A COMPARATIVE STUDY OF THE TREATMENT OF 
EMPLOYEE INVENTIONS, PRE-INVENTION 
ASSIGNMENT AGREEMENTS, AND SOFTWARE 
RIGHTS

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I. INTRODUCTION

Until the last century or so, the inventive works of an employee were automatically considered to be the property of the employer in many countries.¹ More recently, legislators and employers have come to understand the value of intellectual property. Legislators have promulgated laws that protect employees from being improperly compensated—or not compensated at all—by their employers for their intellectual works, and employers have responded by drafting contracts that try to protect their interests in the intellectual property of their employees. This Comment aims to survey the history and current status of the laws governing employee inventions in several countries around the world. It will illustrate how the growing awareness of intellectual property as “the new global currency”² is resulting in laws that increasingly protect inventors from being exploited by their employers. It will also show how the growth of intellectual property value of software should be addressed by considering the assignment of software rights in labor contracts and laws governing them.


¹ See, e.g., Edith Palmer, Austria, in 17 LAW LIBRARY PUBLICATIONS, EMPLOYEE INVENTION LAWS IN VARIOUS EUROPEAN COUNTRIES 4 n.2 (Library of Cong. 1986) (“The 1897 Patent Law of Austria already emphasized the rights of the inventor at a time when other European countries still favored the applicant.”).

² See generally, Colleen Spring Zimmerman, Overview: Intellectual Property—The New Global Currency, in 1 INTELLECTUAL PROPERTY IN THE GLOBAL MARKETPLACE O.1, O.1 (Melvin Simenksy, Lanning G. Bryer & Neil J. Wilkof eds., 2d ed. 1999); but cf. PETER DRAHOS, A PHILOSOPHY OF INTELLECTUAL PROPERTY 96 (postulating that Karl Marx likely did not consider products of the mind to be property, surmising that “[o]wnership for him was ownership of the tangible”).
II. PRE-INVENTION ASSIGNMENT AGREEMENTS

A pre-invention assignment agreement is an agreement in an employment contract whereby the employee agrees to assign to the employer rights to the intellectual property that the employee produces during the period of employment. Due to the growing awareness of the value of all types of intellectual property, the nature of these agreements have increasingly addressed intellectual property issues other than patents, such as copyrights and software. As a result, sometimes authors may prefer to use other, more encompassing, terminology, such as "preassignment agreement" or "pre-assignment intellectual property agreement.

Originally, many countries treated the inventions created by employees during their employment as the property of the employer. Austria was one of the first countries to protect the rights of employees in their inventions. The Austrian Patentgesetz (Patent Act) of 1897 stated the following:

Salaried employees, wage earners, and government officials shall be considered the creators of the inventions made by them in their service, unless otherwise provided by contract or civil service regulation.


4. See generally ROBERT J. SHAPIRO & KEVIN A. HASSETT, THE ECONOMIC VALUE OF INTELLECTUAL PROPERTY 3-6 (2005) (tying the protection of intellectual property rights with national economic growth and estimating that the intellectual property of the United States is worth roughly $5 trillion).


6. LANEY, supra note 3, at 5 (highlighting the growing importance of software in pre-invention assignment agreements in the engineering world).

7. See id. (arguing that the term "preinvention assignment agreement" does not adequately describe some of the more recent employment agreements regarding intellectual property).


10. Id.
Contractual terms or civil service rules aimed at depriving an employee or civil servant of an industrial enterprise of the appropriate profit for his invention made in his service shall have no legal effect.\(^{11}\)

This noble ideal was borne from the desire to protect the personality rights\(^{12}\) of the inventor.\(^{13}\) The concepts expressed in this Act were further entrenched with the passing of the Austrian patent law reform of 1925, which spawned the laws addressing employee inventions that are still in use today.\(^{14}\) These laws were the first of their kind in the world, and became an inspiration for the reform of employment contract laws in other countries.\(^{15}\)

III. PRE-INVENTION ASSIGNMENT AGREEMENTS IN THE UNITED STATES

Within the United States, how employee inventions are treated is largely covered by the common law.\(^{16}\) Courts look at various factors when determining who owns the rights to the invention, including: the function of the employee within the employer’s company, the subject matter covered by the invention, and the amount of the employer’s resources used in the development of the invention.\(^{17}\)

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\(^{12}\) Note, however, that in the United States, the idea of protecting one’s “personality rights” usually only entails the protection of one’s name, voice, or likeness from unauthorized use. See Robert Buchan & Gill Grassie, Personality Rights: A Brand New Species?, 49 J. L. SOC’Y SCOT. 48, 48 (May 2004) available at http://www.journalonline.co.uk/pdf/2004-05.pdf (“In the USA it is accepted that a person’s name, voice and likeness are protected at law.”). Some European jurisdictions consider a protected work to also be an extension of the author’s personality. See, e.g., CODE DE LA PROPRIETE INTELLECTUELLE [C. P.I.] [Intellectual Property Code] art. L121-1 (Fr.), translation available at http://195.83.177.9/upl/pdf/code_35.pdf (decreeing that an author enjoys the right of having his work respected, and that this right is attached to the author’s person, and is perpetual, inalienable, and imprescriptible); see also Propriété Intellectuelle—Droit d’Auteur, http://www.sg.cnrs.fr/daj/propriete/droits/droits.htm (last visited Jan. 18, 2008) (explaining the concepts of moral rights as found in droit d’auteur (French copyright law) and presenting the example of droit au respect de l’intégrité de l’œuvre (right to the respect of the work’s integrity), in which the author may prevent the work from being modified).

\(^{13}\) Palmer, supra note 1, at 4.


\(^{15}\) Palmer, supra note 1, at 5.


\(^{17}\) Id.
The federal government has written a set of regulations dealing with inventions of government employees, which was first addressed by President Truman in 1950 with his Executive Order 10,096 entitled "Providing for a Uniform Patent Policy for the Government With Respect to Inventions Made by Government Employees and for the Administration of Such Policy." The current policy, which remains largely unchanged since 1950, states the following:

The Government shall obtain... the entire right, title and interest in and to any invention made by any Government employee:

(i) During working hours, or
(ii) With a contribution by the Government of facilities, equipment, materials, funds or information, or of time or services of other Government employees on official duty, or
(iii) Which bears a direct relation to or is made in consequence of the official duties of the inventor.

However, even though inventions of government employees are addressed in the Code of Federal Regulations, and patent law itself is a federal matter, the details of pre-invention assignment agreements are still a matter largely left to the states. As of 2001, there have been eight states that have passed legislation on the subject of limiting pre-invention assignment agreements: California, Delaware, Illinois, Kansas, Minnesota, North Carolina, Utah, and Washington. These laws typically limit pre-
invention assignment agreements from “apply[ing] to an invention developed by [an] employee on his or her own time and without using employer resources [unless it either] relates to the employer’s business, or anticipated research or development of the employer; or results from any work performed by the employee for the employer.”

IV. EMPLOYEE INVENTIONS IN EUROPEAN COUNTRIES

Over time, the methods used to address employee inventions in Europe can be roughly differentiated into three categories: (1) countries that generally address the issue in their labor laws and give employee inventors the right to be compensated for “inventions appropriated by [their] employer[s]”; (2) countries that usually address the issue in their patent laws, allow clauses in employment contracts that assign the right to future employee inventions, and give inventors the right to collect additional compensation for their inventions if there are additional equitable considerations; and (3) countries in which the state is the sole employer, and compensation to employees for inventions often takes the form of state awards, rights to travel abroad, invitations to social events, diplomas, paid vacations, and other forms of preferential treatment.

A. Austria

Under the Patentgesetz (Patent Act) of 1970, employees have the right to own the patents for the inventions that they develop during their employment. A pre-invention assignment agreement between the employer and either an individual employee or a collection of employees may assign the inventions to the employer, or give the employer the right to use the inventions. However, all inventions that are not connected with

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25. “Equitable considerations” in this context would include cases such as when an employee’s invention turns out to be much more profitable than expected when the compensation clause in the employment contract was written. Id. at 2.
27. Sipkov, supra note 24, at 2-3.
29. Strasser, supra note 28, at Austria-122.
the inventor's employment cannot be so assigned; they will always belong to the employee. The Patentgesetz considers inventions to be connected with the inventor's employment if either the employee's official duties led to the invention, the employee's official duties inspired the invention, or the invention made a significant use of the employer's knowledge, skill, or resources.

When an employee invents something that falls under any pre-invention assignment agreements that may be in effect, the employee must notify the employer immediately, after which the employer has four months to determine whether or not to claim the invention, and if so, to what degree. If the employer claims the invention, the employee is then entitled to an adequate royalty in addition to the predetermined salary unless the employee was specifically hired to produce inventions, and the inventor's salary is correspondingly higher than normal to reflect this. The Patentgesetz also currently states the amount of royalties that may be collected, borrowing much of the details from the laws of Germany, which took its original inspiration to regulate employee inventions from Austria.

B. France

Even though France was one of the original pioneers of international intellectual property rights, employee inventions were not addressed in

30. Id.
31. Id.
32. Palmer, supra note 1, at 5.
33. Id. at 5-6; Strasser, supra note 28, at Austria-122.
34. Strasser, supra note 28, at Austria-122.
35. Id.
36. Palmer, supra note 1, at 7.
French law until 1978, more than eighty years after Austria first addressed the issue in its Patentgesetz of 1897. Although the issue of employee inventions had been a subject discussed in the legislature for decades prior, the French Patent Acts of 1844 and 1968 made no mention of the topic.

Article L611-7 of the Code de la Propriété Intellectuelle [Code of Intellectual Property] addresses the subject of employee inventions. It provides a right for employees to be reimbursed for certain types of inventions "if more favourable terms are not provided for the employee by collective agreement or individual contract of employment." The article divides inventions by employees into three categories: (1) "inventions under mission," where the employee has been hired to invent, or the invention arose from research that the employee has been assigned to conduct; (2) "inventions beyond mission assignable to the employer," where the employee’s invention was beyond the scope of the employee’s assigned duties, but the invention either arose during the performance of assigned duties, was made "in the field of activity of the company," or utilized technologies of the company or data retrieved by the company; and (3) "free inventions," where the invention falls in neither of the two other categories.

Inventions under mission are considered to belong to the employer. The inventor shall be entitled to "additional remuneration," but the method of calculating the size of such an award is not mentioned in the law, which only states that the "additional remuneration shall be determined by the collective agreements, company agreements and

40. See supra note 11 and accompanying text.
41. Michel Despax & Jacques Rojot, France, in 6 INTERNATIONAL ENCYCLOPAEDIA FOR LABOUR LAW AND INDUSTRIAL RELATIONS France-1, France-145 (Roger Blanpain ed., Kluwer Law & Taxation Publishers 1992) ("Periodically, since 1924, proposals for acts have been prepared (October 1947; April and June 1951; November 1955; December 1957; January 1958; March 1963; and finally in a 1967 vote of a new draft). All have failed to become law.").
42. Loi sur les Brevets d'Invention [LBI] of July 5, 1844, Sirey, Lois Annotées, 2e Série 1831-1848, p. 810.
44. BOUVET, supra note 39.
45. C. P.i. art. L611-7 (Fr.); BOUVET, supra note 39, at 2-4 n.1.
46. Despax & Rojot, supra note 41, at France-145.
47. C. P.i. art. L611-7 (Fr.).
48. Id. See also BOUVET, supra note 39, at 4-5.
49. C. P.i. art. L611-7 (Fr.).
50. Id.
51. BOUVET, supra note 39, at 4.
individual employment contracts." Inventions beyond mission assignable to the employer, on the other hand, belong to the employee. However, the employer has the right to have the ownership of the patent, or at least a subset of the associated rights, assigned to it for a limited amount of time. If the employer chooses to do so, the employer must pay the employee a "fair price." If the parties cannot agree on such a price, the Commission de conciliation (Joint Conciliation Board) or the Tribunal de grande instance (First Instance Court) will determine its value, taking into account "both the initial contributions of either of them and the industrial and commercial utility of the invention." Free inventions belong to the inventor, and the employer has no privileged rights as it does when the invention was an invention beyond mission but assignable to the employer. Although the employer may still try to obtain a license for the employee's technology, it will have to do so through negotiations with the employee. The employee is free to refuse to grant a license to the employer, and may grant licenses to other parties as well.

Over time, French intellectual property law has given more rights to employees. Originally, the Patent Act of 1978 only stated that the employee may receive additional remuneration if the employee's invention was an invention under mission, but the Patent Act of 1990 amended the law so that the employee shall receive additional remuneration for the intellectual work.

Article L611-7, however, does not address how intellectual property rights should be assigned when the intellectual work in question is not patentable under French law. Specifically, the issue of the assignment of software rights is not addressed, since the patentability of software in Europe is questionable.

C. The Union of Soviet Socialist Republics (USSR)

Although the Soviet Union no longer exists, a study of the legal system it had in place to address employee inventions will be informative.

52. C. P.I. art. L611-7 (Fr.).
53. Id.
54. Id.; BOUVET, supra note 39, at 5.
55. C. P.I. art. L611-7 (Fr.).
56. Id.; BOUVET, supra note 39, at 5.
57. BOUVET, supra note 39, at 5.
58. Id.
59. BOUVET, supra note 39, at 6.
60. Despax & Rojot, supra note 41, at France-145.
61. Id.; see also infra Part VI (addressing the patentability of software in Europe).
62. The USSR is also commonly known as the Soviet Union.
Article 47 of the Soviet Constitution of 1977\textsuperscript{63} states that citizens of the Soviet Union will enjoy freedom with respect to scientific, technical, and artistic works.\textsuperscript{64} However, the practical realities of this article may be harsher than its ideals may purport.\textsuperscript{65} The creator of Tetris,\textsuperscript{66} Alexey Pajitnov, is a well-known example of a Russian inventor who was not able to earn any significant royalties during the Soviet era.\textsuperscript{67} Although Pajitnov first developed the game in 1985 while he was working for the Dorodnicyn Computing Centre of the Academy of Sciences of the USSR,\textsuperscript{68} it was not until 1996, when the original license to Tetris expired,\textsuperscript{69} that Pajitnov was able to collect a fair share of his royalties.\textsuperscript{70}

In any case, from a theoretically legal standpoint, it appears that inventors had the choice of “either transfer[ring] the exclusive right to an invention to the State or retain[ing] the exclusive right to themselves.”\textsuperscript{71} If the inventors elected to obtain a patent, they paid a fee of 110 rubles\textsuperscript{72} for

\begin{itemize}
\item 63. Konstitutsiia SSSR (1977) [Konst. SSSR] [USSR Constitution] art. 47.
\item 64. Palmer, supra note 1, at 95; see also Konstitutsiia SSSR (1977) [Konst. SSSR] [USSR Constitution].
\item 65. See, e.g., Palmer, supra note 1, at 95 (making the tongue-in-cheek comment that Article 47 “thus in theory requir[es] the State to protect the rights of authors of inventions.” (emphasis added)).
\item 66. Tetris is a popular puzzle game that is “typically listed as one of the top 5 video games of all time . . . as much for its influence as for its gameplay.” Tetris—Non-stop Puzzle Action, History, Introduction, http://www.tetris.com (last visited Jan. 29, 2007).
\item 69. Cf. e.g., The Tetris Saga, http://www.atarihq.com/tsr/special/tetrisist.html (last visited Jan. 29, 2007) (detailing the licensing confusion surrounding the game and the eventual court fight over the license).
\item 71. Palmer, supra note 1, at 96.
\end{itemize}
each application they filed.\textsuperscript{73} There appears to have been no way for employees to reach some form of pre-invention assignment agreement,\textsuperscript{74} but if they never existed, this would at least conform with the theoretical right for the inventor to choose to either patent their invention or transfer the rights of the invention to the State “at their own discretion.”\textsuperscript{75}

V. EMPLOYEE INVENTIONS IN COUNTRIES OUTSIDE OF EUROPE

A. The People’s Republic of China (PRC)\textsuperscript{76}

From a legal standpoint, employees are afforded protection for their inventions by the 1984 Patent Law of the PRC.\textsuperscript{77} The Patent Law uses the term “service invention-creation,” which it defines as follows:

A service invention-creation is any invention-creation [discovered by an employee]

(i) in the course of performing his own duty;
(ii) in execution of any task, other than his own duty, which was entrusted to him by the entity to which he belongs;\textsuperscript{78}

or

(iii) within one year from his resignation, retirement or change of work, where the invention-creation relates to his

\textsuperscript{73} Palmer, supra note 1, at 98.

\textsuperscript{74} The relevant English literature seems to never address Soviet pre-invention assignment agreements, but perhaps this is because much of the relevant English literature also seems to address the issue of Soviet employee inventions as if it was a futile theoretical exercise. Cf., e.g., Palmer, supra note 1, at 96 (failing to address Soviet pre-invention assignment agreements); Andrei A. Baev, Recent Changes in Russian Intellectual Property Law and Their Effect Upon the Protection of Intellectual Property Rights in Russia, 19 Suffolk Transnat’l L. Rev. 361, 368 (1996) (explaining that “patents were not available in the . . . case of employee inventions” and neglecting to even address the issue of pre-invention assignment agreements).

\textsuperscript{75} Palmer, supra note 1, at 96.

\textsuperscript{76} The PRC is not to be confused with the Republic of China (ROC), otherwise known as Taiwan or Formosa. Taipei Economic and Cultural Office in New York, History, http://www.taiwanembassy.org/US/NYC/ct.asp?xItem=456&CultureNode=2952&mp=62 (last visited Jan. 23, 2008).


\textsuperscript{78} The author of this specific source appears to often refer to employers as entities, as in, “the entity to which [the employee] belongs.” Chen, supra note 77, at China (P.R.)-86.
own duty or the other task entrusted to him by the entity to which he previously belonged.  

If an invention is a service invention-creation that is “made by a person in execution of the tasks of the entity to which he belongs, or made by him mainly by using the material and technical means of the entity[,]” then the entity, namely the employer, will have the right to apply for a patent.  

The inventor should also receive a reasonable royalty for the work. On the other hand, for any “non-service invention creation,” inventors are free to apply for a patent themselves. 

Pre-invention assignment agreements appear to be legal in China, if only because there appears to be no law on the issue, and prominent intellectual property law firms recommend their clients to enter into pre-invention assignment agreements with any Chinese employees.

B. Japan

The Old Patent Law of Japan held that the employer had the right to apply for patents on employee inventions. However, this principle was changed with the Revised Patent Law of 1921, in which it was established that under the “inventor-principle,” employees have the right to apply for patents on their own inventions. In addition, this right of the employee can be superseded “only by way of contract or other formal regu[1]ation,” implying that pre-invention assignment agreements can be considered legal.

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79. Id. at China (P.R.)-86.
80. Id. at China (P.R.)-86-87.
81. Id. at China (P.R.)-87.
82. Id.
83. The reason for this, however, may be similar to the lack of material addressing pre-invention assignment agreements in the Soviet Union.
88. Tezuka, supra note 86 at 347.
89. Id.
Currently, the applicable law governing inventions by employees can be found in Article 35 of the Patent Act of 1959. This act defines an "employee invention" as "an invention which, by the nature of the said invention, falls within the scope of the business of the said employer ... and was achieved by an act(s) categorized as a present or past duty of the said employee ... performed for the employer." When an employee has obtained a patent on such an employee invention, the employer has a non-exclusive license to exercise the rights of that patent. However, if the invention in question is not an employee invention, then any pre-invention assignment agreement that gives the employer any right to obtain a patent for the invention, to exercise the rights of such a patent, or to hold an exclusive license for the invention will be considered null and void.

The Patent Act also decrees that inventors shall receive reasonable compensation for their intellectual labors should their employers wish to obtain, to exercise the rights of, or to hold an exclusive license for, a patent for an employee invention. Although the Act sets up certain measures to attempt to prevent employers from taking advantage of their inventive employees, in practice, many Japanese corporations still compensate their researchers poorly. For example, the inventor of the first practical blue LED, Shuji Nakamura, was compensated ¥20,000 by his employer.

91. Id. at art. 35(1).
95. Such measures include requiring that negotiations between an employer and an employee result in reasonable compensation values, and that if the negotiations fail to do so, that the employee's compensation will be determined "by taking into consideration the amount of profit to be received by the employer ... from the invention, the employer[s]' burden, contribution, and treatment of the employee, ... and any other circumstances relating to the invention." Tokkyohō [Patent Act], Law No. 121 of 1959, art. 35(5).
96. Dennis Normile, Blue LED Inventor Sues Former Company, SCIENCE, Aug. 31, 2001, at 1575, available at http://www.sciencemag.org/cgi/reprint/293/5535/1575a.pdf ("Nakamura [the inventor of the blue LED] has repeatedly criticized the low level of recognition and poor salaries of researchers in Japan."). Some of the major Japanese companies are recognizing this problem and attempting to correct it. For example, in 2001, Sony Corporation began to award to their employees bonuses of up to $16,000 for key patents. Id.
Nichia Corporation, for his patent and all associated rights, even though the patent would result in an increase of roughly ¥120 billion in profits for Nichia.

Legislation on the issue of employee inventions has traditionally been classified under intellectual property laws, but arguments have been raised regarding whether or not it should be classified under labor laws.

C. Nigeria

Employee inventions are addressed in the Patents and Designs Act of 1970, which essentially restates the common law. This law declares that inventions “made by an employee in the course of the employee’s employment or in the execution of a contract for the performance of a specific work” belong to the employer or the party that commissioned the

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98. Shuji Nakamura has been awarded Finland’s Millennium Technology Prize of 2006 for his invention. The Millenium Technology Prize, Millennium Technology Prize Awarded to Inventor of New Source of Light, http://www.millenniumprize.fi/index.php?id=730 (last visited Mar. 25, 2007). The Millennium Technology Prize is awarded every two years to “celebrate innovations that have a favourable impact on quality of life.” The Millennium Technology Prize, http://www.millenniumprize.fi/index.php?id=14 (last visited Mar. 25, 2007). With a purse of €1,000,000, it is “the world’s largest technology prize.”


100. Although, barring any contrary pre-invention assignment agreements, an employee is allowed to own the patents for any employee inventions patented during the course of employment, a Japanese court awarded the ownership of the patent to Nichia because Nakamura “filed no objection for over [ten] years after the patent application.” Nakamura Loses, supra note 99.

101. Record Settlement, supra note 99 (explaining that a calculation used by the Tokyo District Court found that Nichia would have gained ¥120.8 billion in profits by the time the patent in question expired in 2010).

102. In August of 2001, Nakamura sued Nichia to obtain a more reasonable award for his invention, in light of the large amount of profit that it has generated for Nichia. Normile, supra note 96. The two parties eventually reached a settlement, with Nichia paying Nakamura about ¥844 million. Record Settlement, supra note 99.

103. Tezuka, supra note 86, at 348.


work. If the invention was made in the course of the employee’s employment, then the employee is not entitled to any additional remuneration. However, if the employment does not require the usage of any form of “inventive activity,” then the employee is entitled to some form of award, taking into account the employee’s salary and the importance of the invention. In general, the laws addressing employee inventions are seen as being “in a less than satisfactory state” because the laws are “heavily weighted against the employee.”

VI. PATENTABILITY OF SOFTWARE

Due to the differing natures of patents and copyrights, a software patent is quite different from a software copyright. A patent is a set of rights granted by the state that allows an inventor to prevent other parties from making, using, or selling products that implement the claimed invention for a set period of time. Although a copyright also grants the artist the right to prevent others from reproducing an artistic work, in the software context a copyright will only protect one implementation of an algorithm, while a patent will allow the inventor to have exclusive rights over all implementations of an innovative algorithm because it protects the “underlying ideas” of an invention rather than simply the “expression” of one. However, neither provides strictly stronger protection than the other. For example, copyrights usually have a protection length that extends beyond the artist’s lifetime. The protections of copyrights and

106. Id.
107. Id.
108. Id.
109. Id.
114. Stanford University Libraries, supra note 112.
patents are meant to cover differing areas of intellectual property, and which protection may be “better” for software is debatable.

The Berne Convention for the Protection of Literary and Artistic Works, an international copyright agreement that was first adopted in 1886, provided one of the first international standardizations of copyright law. The convention, among other things, required that copyright be automatic, i.e., that there be no formal registration process in order for an artistic work to be protected by copyright. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), one of the treaties administered by the World Trade Organization (WTO), requires participant countries to implement a minimum set of intellectual property protections, including most of what was required by the Berne Convention. Because TRIPs requires all of the 151 member states of the WTO to adhere to its requirements, it is one of the most important international intellectual property agreements in force today.

One controversial point of TRIPs is the patentability of software, which is addressed in Article 27 of the agreement.

[P]atents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. . . . [P]atents shall be available and patent rights


116. See, John E. Wehrli, Patent or Copyright: Which is the Best Way to Protect a Computer Program?, http://www.lbl.gov/Workplace/patent/ch19.html (last visited Nov. 13, 2006) (debating the pros and cons of obtaining a copyright or a patent on one’s software).


119. Berne Convention, supra note 117.

120. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, 33 I.L.M. 81 [hereinafter TRIPs].


123. WTO: TRIPS, supra note 121 (“The TRIPS Agreement . . . is to date the most comprehensive multilateral agreement on intellectual property.”).
enjoyable without discrimination as to the place of invention, the
field of technology and whether products are imported or locally
produced.124

This Article is controversial because traditionally many European countries
have not allowed software to be patented.125 However, patents are awarded
to all inventions that "have technical character . . . solve a technical
problem . . . are new . . . [and] involve an inventive technical contribution
to the prior art."126 Indeed, some patents granted by the European Patent
Office (EPO)127 may arguably be patents on software algorithms.128 Even
though there has been much debate over the possible changing status of
software patents in Europe,129 recent developments,130 such as the rejection
by the European Parliament of a proposed directive to allow "computer-
implemented inventions" (CII)131 to be patented,132 appear to show that they
will likely not be implemented anytime soon.133

124. TRIPs, supra note 120, at Art. 27, available at
http://www.wto.org/english/tratop_e/trips_e/t_agm3_e.htm#5 (last visited Feb. 18, 2008).
125. See, e.g., GNU Project, Saving Europe from Software Patents,
that barring action by European citizens, many countries in Europe will begin implementing
software patents).
126. European Patent Office, Computer-Implemented Inventions (CII),
127. The European Patent Office is not an office that grants patents that hold for all of
Europe; rather, the EPO allows inventors to apply for a group of individual patents, where
each patent is applicable only in one nation. See Ius Mentis, The European Patent
is currently no patent office for all of Europe, but the proposed European Patent
Litigation Agreement (EPLA) may eventually create, among other things, a "common
visited Feb. 18, 2008) (internal quotations omitted); see also, Kevin J. O'Brien, Years of
Deadlock on EU Patent Bring Some New Thinking, INT'L HERALD TRIBUNE, Nov. 8, 2006,
128. See, Edward Griffith-Jones & Tom Chance, Software Patents in the EU: A
Perspective on the European Computer Implemented Inventions Directive, O'REILLY
examples of European patents that cover methods of selling items over the Internet).
129. Donald Ying, The State of Software Patents in the European Union 13-22 (Dec. 3,
130. Andreas Gross, Software Patents—Boon or Bane for Europe?, 14 INT'L J.L. &
131. The term "computer-implemented inventions" is a term used by the European Patent Office, defined as "an invention that works by using a computer, a computer network
or other programmable apparatus. To qualify, the invention also needs to have one or more
features which are realised wholly or partly by means of a computer program." European
Patent Office, supra note 126.
Although the United States, like Japan and Australia, currently does not place limits on software patents in contrast to most of Europe, the United States Patent and Trademark Office (USPTO) rejected software patents in the 1950s and early 1960s. However, in State Street Bank & Trust Co. v. Signature Financial Group, Inc., the Court of Appeals for the Federal Circuit ruled that inventions that are "practical application[s] of . . . mathematical algorithm[s] that produce[] 'a useful, concrete and tangible result,'" may be patented in the United States. Nowadays, the fact that software is patentable in the United States is clear.

VII. SOFTWARE IN PRE-INVENTION ASSIGNMENT AGREEMENTS

Many of the sources covering international labor law referenced by this Comment appear to not have addressed the question of software in pre-invention assignment agreements. It is unclear whether this is the case because the laws on the issue of pre-invention assignment agreements in many of the countries covered do not actually address this question, or because the sources only glossed over the relevant law and did not address the question of software in these agreements because it was unnecessary detail.


135. ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 1007 (3d ed. 2003); see also Gottschalk v. Benson, 409 U.S. 63 (1972) (holding that an invention could not be patented because it involved a mathematical formula).

136. 149 F.3d 1368 (Fed. Cir. 1998).

137. State St. Bank & Trust Co., 149 F.3d 1368, 1373 (quoting In re Alappat, 33 F.3d 1526, 1544 (Fed. Cir. 1994)).

This may pose a problem in countries where the validity of software patents is in question. For example, since it is unclear whether or not one can obtain software patents in the European Union, or even whether the status of software patents will change in the future, an employee working in a country of the European Union who writes a software program that might have been patentable in countries such as the United States, but not in the employee's country, could be confused as to whether all intellectual property rights related to the software belong to the employer. Of course, this is true only if the pre-invention assignment agreement does not explicitly address software.

VIII. CONCLUSION

Although originally the right to patent employee inventions belonged to the employer by default, states began to develop laws that would allow employees to retain some intellectual property rights of their inventions. This gradual shift in favor of the employee has reached the point where employers routinely engage in pre-invention assignment agreements in order to retain the ability to use their employees' inventions. Furthermore, states that have not given employees as many rights regarding their inventions are described as having a set of laws that address employee inventions in a "less than satisfactory" manner.

Because of the ever-increasing importance of intellectual property, an increasing number of countries are addressing pre-invention assignments through legislation. If states were to directly address the rights of software written by employees during their term of employment, i.e., employee software, it may help clarify pre-invention assignment agreements that would have been ambiguous otherwise. Alternatively, the possible ambiguity could be resolved if pre-invention assignment agreements covered the assignment of rights relevant to employee software. Because the advent of laws addressing employee inventions helped trigger pre-invention assignment agreements, I believe states should address the issue of employee software first, so that employers and employees become more aware of the subject. With this added awareness, the laws and practices of pre-invention assignment agreements with respect

139. See, e.g., Ying, supra note 129.
140. See, e.g., ZHANG, supra note 84.
141. Agomo, supra note 105.
142. Cf. Pisegna-Cook, supra note 16, at 186 ("The increasing importance of intellectual property to corporations, because of the magnitude of financial impact coupled with employer-employee relations, strongly suggests that states should address the preinvention assignment issue by legislative enactment of statutes.").
to employee software can eventually develop into a clearer and more mutually beneficial state.