 1966-1976 brought about a devastating and fatal period for intellectuals. Not until Mao was forced to retreat from the "Great Navigator's" seat in 1976 did the intellectuals redeem some human dignity. Protection of the works that earned them the highest title of political transgression, however, was not yet forthcoming.

28. Id.
29. Id. at 4.
30. Id. at 6.
32. Despite the passage of a few committee-level resolutions in the early 1950's, including the Resolution on the Development and Improvement of Publishing (1950), the Provisional Regulations for Protecting Publication Copyright (1951), and the Resolution on the Correction of Unauthorized Reprinting of Books (1953), no specific administrative mechanism existed to enforce the resolutions. NIMMER ET AL., supra note 20, at 7.
33. Cirillo, supra note 17, at 394-95. See also Fuller, supra note 19.
34. NIMMER ET AL., supra note 20, at 7.
35. Cirillo, supra note 17, at 394.
36. Mark Sidel, Copyright, Trademark and Patent Law in the People's Republic of China, 21 TEX. INT'L L.J. 259, 263 (1986). During the turmoil, in addition to sending them to prison or communes, authorities tortured or even killed the intellectuals. Furthermore, the authorities could mean anyone in charge of the campaign at that particular time and place. Id.
37. After ten years of economic, cultural, and human ruination caused by his Cultural Revolution, Mao retreated from the de facto governing positions, though he remained the paramount leader till his death in 1976. The Last Titan, NEWSWEEK, Sept. 20, 1976, at 37. The term "Great Navigator" is translated by the author of this Article from Weida De Duoshou.
C. 1979: The Beginning of A New Era

The PRC sought to end its antagonistic position toward the United States when Premier Zhou Enlai tried re-introducing the PRC to the international marketplace. The two countries officially established diplomatic relations and, on January 1, 1979, issued the Joint Communiqué on the Establishment of Diplomatic Relations Between the People’s Republic of China and the United States of America. Ensuing bilateral agreements stipulated copyright protection of works from the United States and the Philippines in the PRC. The PRC, however, did not formally recognize the concept of copyright until 1985, when the newly enacted Inheritance Law provided for the inheritance of copyright as a property and an economic right. In the meantime, Chinese scholars and officials already were engaged in heated debate over whether sui generis, a hybrid between patent and copyright, or existing contractual remedies would suffice.

1. Political and Social Forces Against Intellectual Property Protection in Socialist China

Premier Zhou Enlai’s era of reform retained a residual anti-intellectualist mood, although the period of flagrant abuses evident during the Cultural Revolution had ended. Some lingering forces against legal protection have their roots in the prevailing cultural and political conditions.

Two major Chinese philosophical traditions might have had some subtle influence on political views. Tao, or “The Way,” from which the traditional culture grew, is an idea of social totality, as opposed to the individualism that is promoted in Western culture. Neo-Confucianism also stresses the common good over

38. Nimmer et al., supra note 20, at 7.
40. These agreements included the Sino-American High Energy Physics Agreement of 1979, the Agreement on Trade Relations between the PRC and U.S. of 1979, and a cultural affairs agreement between the PRC and the Philippines. Nimmer et al., supra note 20, at 8.
41. Id. at 10.
42. Sidel, supra note 36, at 287. See also Cirillo, supra note 17, at 404.
43. Cirillo, supra note 17, at 388.
44. One commentator similarly noted that The Way “promotes the idea that an individual’s creation of a work is really a part of a larger metaphysical force . . . . [T]he artist’s creation is a part of everyone.” See id. at 394.
individual desires.\textsuperscript{45} The philosophies are inherently antithetical to intellectual property protection, as they suggest that an individual’s creation is “no more the creator’s than the society’s.”\textsuperscript{46}

Another difficulty in implementing protection for intellectual products in the PRC stems from the concept of ownership of the intangible copyright in the underlying work. For instance, a person purchasing a Microsoft Windows software package might “naturally” expect to be able to do whatever he or she wishes with it (e.g., use it, destroy it, give it away, or copy it for friends). He or she may not realize that what he or she purchased is only a license for limited use of the software. The lack of a conceptual distinction in ownerships is quite universal among computer software owners.\textsuperscript{47} The creator’s natural right to reproduce his or her own works and commercially exploit the work should not be compromised.

Another cultural barrier resides in the industry of art work replicas. This industry produces replicas of famous single-edition art works, mainly historic calligraphy, sculptures and paintings, for the PRC’s general consumer market.\textsuperscript{48} Consumers purchase items with full knowledge that the art is a replica, and the original owners accept this practice.\textsuperscript{49} No one sues for copyright infringement; the fact that one’s works are good enough to be replicated establishes or reinforces an author’s master status.\textsuperscript{50} Perhaps, its cultural legitimacy comes from the fact that the original art works are mostly single-edition historical pieces. Without replicas, the general public would not be able to enjoy the works in their own homes. This rationale affirms the pervasiveness of the philosophical notion of social sharing.

Similar to this subconscious philosophical notion, another resilient and prominent barrier is the PRC’s sensitivity to a repeat of the “Gun-Boat” diplomacy—a reminder of a very weak China.\textsuperscript{51} The PRC analogizes the use of Special 301 sanctions to

\textsuperscript{45} Id. at 393.
\textsuperscript{46} Id.
\textsuperscript{47} John T. Soma et al., The Use of Quiet Title and Declaratory Judgement Proceedings in Computer Software Ownership Disputes, 71 DENV. U. L.REV. 543, 544 (1994).
\textsuperscript{49} The original work owners normally own the copyright.
\textsuperscript{50} Holloway, supra note 48, at 223.
demands for land and resources by gun-toting Westerners in the past. This resentment towards the U.S. Special 301 policy mirrors that of other U.S. trading partners.\textsuperscript{52}

Special 301 is a form of retaliation against inadequate protection of intellectual property and unfair competition\textsuperscript{53} rather than a form of robbery or colonization as in the past. The PRC can avert the tariffs by not exporting to the United States or even retaliating in kind; the PRC need not choose between ruination by war and unequal treaties as in the past.

2. Silencing the Opposition

Realizing the significance of legal protection of technological development, the PRC decided to draft its first copyright law in 1978.\textsuperscript{54} Computer technology is crucial to the PRC's modernization, the success of which hinges largely on the PRC's ability to attract technology transfers and high-technology products from abroad.\textsuperscript{55} Inadequate legal rights and protections afforded to new technology investors certainly discourage such investment. The PRC's commitment to modernization and international trade appeared unequivocal.\textsuperscript{56}

Meanwhile, the threat of Special 301 tariffs acted as a catalyst to the lengthy process of drafting legislation.\textsuperscript{57} The use of threats, rightfully or not, worked for the United States in this case. The PRC could not stand to lose billions of dollars in exports to the United States.\textsuperscript{58}

In any event, the PRC's need to trade with foreign countries, especially with the United States, necessitated the enactment of a law to protect foreign software. If the PRC was to trade interna-


\textsuperscript{53} FOLSOM, \textit{supra} note 13, at 588.

\textsuperscript{54} NIMMER ET AL., \textit{supra} note 20, at 8. China realized the significance of modern science and foreign technology in its future, and the crucial task of ending judicial anarchy to facilitate such pursuit. Fuller, \textit{supra} note 19, at 60.

\textsuperscript{55} Cirillo, \textit{supra} note 17, at 397.

\textsuperscript{56} Fuller, \textit{supra} note 19, at 60.

\textsuperscript{57} Even though drafting began in 1979 and resulted in a first draft in 1980, it took another seven years to have a new draft submitted to the Legal Bureau for review in 1986. In the interim, legislative inexperience and lack of proper management contributed to the delay. NIMMER ET AL., \textit{supra} note 20, at 8.

\textsuperscript{58} The latest figure shows a $3.9 billion (U.S.) exports to the United States in 1992. \textit{Microsoft Award, supra} note 9, at 5.
tionally, its action would have to evince "its intention to abide by
the internationally accepted rule for doing business."\textsuperscript{59} International software protection is inevitable and indispensable to orderly trade and international stability, both to avert mutually detrimental trade wars between countries and to promote useful technologies.\textsuperscript{60}

The Berne Convention, the largest multilateral treaty protecting literary works,\textsuperscript{61} seemed to be the preferred vehicle to achieve such protection.\textsuperscript{62} In fact, the U.S. Patent and Trademark Office attorney had predicted the PRC would join the treaty by 1992.\textsuperscript{63} Even if the PRC had joined the Berne Convention before 1990, however, no practical effects would have occurred because the Berne Convention calls only for national treatment which requires a member country to protect works of other member countries as it would domestic works.\textsuperscript{64}

III. 1990 COPYRIGHT LAW ENACTMENT

The threat of Special 301 sanctions hastened the promulgation of the PRC's first comprehensive copyright statute in its contemporary history.\textsuperscript{65} The Act took years of consultation and assistance from the World Intellectual Property Organization ("WIPO"), domestic and foreign legal experts, and business consultants.\textsuperscript{66} The Copyright Law, enacted on September 7, 1990, went into

\begin{itemize}
  \item \textsuperscript{59} Fuller, supra note 19, at 66.
  \item \textsuperscript{61} Berne Convention, supra note 17, at 190.
  \item \textsuperscript{62} Unlike the U.C.C., the Berne Convention's protection in other signatory countries is automatic. The Berne Convention contains no requirement that formalities of each nation must be satisfied in order to trigger protection. Syrowik, supra note 60, at 65.
  \item \textsuperscript{63} Cirillo, supra note 17, at 398.
  \item \textsuperscript{64} Fuller, supra note 19, at 68.
  \item \textsuperscript{66} Since 1980, when the PRC joined WIPO, the organization had been assisting the PRC drafting of copyright law and regulations through "various meetings, courses[,] and seminars" in preparation of joining the Berne Convention. Cirillo, supra note 17, at 398.
  \item \textsuperscript{67} See Fuller, supra note 19, at 65. "Some foreign companies have been asked to comment on various drafts of the forthcoming law." \textit{Id.}
effect on June 1, 1991. The accompanying Implementing Rules, which detail the law, went into effect simultaneously.

A. Legislative Intent and Justification

Article 1 of the Copyright Law states the three official objectives of the law: (1) to protect copyright and related interests of authors of literary, artistic, and scientific works; to encourage the creation and the dissemination of works beneficial to socialist material and spiritual culture; and (3) to promote the development and prosperity of socialism's cultural and scientific institution.

B. Basic Rights Afforded Under the PRC's Copyright Law

The Copyright Law is the first legislation of its kind since the founding of the PRC in 1949. It covers a complete set of basic rights, the requirement of a written contract for licensing, the establishment of enforcement agencies, liability of infringers, and the inheritance of copyright.

The basic set of rights under the Chinese banquan (copyright) or zhuzuoquan (author's right) adopted the European civil law on droit d'auteur (author's right), rather than the Anglo-American copyright law. Simply put, the two differ mainly in the author's moral or personal rights. The Copyright Law affords the right of integrity to all authors; this encompasses the

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68. Copyright Law, supra note 15.
70. Copyright Law, supra note 15, art. 1.
71. Id.
72. Categories of works protected include: literary, oral, musical and dramatic, choreographic, arts, cinematographic and visual, engineering designs, product design drawings, maps, computer software (not specifically spelled), and a catch-all for those already protected by administrative regulations. Id. art. 3.
73. Id. arts. 23, 45-50, 54; Implementing Rules, supra note 69, arts. 18-22.
74. Copyright Law, supra note 15, art. 51.
75. Id.
77. Id. For a brief discussion on the differences between the Anglo-American copyright and the European continental droit d'auteur systems, see Dietz, supra note 1, at 443.
right to be free from distortion, fragmentization, and unauthorized changes.\footnote{78}

Other common rights fall into two categories—economic and personal.\footnote{79} Economic rights include: (1) the right to publish; (2) the right to identify oneself and affix one’s name; (3) the right to amend; and (4) the right of integrity.\footnote{80} Personal rights include: (1) the right to use one’s own work; and (2) the right to remuneration.\footnote{81}

The Copyright Law grants copyright claims to the employee rather than the employer corporation.\footnote{82} The applications, however, are very narrow and under ordinary employment situations, the corporation is entitled to the copyright.\footnote{83}

C. Qualifying For Protection Under the Copyright Law

The copyright typically expires fifty years after the death of the author.\footnote{84} For foreign authors, however, protection under the law might be illusory due to the “first published in the PRC” requirement.\footnote{85} That is, foreign works that have been published outside the PRC would receive protection under the law only through bilateral or multilateral agreements to which China is a party.\footnote{86} Therefore, these provisions were no more than window-dressing until China joined all multilateral treaties.\footnote{87}

\footnote{78. Copyright Law, supra note 15, art. 10(4).}
\footnote{79. Id.}
\footnote{80. Id.}
\footnote{81. Id.}
\footnote{82. Jia Zhao, China Promulgates New Copyright Law, E. ASIAN EXEC. REP., Oct. 15, 1990, at 9. The corporation, however, has the right to use the works in the “scope of its business.” Id.}
\footnote{83. Where the law requires, or where the employee authors the work using the corporation’s resources and in an employment capacity, the copyright belongs to the corporation. Even if the employee acquires the copyright under Article 16, she may not authorize a third party’s use of the work until two years from completion, during which the corporation has the right to use the work. Copyright Law, supra note 15, art. 16.}
\footnote{84. For legal persons or entities, the protection lasts only fifty years. Id. art. 21.}
\footnote{85. The PRC adopted the Berne Convention definition of “first published,” as explained in China Business Law Guide (CCH) ¶ 61-760 at 63,804 (1991). “First Published within PRC” means that the work has to be first published in the PRC—not already published outside the PRC—to yield protection of the law.}
\footnote{87. China joined both the U.C.C. and the Berne Convention on October 5, 1992. Khoon, supra note 2, at 178.}
In addition, it was not readily apparent how computer software would be protected under the Copyright Law because Article 3, which is the only article that addresses the issue, merely mentions inclusion of software for protection. Foreign authors had to look to the pending software regulations for the substance of the law. Nonetheless, limitations inherent in the law presumably also apply to software protection.

D. Criticism of the Copyright Law

1. "Personal Use" Limitations on the Rights

To protect public interests, the law reasonably should impose limitations on authors' copyrights. A limitation that legitimizes "infringements" for personal study, research, and enjoyment, however, is unreasonable. Developed countries like the United States have similar "study research exceptions," which are narrowly defined. The purportedly "small" quantity mentioned in the PRC Copyright Law has added ambiguity that opens the provision to manipulation.

2. Other Ambiguities

Two other sources of ambiguity in Article 4 are: (1) the "public's rights or interests," and (2) banned publication. The public's rights and interests are susceptible to manipulation, especially under a totalitarian government like the PRC. No opposition would exist should the government decide to change its definitions of these concepts.

Article 4 stipulates that works banned from publication shall receive no copyright protection. Democratic countries, such as the United States, which deny protection to illegal subject matter, nevertheless define the term in advance. The Copyright Law contains no advance definitions of "illegality." Consequently, the PRC government might ban publications ex post facto to suit its particular need. Of course, other legislation might exist that

88. Copyright Law, supra note 15, art. 3(8).
89. 17 U.S.C. § 107 (1989). Although the code does not set forth any firm guidelines, it does establish parameters to determine if the section applies. Id.
90. Copyright Law, supra note 15, art. 22(6).
91. Id. art. 4.
92. Id.
defines illegal publications. Furthermore, political costs and lost investment, domestic and international, would be a heavy price to pay, should the government enact ex post facto bans on certain publications.

3. "Literary Work" Excludes Computer Software

To protect their investment in software marketed in the PRC, foreign software developers, especially U.S. developers, have urged the PRC to adopt the U.S. standard of treating software as literary works, which are forms of expression. Under this standard, copying of the expression, and not necessarily the exact duplication, constitutes an infringement. Under the Copyright Law, however, only exact duplicates of software codes or files are infringing works.

4. The Lack of Criminal Liability for Infringement

Neither Article 45 nor Article 46 of the Copyright Law imposes criminal sanctions on infringers. When economic benefits are vast and the chance of being arrested, convicted, and penalized are low, civil liability alone insufficiently deters infringers. Although minor penalties probably still would alleviate some problems of software piracy, criminal penalties will be necessary for effective protection.

5. Mutual Exclusivity of Various Legal Protection

Contrary to U.S. law, the Copyright Law specifically excludes scientific or technological works that are protectable under other areas of its law, such as technology contracts or patents. For instance, where a technology contract provides legal protection against unauthorized copying of a particular software, the software developer holds no copyright claims against infringers. This mutual exclusivity in legal protection could be problematic,

95. The legal meaning of "computer software" was not officially defined until the promulgation of the Computer Software Protection Rules on May 24, 1991. Rules, supra note 16, arts. 2 & 3. See also Implementing Rules, supra note 69, art. 4(1).
96. Article 45(1) applies to non-commercial infringers, while commercial infringers would be liable for additional penalty or confiscation of illegal proceeds under Article 46(2). Copyright Law, supra note 15, arts. 45(1) & 46(2).
97. See Intellectual Property, supra note 5.
98. Copyright Law, supra note 15, art. 7.
particularly when the prior contract protection or patent monopoly is inadequate or even unenforceable. Mutual exclusivity eliminates the multiple layers of claims, and thus the multiple layers of protection.

6. "First Published in the PRC" Requirement Imposes a Barrier

To qualify for protection under the Copyright Law, software must be "first published" in the PRC. Alternatively, the work may be first published outside the PRC within thirty-days prior to its publication in the PRC. The Berne Convention also allows a thirty day time period for simultaneous publication. A grace period longer than thirty days would be more reasonable given the time-consuming bureaucracy in international business transactions. Under the Copyright Law, however, domestic software developers, who need not deal with international bureaucracy to acquire domestic copyright protection, are not subject to the first published in the PRC requirement.

Such flagrantly discriminatory standards violate the national treatment principle of major multilateral copyright treaties, such as the Berne Convention and the Universal Copyright Convention. These treaties require each member country to provide the same legal protection to foreigners as it does to its nationals. Moreover, the Berne Convention requires a signatory country to be legally mature and ready to give effect to the provisions of the Berne Convention. The PRC had to rebuild gradually to meet the Berne Convention's requirements. At the time, the PRC had not signed, nor was it legally ready to join, the Berne Convention. The PRC was bound to improve its protection of computer software in the upcoming detailed rules.

99. Id.
100. Id.
101. Berne Convention, supra note 17, art. 3(1)(b).
102. Zhao, supra note 82, at 9.
IV. FIRST SET OF COMPUTER SOFTWARE PROTECTION RULES PROMULGATED IN 1991

A. Scope of Protection Defined

The uncertain scope of protection of software was clarified when the PRC passed the Computer Software Protection Rules ("Rules") on May 24, 1991.105 These Rules went into effect in October, 1991.106 A set of Measures for Computer Software Copyright Registration ("Measures") accompanied the Rules and went into effect on April 6, 1992.107

The Rules define "software" as the computer and the supporting files.108 "Computer program" means the source and target programs.109 More technically, a computer program refers to the coded or symbolic command sequences or symbolic statement sequences, which can be automatically transferred into coded command sequences.110 Such coded command sequences are then executed by computers or other such devices with information processing ability to attain a required result.111 The files consist primarily of written data and diagrams used to describe various aspects of a program, such as manuals and flow sheets.112 Article 7, however, explicitly excludes from protection the mental exercises and processes in the development of software, such as "thoughts, concepts, discoveries, principles, algorithms, processing procedures[,] and operational methods."113

105. Rules, supra note 16, art.1.
106. Id.
107. Measures, supra note 16.
109. NIMMER ET AL., supra note 20, at 18. Source program is the computer program that the author actually writes to give instructions to the computer for execution. Target or object program is the source program "translated" into binary language, one that the computer understands. Id.
110. Id.
111. Rules, supra note 16, art. 3(1).
112. Id. art. 3(2).
113. Id. art. 7.
B. Substantive Rights

Software copyright holders, once qualified, are entitled to the following substantive rights:

(1) right of publication, namely the right to determine whether software is made public;
(2) developer's right of acknowledgement, namely the right to make known identity of the developer of the software and state his name on the software;
(3) right of usage, namely, on the premise of not harming society's public interest, the right to use the software in reproductions, exhibitions, publications, or in adapted, translated, annotated or other forms;
(4) right to authorize usage and right to receive remuneration, namely the right to authorise others to use the software in one or all of the forms outlined in item (3) of this Article and the right to receive remuneration for this;
(5) right of assignment, namely the right to assign to others software usage rights as per item (3) and usage authorisation rights as per item (4) of this Article. Other rights stipulated by the Rules include joint authorship and inheritance rights.

C. Duration of Copyright

The Rules grant copyright protection for twenty-five years with a maximum extension of another twenty-five years upon renewal; the period commences at the end of the initial release year. The Berne Convention standard of protection may be up to fifty years beyond the author's life. With the advent of computer technology, a few years often renders versions of software obsolete, if it is not already displaced by fierce competition. Therefore, in a practical sense, no difference exists between the two time periods. Admittedly, however, situations exist where outdated software has some residual research and derivative value

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114. Id. art. 9.
115. Id. arts. 11, 16 & 20.
116. Id. art. 15.
to competitors. In such cases, the copyright holder might wish to keep the software from entering into the public domain.

D. Commissioned and Joint Works

The Rules mandate a written contract in commissioned and joint work projects. In addition, they demand a clear statement of the identity of the copyright owner. The commissioned party is favored if the contract is unclear or if no contract exists. If such deficiencies exist between joint authors, however, each would have copyright to his or her own creation, and no joint work is recognized. In other words, there is no copyright for the joint work.

E. Increasing Penalties for Infringers

The Rules closed the punishment gap between non-commercial and commercial infringers in favor of a higher penalty. More protection exists now than was previously available under the Copyright Law. Remedies include confiscating illegal earnings, imposing fines, requiring a public apology, and other administrative penalties. Although criminal sanctions would provide greater deterrence, such penalties have yet to be imposed.

F. Criticisms of the Rules and Measures

1. Insufficient Injunctive Remedies

Without the guarantee of an expedient judicial system, preliminary remedies are needed. For instance, during the pendency of a suit or administrative hearing, a copyright holder requires preliminary injunctive relief to avoid irreparable harm.
2. Formalities Impose an Undue Burden on Copyright Holders and Transferees

The formalities of having to register in order to validate one's copyright, to renew for the twenty-five-year extension, and to report the details of an assignment, put an undue burden on the copyright holders. An inadvertent omission of any of the foregoing steps can result in a complete lack of protection under copyright law. Moreover, as discussed above, the three-month grace period for a new assignee to re-register is not sufficient in a practical sense. Article 24 provides, however, upon approval of registration, a "registration certificate" will be issued attesting to the copyright validity. Though it remains unclear whether this presumption of validity is conclusive and irrebuttable in infringement suits, the certificate nevertheless offers an evidentiary advantage to the copyright holder.

Arguably, the formality requirements remain common in many countries, such as the United States until it joined the Convention in 1989. For example, the PRC registration process requires deposit of a copy of the software with the national Software Registration Centre. This is similar to the United States, which requires deposit of copies at the Library of Congress. Such central depositories serve well as the country's sole official copyright record-keeping place for others to check for copyright existence and ownership. Many inadvertent infringements may be avoided with such a mechanism in place.

3. "First Published in PRC" Requirement Remains

As mentioned above, the "First Published" requirement effectively puts foreign software developers at a disadvantage in obtaining copyright protection. At a minimum, all software that

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126. Id. art. 15.
127. Id. art. 27.
128. Id. art. 27.
130. Khoon, supra note 2, at 179.
131. Measures, supra note 16, art. 9. Software Registration Centre is the agency authorized to process applications of registration for copyright. Id.
entered the PRC market before October 1991 would not be protected.\footnote{133}

4. Ambiguities Remain

Several articles of the Rules and the Copyright Law contain ambiguous terms that are subject to manipulation. "Public interest" as used in Article 9(3) of the Rules and in Article 4 of the Copyright Law, is the most amorphous. This vague term provides authorities with leeway to declare something against public interest without first defining "public interest." Article 18(3) of the Rules provides that licensing agreements for the "rights of usage"\footnote{134} may be, but are not required to be, in the form of a written contract.\footnote{135} Although the contract is renewable, each license term shall not exceed ten years. Article 18(3) does not cover whether an oral contract for longer than a ten-year term is valid. If such an oral contract is valid, the question arises as to why the law places more restraints on a contract term where the parties make the effort to reduce an agreement to writing. There is little practical difference, however, because the commercial life span of most software falls well within ten years.

Additionally, the ambiguous wording of Article 26 of the Rules has potentially far-reaching effects. Article 26 stipulates certain conditions for the authorities to cancel an otherwise valid registration.\footnote{136} Under one condition, the authorities may cancel an approved registration if the "main information" provided to the Software Registration Centre\footnote{137} for such approval is later proven "inaccurate."\footnote{138} While "main information" reasonably may be interpreted to mean "material information," "inaccurate" information may be read to disregard any subjective determination of the applicant's deceptive intent. In other words, only the factual inaccuracy is required for cancellation. On the other hand, such

\footnote{133. Exception is made for software published within the thirty day grace period if subsequent publication in China occurred after October 1, 1991.}
\footnote{134. The "rights of usage" are the rights to reproduce, to exhibit, to publish, and to make derivative works (including adaptation, translation, and annotation of the original software). Rules, \textit{supra} note 16, art. 9(3).}
\footnote{135. Rules, \textit{supra} note 16, art. 18(3).}
\footnote{136. Article 26 of the Rules also allows the judiciary, in a final decree, to cancel an otherwise valid registration of a software copyright. Rules, \textit{supra} note 16, art. 26.}
\footnote{137. Copies of software must be deposited with the Software Registration Centre. Measures, \textit{supra} note 16, art. 9.}
\footnote{138. Rules, \textit{supra} note 16, art. 26.}
an objective standard imparts certainty and promotes accuracy in filing applications.

Finally, one other ambiguity occurs in Article 22 of the Rules. This article excludes from infringement liability a "small number" of copies made for "non-commercial objectives," such as classroom teaching, scientific research, or enabling "State authorities to carry out their duties." As mentioned above, the term "non-commercial objectives" is open to manipulation by the parties, as well as government officials, especially when the list for "non-commercial objectives" is not exhaustive and the government-duty exemption is so broad. Nevertheless, one may compare the education exemption to a similar U.S. provision. For instance, such exemptions are very similar to the "fair use" doctrine codified in U.S. copyright law, which exempts unauthorized use of software for teaching purposes. Admittedly, however, the U.S. "fair use" exemption is better defined than in Article 22 of the Rules.

Article 31 of the Rules also exempts one from liability in developing software similar to existing software if the development is: (1) to implement relevant "State policies, laws, rules, and regulations;" (2) essential to implement "State technological standards;" or (3) one of the limited forms of expression available for selection and use. An objective means exists to determine whether there is indeed only one way, or whether there are a few ways, of expressing an idea (achieving the goal of a software program). For example, program execution efficiency or printer interface codes would automatically rule out many ways of writing

139. Rules, supra note 16, art. 22.
140. Id.
141. In the United States, "fair use" is an affirmative defense for an infringer. Statutory factors to consider are:
   (1) Nature of the "fair use" (purpose and character of the use).
   (2) Nature of the protected work (creative vs. merely factual; computer software mostly are classified as creative).
   (3) Amount and substantiality of the "used" portion relative to the copyrighted work as a whole.
   (4) Economic effect on the protected work's market and value.
17 U.S.C. § 107 (1989). Examples of "fair use" include uses of the software for teaching, scholarship, or research. For a concise discussion, see 1 RICHARD L. BERNACCHI ET AL., BERNACCHI ON COMPUTER LAW—A GUIDE TO THE LEGAL AND MANAGEMENT ASPECTS OF COMPUTER TECHNOLOGY, § 3.12.2f at 3-112 (Nov. 1992).
142. See generally BERNACCHI ET AL., supra note 141.
143. Rules, supra note 16, art. 31(1)-(3).
a program (expressing through the program's structure, organization, and sequence) if certain results come about. In such cases, the Merger Doctrine\textsuperscript{144} would apply in the United States, resulting in non-protection of those elements of the program; protection of those elements would in effect grant monopoly on the idea being expressed, not just the expression, since there are only a few ways to express the idea. Therefore, the ambiguity in the third exemption under Article 31 may be resolved objectively; this would diminish the possibility of manipulation.

Further, the limited ways of expression in the third exemption may be analogized to the U.S. \textit{scènes à faire} exemption,\textsuperscript{145} which accommodates situations where external considerations dictate some elements of a program being written. While the third exemption does not seem to be a real problem, the essentiality, relevancy, and policy remain highly malleable, and are subject to abuses.

5. Negligent Vendors/Distributors Should Pay

Article 32 of the Rules states that a distributor or vendor distributing pirated or infringing software is liable for infringement only if he or she "knowingly" does so.\textsuperscript{146} If "knowingly" is taken to mean merely "intentionally," it would be much more difficult to prove intent at that moment; it is quite subjective. Such knowledge requirement should be interpreted as an objective standard of proving intent by requiring an "imputed knowledge" or "should have known" standard. After all, the vendors or distributors of software are in the best position to prevent distribution of pirated software or other infringing works.

\begin{itemize}
\item \textsuperscript{144} In the United States, the copyright statute expressly states the expression-idea dichotomy—it protects only the expression, but not the underlying idea being expressed. 17 U.S.C. § 102(b) (1976). The Merger Doctrine applies and renders unprotected the elements that may be expressed in only one way or very limited ways, since the protection of the expression cannot be separated from the protection of the underlying idea. Blindly granting monopoly of such expression in effect also grants monopoly of the idea. For a detailed discussion on the doctrine, see BERNACCHI ET AL., \textit{supra} note 141, § 3.11.2 at 3-75.
\item \textsuperscript{145} The \textit{scènes à faire} doctrine is applied where certain goals or functions of a program or external conditions dictate the ways to write the software. Examples of such external conditions are industry custom, hardware and software standards. See BERNACCHI ET AL., \textit{supra} note 141, at 3-102.
\item \textsuperscript{146} Rules, \textit{supra} note 16, art. 32.
\end{itemize}
V. 1992 JOINING OF THE BERNE CONVENTION

In order for the PRC to join the Berne Convention—a demand hotly pursued by the USTR—the PRC’s then existing legal framework had to be ripe and it had to make the final legislative adjustment to conform to the minimum standard of the convention. As a result, the PRC issued the Regulations on Implementation of International Copyright Treaties (“Treaty Regulations”) on September 25, 1992 and the State Copyright Bureau became responsible for implementing international treaties. The PRC since has joined the Berne Convention, effective October 15, 1992. As a matter of principle, the PRC now affords foreign software copyright holders no less protection than it does to its citizens. The Treaty Regulations provide significant protections to software copyright holders of member countries in both substance and procedures.

147. Fagui, supra note 15. See also Treaty Regulations, supra note 117.
148. The Treaty Regulations apply to the Berne Convention, and other bilateral agreements on copyright which the PRC has signed with another country. Treaty Regulations, supra note 117, art. 3.
149. The PRC has also joined the U.C.C., which went into effect on October 15, 1992 as well. Khoon, supra note 2.
150. Article 4 of The Treaty Regulations lists three types “foreign works” as examples:
(1) Works whose author(s) or copyright holder(s) is a national or permanent resident of an international copyright treaty member country.
(2) Where (1) cannot be satisfied, works which was published initially or simultaneously in such a member country.
(3) Works or commissioned works, copyright holder(s) of which is a Sino-foreign joint equity enterprise, Sino-foreign cooperative enterprise, or sole foreign investment.
Treaty Regulations, supra note 117, art. 4.
151. In fact, if the domestic laws and regulations are not amended in time, protections due to foreign software copyright owners will, during the lag time period, actually be more than those due its own citizens. For instance, the registration requirement and extension requirement for second term will apply to domestic but not foreign copyright holders. It is unlikely, however, the PRC government would discriminate against its own citizens.
A. Procedural Improvements

1. Lifting of the Onerous Registration Requirement

The Treaty Regulations omitted reference to the Measures, which require registration of the software. This omission constituted a prerequisite to accession to the Berne Convention, which prohibits any formality as a condition for protection. Software copyright holders now do not need to register their copyright in order to receive protection under the Copyright Law.

2. “First Published in the PRC” Requirement Satisfied by First Publication in a Treaty Member Country

Another major procedural simplification is the ease of satisfying the “First Published in the PRC” requirement for both Berne Convention member and non-member countries. Aligned with the fundamental Berne Convention requirement that first publication in a member country yields the same protection as if the work were first published in another member country, the PRC duly expanded protection to such works. The expansion in the number of potential foreign works under protection will be enormous, considering that ninety-five countries are parties to the Berne Convention. Meanwhile, non-member countries in the rest of the world also stand to benefit from the PRC joining the Berne Convention.

152. In addition to the regulations contained therein, the Treaty Regulations now refer only to the Copyright Law, the Implementing Rules, and the Rules. Effective October 15, 1992, the PRC no longer requires registration before it grants copyright protections. See China to Join Copyright Conventions, Prentice Hall Law & Bus., Aug. 1992, available in WL, TP-ALL Library, 4 No. 8 PH-JPROPR 36; see also Khoon, supra note 2, at 179.


154. As of January 1993, the Berne Convention, by far, is the most popular convention and enlists the most signatories among all international copyright treaties (U.C.C., Phonograms Convention and the Satellites Convention have 89, 44, and 15 member countries respectively). Jean Lin, The United States—Taiwan Copyright Agreement: Cooperation or Coercion?, 11 UCLA FAC. BASIN L.J. 155, 163 (1992).
B. Non-member Countries Enjoy Convention Benefits in the PRC Through the "Back Door"

The PRC has not gained any protection that it did not already have in member countries before joining the Berne Convention. A loophole in the Berne Convention, the "Back Door" that non-member countries frequently used, such as the United States before it joined the Berne Convention in 1989, was also available to the PRC. By "simultaneous publication" in a member country—within thirty days of initial publication in the originating country—works from a non-member country could use this "back door" and gain full benefits under the Berne Convention in all member countries. This procedural change is probably the most costly to the PRC in joining the Berne Convention.

C. Substantive Improvements

1. Computer Software is Protected as Literary Work

Aside from procedures, however, there exists no real meaningful protection under copyright law for computer software until the works are protected as literary works. Imbedded in the concept of protecting literary works is protecting the form of expression used by the author in that particular copyrighted work, not just the exact literary appearances or sequences. Thus, software protected as non-literary works are open to lawful copying of their most essential, creative parts—the overall logic and design of the system that the literary elements embody; only exact copying of the codes is an infringement. On the other hand, as literary works, a computer program's literary elements, structure, organization, and sequence of execution, are all protectable elements against infringers. It follows that Article 7 of the Treaty Regulations, which establishes software's literary status in the PRC's copyright protection scheme, grants the most significant and concrete legal protection to foreign computer software through the Berne Convention or its "back door."

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155. See Convention, supra note 17, art. 3(1)(b).
156. Id. art. 3(4).
157. See BERNACCHI ET AL., supra note 141, § 3.11.1 at 3-70, 73.
158. Treaty Regulations, supra note 117, art. 7.
2. Duration of Copyright Lengthened to Fifty Years

Another substantive benefit is derived from a change of procedure. Formerly under the Rules, qualified foreign copyright holders could obtain a total of fifty years of protection in two terms, but they were required to apply for an extension after the first twenty-five-year term runs. Under the Treaty Regulations, however, the second term is automatic, eliminating the risk of inadvertent omission to apply for an extension. Some Berne Convention member countries, like the United States, do provide more than fifty years based on their domestic laws. Nonetheless, the Berne Convention calls for a fifty-year term.

3. Copyright Owners’ Legal Right to Stop Importation of Infringing Works from Abroad

Regardless of how thorough the PRC’s copyright law protects foreign software within its borders, infringers do not face liability under PRC law if the infringements take place outside the PRC. Infringers often pirate software outside a protecting country, then ship the products into that country, sometimes because the work is not protected in the country where the copying occurred, or such country is lax in enforcing the law. Therefore, to effectively defeat such “legal” acts, Article 15 of the Regulations grants foreign software copyright owners the right to stop through an injunction the importation of: (1) infringing reproductions from abroad, and (2) reproductions from countries where the work is not protected. This provision, in the enforcement aspect, even surpasses Section 602 of the U.S. Copyright Act of 1976, which makes unauthorized importation of infringing works from abroad an infringement of the owner’s exclusive right to distribute and

159. Rules, supra note 16, art. 15.
160. Treaty Regulations, supra note 117, art. 7.
161. U.S. copyright law, influenced heavily by its entertainment and publishing industries, has given works created or published since 1978 protection for fifty years beyond the life of the last surviving author. See 17 U.S.C. §§ 302, 305 (1976).
162. Treaty Regulations, supra note 117, art. 7.
163. See Video Game Executive, supra note 10.
164. The PRC was such an example. Before joining the Berne Convention, the PRC did not protect foreign software copyright that failed to satisfy its many requirements, such as the registration and first published in the PRC requirements.
165. Treaty Regulations, supra note 117, art. 15.
import. The U.S. provision does not guarantee injunctive relief even though, under both laws, a copyright owner presumably has to prove unauthorized importation.

In sum, foreign computer software in the PRC now is protected by the Berne Convention provisions and PRC copyright laws. Yet, there are pitfalls in the PRC's copyright law, and points that need improvement.

VI. PITFALLS AND NEEDED IMPROVEMENTS IN PRC COPYRIGHT LAWS

While the Treaty Regulations expressly state their supremacy to all related legislation on foreign computer software protection in the PRC, existing copyright law that is not stipulated in the Treaty Regulations presumably still will apply.

A. Improvements Needed in PRC Copyright Laws

1. Some Ambiguities Remain

Some of the ambiguities of the Copyright Law (examined in Part III) and the Rules (examined in Part IV) remain unresolved. This is simply because the Treaty Regulations have not addressed those existing provisions. All but three ambiguities either have insignificant practical effects or fall under some long-established exceptions recognized in developed countries.

167. These benefits to foreign software are not retroactive. Treaty Regulations, supra note 117, art. 17. According to the Memorandum of Understanding, however, signed by the United States and the PRC on January 17, 1992, China already afforded full protection to U.S. copyrighted works in the PRC since March 17, 1992. CHINA TO JOIN COPYRIGHT CONVENTIONS, supra note 152.

168. Article 19 lays out the authority hierarchy among the Berne Convention, Treaty Regulations, and all other existing copyright legislation. Treaty Regulations, supra note 117, art. 19. Where the Berne Convention's provisions conflict with Treaty Regulations, the Berne Convention applies. As for conflicts between the Treaty Regulations and any other existing copyright legislation, the Treaty Regulations are supreme. Id.

169. The three ambiguities include: (1) the unresolved situation of oral licensing agreement of longer than a ten-year term, Article 18 of the Rules; see supra Part IV; (2) the meaning of "inaccurate" information on registration application, Article 26 of the Rules; however, this ambiguity is moot, since the requirement to register has been eliminated by the Treaty Regulations; see supra Parts IV and VI.

170. Article 22 of the Rules exempts "non-commercial" uses without remuneration; however, as discussed in Part IV, such exception coincides with the "education-research" and the "fair use" exceptions in U.S. copyright law. See supra Part IV.F.4. The second
The more significant ambiguities are: (1) the "banned publication" in Article 4 of the Copyright Law, (2) the "public interest" terms in Article 4 of the Copyright Law and Article 9(3) of the Rules; and (3) the "knowingly" standard in Article 32 of the Rules. Whether the "knowingly" standard is subjective or objective will become apparent when PRC courts begin applying the standard in litigation. Even though PRC is a civil law country, where prior rulings are of no precedential value, judicial interpretation of such standards is still indicative of how courts will interpret the articles.

Unfortunately, the terms "banned publication" and "public interest," used in both the Copyright Law and the Rules, have rather amorphous meanings, depending upon the circumstances. The terms, which are arguably ex post facto, can encompass almost anything. As embraced by legislation in the United States, however, these kinds of malleable terms usually command a standard of reasonableness, such as public safety or health. Whether or not the PRC judiciary would interpret the term with reasonableness, or even have the same definition of reasonableness, might be irrelevant. From an economic and political standpoint, the PRC stands to lose handsome foreign investment and technology transfer, should it choose to abuse its interpretive discretion. Such losses resulting from a retreat of developed countries, as explained before, would undoubtedly impede or even stall its modernization efforts. Thus, in interpreting terms like "public interest" and "banned publication" under such overwhelming pressures, the authorities would likely restrain themselves to those considerations, even if the authorities have abusive intent.

2. Addition of Criminal Penalty Preferred

The addition of criminal penalties (as noted in Parts III and IV) would enhance deterrence against infringers. The PRC laws, however, still favor civil penalties, typically including injunction, public apology, or monetary losses. If profit-making motivates the unauthorized copying and publishing, administrative

ambiguity that mirrors other U.S. exceptions is the "limited forms of expression" exception in Article 31(3) of the Rules. This article parallels the Merger Doctrine exception and is arguably similar to the "scènes à faire" exception of the U.S. copyright law; see supra Part IV.

171. See supra Parts III and IV.
172. Copyright Law, supra note 15, art. 45 & 46.
penalties, such as confiscation of illegal proceeds and fines, would be in order.\textsuperscript{173} The Berne Convention, which only calls for civil penalties, is also lenient. If, however, the "compensation" to authors is so large that its deterrent effect is felt by infringers, it might just suffice, if coupled with injunctions and confiscation of illegal proceeds. Still, criminal penalties are a necessary aspect of effective deterrence in the protection of computer software.

\textbf{B. Pitfalls of PRC Copyright Laws}

There are three sections in the Copyright Law and the Rules of which a party with an interest in a software copyright ought to be aware. First, authors of a work intended for joint copyright must have a written contract, stipulating the terms.\textsuperscript{174} Second, where a party has commissioned works, it is imperative that the commissioning party secure a clearly written contract from the commissioned party. Absent a clearly written contract, the commissioned party automatically becomes the copyright holder.\textsuperscript{175} Finally, in a scenario involving scientific and technological works—for example, computer software—if such works receive protection from patent or technology contract law, Article 7 of the Copyright Law requires application of those laws, not copyright law.\textsuperscript{176} It is not clear, however, whether the copyright holder may rely on copyright law if he or she fails to prevail under the other laws. This is a shortcoming of mutual exclusivity.\textsuperscript{177}

\textbf{VII. CONCLUSION}

In light of the PRC's traditional and cultural philosophies, contemporary political and social history, and the short time period available for a thoroughly new legislation, the PRC has progressed significantly in two years in the protection of foreign software. From its conception in the lengthy Copyright Law of 1990 to the maturing body of computer copyright law and eventually a complete set of laws and regulations upon joining of the Berne Convention in 1992, the legal protection for computer software in the PRC has advanced several stages.

\begin{footnotesize}
\begin{enumerate}
\item 173. \textit{Id.}
\item 174. Rules, supra note 16, art. 11. See supra Part V.
\item 175. Rules, supra note 16, art. 12. See supra Part V.
\item 176. Copyright Law, supra note 15, art. 7. See supra Part III.
\item 177. See supra Part III.D.4.
\end{enumerate}
\end{footnotesize}
However complete and conforming to international standards the PRC's computer copyright protection laws are, the prevailing international standard—the Berne Convention—imposes only civil penalties. In addition, foreign software copyright holders ought to be aware of situations where the software is unprotected by copyright law due to pre-emption by other areas. Finally, copyright holders need to be alert to the existing malleable sections in the body of PRC's software copyright law.

Since the legislation for software copyright protection in the PRC is complete and provides a legal framework, upon which authors may bring charges to combat infringers, the focus now ought to be on the enforcement phase. Discouraging infringements depends now on effective prosecution and imposing severe penalties, including criminal sanctions.\(^7\)

Since completion of this Article in May 1994, many changes have occurred in this developing area. As Mr. Lam predicted, on July 5, 1994, the PRC's National People's Congress augmented then copyright protection with an array of criminal penalties including:

1. imprisonment of up to 7 years;
2. retribution;
3. fines; and
4. confiscation of illegally copied software, raw materials and equipment employed in the infringing process.


On October 12, 1995, the Beijing Intermediate People's Court found that Ju Ren Computer Co. unlawfully duplicated and distributed various software programs including Autocad, Lotus 1-2-3, Windows 3.0, Microsoft Word, and WordPerfect 5.2. *Chinese Firm Found Guilty in Copyright Case,* L.A. TIMES, Oct. 31, 1995, at D2. This is the first time a Chinese company has been found guilty of copyright infringement, and Microsoft is hoping for punitive damages. *Id.* The court should deliver a decision on damages in early November. *Id.—Ed.*