

Patenting Software in China: What Do You Need to Know

There are growing software inventions today in almost every sector, and these represent future trends, especially considering the incoming time of smart home and smart robot.

The intellectual property protection of computer software has been highly debated at the national and international level. It has been well known that software, whether in source or object code, can be protected under copyright law. However, copyright protection is limited to the literal expression of software, it does not protect the ideas underlying the software, which often have considerable commercial values. Patent protection, on the other hand, provides a solution to protect the ideas. Practice varies in different jurisdiction over the extent to which software patents should be granted, if at all.

This article provides practical tips of protecting software inventions in China, as well as discussions with trends in practice and comparisons among different patent offices, the State Intellectual Property Office (SIPO), European Patent Office (EPO) and the United States Patent and Trademark Office (USPTO).

Technicality Requirement for Eligibility

Unlike in Europe, Chinese Patent Law does not expressly exclude “programs for

computers” as such ¹ from patentability. Nevertheless, Chinese Patent Law, in Article 2, requires an invention² being a technical solution to a product or a method.

To meet the required technicality, the Guidelines for Patent Examination of SIPO (the “Guidelines”) elaborate:

“Invention containing software refers to a **solution** for resolving a problem raised in the invention fully or partially based on the process of a computer program, which is executed by computer in order to control or process external or internal objects of the computer etc.” Section 2, Chapter 9, § 2.

More, the Guidelines seek a 3-prong test for the eligibility of software inventions: (i) whether the invention solves a **technical problem**? (ii) whether the invention **uses a technical mean** following the laws of nature? (iii) whether the invention achieves a **technical effect** in conformity with the laws of nature? Id.

It should be emphasized that the above 3-prong test must be met, and “technical” is the center.

¹ EPC, Article 52, paragraph 2.

² A software invention can be only protected through an invention patent, because it is considered as an improvement on a method, step, or process in essence. Before 2014 or earlier, some software inventions were erroneously granted as utility models in China, which resulted from lack of substantive examination for utility models. Now, the SIPO’s examiners of utility models are more cautious and more sensitive to features suspected as software in claims.

Similarly, EPO adopts a “technical character” examination, which is a derisively low threshold, i.e., any demonstration and degree of “technical character” passes the patent eligibility threshold. On the other hand, USPTO, rejecting the technicality, focuses on whether (i) whether the patent covers an excluded area from patenting such as an abstract idea or law of nature, (ii) if yes, whether there is an inventive concept that is an application of the abstract idea or law of nature.

Patentable Subject-Matter Examples

Regarding the threshold of patentable subject-matter, the Guidelines provides four examples to illustrate eligible software inventions.

(i) To control industrial process: e.g., A method for controlling a die forming process of rubber.

(ii) To improve internal performance of computer-related product: e.g., A method for expanding the storage capacity of movable computer device.

(iii) To measure or test: e.g., A method for measuring liquid viscosity by computer program.

(iv) To process external data: e.g., A method for removing image noise.

The examples, in fact, cover all of the business and industrial sectors. But, software inventions in industrial sectors always are accepted as eligible by default, while

business methods in business sectors may encounter strict scrutiny of the above mentioned 3-prong test.

This has been not good news for enterprises in sectors of banking, insurance for many years, and becomes barriers for a large amount of emerging companies who are focused on e-business, gaming, and logistics. Encouragingly, there has been some trends that SIPO is considering loosening the above mentioned 3-prong test to the software inventions in these sectors. The US, in contrast, seems more difficult for patenting software inventions in these sectors.

Comparisons in Claims of Patenting Software

(i) Claim categories

For pure software inventions, which means only involving software improvement, SIPO only allows two categories of claims, i.e., first category—method claim, and second category—product claim.

USPTO allows a third category, i.e., medium claim.

EPO further allows a fourth category, i.e., computer program or program product.

(ii) Method claim requirement

SIPO, EPO and USPTO require differently for methods. Among them, EPO and USPTO seem stricter than SIPO, requiring a recitation of a specific physical limitation on the method. Missing the limitation, a lack-of-eligibility objection or

lack-of-inventive step objection is likely to arise in EPO, and a lack-of-eligibility rejection or obviousness rejection is likely to arise in USPTO.

(iii) Product claim requirement

SIPO and EPO have different requirements from that in USPTO, that is, module type claim in SIPO, EPO, while processor plus memory type in USPTO. If you use processor plus memory type claim, in China, you will be likely to encounter rejection that the claim is unclear in itself or unsupported by the specification.

Further, although apparently, SIPO and EPO both allow module type claims, they have different claim interpretations. SIPO considers the modules in the claims are only virtual modules and thus module claims are interpreted as method claims, while EPO doesn't think so. EPO considers the modules in the claims are hardware or physical modules if not clearly defined in the specification. In principle, in European countries, the meaning of the modules is construed according to the descriptions in the embodiments of the specifications combined with drawings.

Recently, there are some trends in SIPO's examination practice and EPO that a product claim in processor plus memory type of US is allowed. Even though, SIPO's examiner may still be sensitive to words like "software", "program" appearing in claims.

Whatever the product claim is in module

type, or processor plus memory type, there has not been a judicial interpretation for what a product claim may cover in real infringement case both in China and European countries yet.

Comparisons in Specification of Patenting Software

In SIPO, there is no requirement about the physical environment that the software runs, or the physical product containing the software. What an application needs to provide is only:

(i) The principal flowchart of the computer program in drawings.

(ii) Each step of the computer program in specification based on the flowchart in time-based order with natural language.

(iii) A portion of program with source language or code, if necessary, but not necessary to provide whole source program.

However, EPO and USPTO have stricter requirements for the physical environment that the claimed software runs, or the physical product containing the claimed software. Especially in the US, with Supreme Court's series of cases mainly in 2013-2015, there has higher requirements for the details in the specification, for example, an algorithm of some claimed software's key step. Otherwise, the risk related to eligibility, obviousness may arise in prosecution and subsequent post-grant procedures.

In summary, software inventions will

play a more and more important role in the future. Knowing the key points of how to patent software inventions in China and the differences in practice of SIPO, EPO, and US

will be helpful for software industry to prepare the corresponding application document, handle prosecution and subsequent post-grant procedures.

The newsletter is not intended to constitute legal advice. Special legal advice should be taken before acting on any of the topics addressed here. For further information, please contact one of the attorneys listed below. General e-mail messages may be sent using ltbj@lungtin.com which also can be found at www.lungtin.com.

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