

# Recommendations to Patent Protection of Computer Program-Related Invention in China

Lei Dai<sup>1</sup>, Dong Guo<sup>2</sup>, Hao Qin<sup>2</sup>

<sup>1</sup>Patent Affairs Administration Department, State Intellectual Property Office of the P.R.C., Beijing, China

<sup>2</sup>Nanjing University of Information Science & Technology, Nanjing, China

Email: mlbsabc@sina.com

**How to cite this paper:** Dai, L., Guo, D. and Qin, H. (2017) Recommendations to Patent Protection of Computer Program-Related Invention in China. *Open Journal of Social Sciences*, 5, 146-149.  
<https://doi.org/10.4236/jss.2017.56013>

**Received:** May 9, 2017

**Accepted:** June 17, 2017

**Published:** June 20, 2017

Copyright © 2017 by authors and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

---

## Abstract

The recommendations to patent protection of computer program-related invention in China are analyzed. They mainly focus on the following points: There are some contradictions in guideline for examination and thus the protection scope of computer program-related invention shall be enlarged. Meanwhile, in consideration of the balance between inventor and public, the reasons for shortening the term of protection for computer program-related invention were given. Finally, emendation of publication rule of computer program-related inventions was suggested.

## Keywords

Recommendation, Patent Protection, Computer Program, China, Scope, Term, Rule

---

## 1. Introduction

At present, the computer program is widely used in various fields, involving more and more computer program inventions; the global demand for patent protection of computer programs is becoming stronger. And many developed countries or regions are beginning to favor the patent protection of computer programs. In America, if a computer program has its practicality in a special technical field, then it will be offered patent protection and the USPTO will no longer stress the need for computer programs to integrate with hardware [1]. And in Europe, a computer program which has the potential to bring about a further technical effect that goes beyond the normal physical interactions between the computer and the program when running on a computer may be considered as an invention [2]. In addition, in Japan, the JPO gives some examples of statutory subject matter of the recognition of patentability of computer pro-

gram inventions [3]. Some developed countries also provide patent protection for computer-readable storage media and business method software characterized by computer programs.

China's patent protection of computer programs has also taken a positive attitude, but because of China's started-late patent system, and the rapid development of software industry, the existing laws and regulations increasingly highlights its unsound, imperfect, not applicable. Therefore, China can not completely copy the software patent protection measures of United States and Japan and other developed countries, and must proceed from the reality of China's software industry development to develop and improve the corresponding protection mechanism.

## 2. To Enlarge the Protection Scope in Computer Program-Related Invention

As mentioned above, according to guidelines for examination of SIPO, an invention which is only involved with computer programs per se or computer programs that recorded in mediums will not constitute the subject matter that patent protection may be sought for [4], *i.e.*, no patent right shall be granted for it. However, at the same time, the guidelines for examination provide that a solution of an invention application involved with computer programs is related to execute computer programs for solving technical problems and reflects the technical means which in accordance with laws of nature by computers that control and process external or internal objects by running programs, and thus obtaining the technical effects which in accordance with laws of nature, is a technical solution and is the patent subject matter [4]. Moreover, as we all know, when the computer runs computer programs for solving technical problems, the hardware of computer's do not change, the computer programs play a key role in solving the problems, put another way, for the invention relating to computer programs, in general, the core of the invention is computer program. Because the guidelines for examination provide the patent protection to the computer program-related invention and recognize that such invention has technical characteristic, in practice, this means that the guidelines for examination recognize the technical characteristic of computer program. However, in guidelines, there is no patent protection to the computer program per se, so we can see that there are contradictions in guideline for examination. Therefore, the guidelines should be amended and offer patent protection to computer program per se [5] [6] [7] [8]. For example, delete the stipulation "If the claim relates only to a computer program per se, then it belongs to the range of the rules and methods of mental activity and does not constitute a subject matter of patent protection" from current the guidelines for examination.

Similarly, to the computer-readable mediums recording the computer programs per se, when the mediums was ran in computer, the computer programs still play a key role for solving the technical problems, then, to the computer-readable mediums, the core of invention is still the computer programs. Now

that the combination of computer with computer programs can constitute patentable subject matter, the computer-readable mediums also should be the patentable subject matter [9]. For example, delete the stipulation “If the claim relates only to a computer program per se which recorded in mediums (such as discs, tapes, DVD, PROM, ROM, VCD or other computer-readable mediums) then it belongs to the range of the rules and methods of mental activity and does not constitute a subject matter of patent protection” from current the guidelines for examination.

### **3. To Shorten the Term of Protection for Computer Program-Related Invention**

From the perspective of space, as mentioned above, the protections scope in computer program-related invention should be enlarged, so what about from time’s perspective? At present, in China, the term of protection for computer program-related invention is 20 years, I consider the term of protection is too long, which do not comply with the rule of development of computer software, it should be shortened. Now, with the rapid development of the Internet, computer software updates faster and faster. Except for the operating system, such as the “Windows” of the Microsoft Company, “the life of the common software is about 5 years, even some software’s life less than two years. In this situation, to the term of protection of 20 years, which not only excessive limit the public to get and use the information of invention and prevent the development of software industry, also bring the undeserved monopoly profits to inventor”, at last, it leads to the imbalance between inventor and public. Therefore, according to the characteristics of software industry, the patent law should adjust the term of protection for computer program-related invention [8] [10] [11]. And at present, most people think of the term of protection for software patents should be 5 years, which is consistent with the technical life of software. Therefore, it is recommended that the computer program patent protection period is defined as 5 years when the patent law is modified.

### **4. To Change the Publication Rule of Computer Program-Related Inventions**

It is equally important to change the publication rule while the scope and term of protection are guaranteed. In the Chinese patent law, the application shall be published within 18 months from the date of submission [4]. On the basis of the standards of novelty, inventive step and practical applicability, to the computer program-related invention, the inventor must describe in detail in application the design ideas of computer program, flow diagram, the function of software and so on. Therefore, once the invention was published, someone else can easily imitate or copy the invention, if the invention does not obtain the patent right, the inventor cannot protect the invention through other ways due to publication, which cannot effectively protect the interests of inventor. However, the rule of “publication after granting patent right” can overcome this shortcoming [2]

[8] [11]. In this rule, if no patent right was granted to the computer program-related invention, the invention will not be published, then the inventor can protect the invention by other ways, so the publication rule in Chinese patent law should be changed to the rule of “publication after granting patent right” for protecting the interests of inventor. Therefore, for the patent of computer program-related inventions, it is recommended that modify the “publication before authorization” to the rule of “publication after granting patent right” for protecting the interests of inventor.

## 5. Conclusions

The recommendations to patent protection of computer program-related invention are analyzed in this paper on the basis of the state of China. They mainly focus on the following points:

- 1) The protection scope of computer program-related invention shall be enlarged because of the contradictions in guideline for examination.
- 2) In order to ensure the balance between inventor and public, the term of protection for computer program-related invention which does not comply with the rule of development of computer software should be shortened.
- 3) Publication rule in Chinese patent law should be changed to the rule of “publication after granting patent right” for protecting the interests of inventor.

## References

- [1] Menell, P.S. (1986) Tailoring Legal Protection for Computer Software, *Stanford Law Review*, **39**, 1329-1372. <https://doi.org/10.2307/1228849>
- [2] Wang, Y. (2006) Research of Problem of the Patent Protection on the Computer Software. Thesis (ML), Fudan University, Shanghai.
- [3] Japanese Patent Office (2000) Draft Revised Examination Guidelines for Computer Software-Related Inventions. Japanese Patent Office, Tokyo.
- [4] SIPO (2009) Guidelines for Examination, Part II, Chapter 9 and Part V, Chapter 8. SIPO, Beijing.
- [5] Lin, S. (2005) Study on the Patentability of Computer Software. Thesis (ML), Southwest University of Political, Science & Law, Chongqing.
- [6] Zhou, Q. (2005) Study of the Patent Protection on the Computer Software. Thesis (ML), Sichuan University, Chengdu.
- [7] Nie, S.J. (2006) Study of the Patent Protection on the Computer Software, Thesis (ML), University of International Business and Economics, Beijing.
- [8] Xiao, X. (2007) Study on Patent Protection on Computer Software under the Trip, Thesis (ML), Dalian Maritime University, Dalian.
- [9] Wang, Y.Z. (2005) The Theory of the Patent Protection on the Computer Software, Thesis (ML), Shandong University, Jinan.
- [10] Chen, Y. (2006) Analysis on How to Protect Computer Software by Patent, Thesis (ML), Nanchang University, Nanchang.
- [11] Zhang, W.Z. (2007) Study of the Patent Protection on the Computer Software, Thesis (ML), Southeast University, Nanjing.

**Submit or recommend next manuscript to SCIRP and we will provide best service for you:**

Accepting pre-submission inquiries through Email, Facebook, LinkedIn, Twitter, etc.

A wide selection of journals (inclusive of 9 subjects, more than 200 journals)

Providing 24-hour high-quality service

User-friendly online submission system

Fair and swift peer-review system

Efficient typesetting and proofreading procedure

Display of the result of downloads and visits, as well as the number of cited articles

Maximum dissemination of your research work

Submit your manuscript at: <http://papersubmission.scirp.org/>

Or contact [jss@scirp.org](mailto:jss@scirp.org)