

A Study on the Status of Software Patent Protection in Japan – Comparison with Status in Korea (*)

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Software patents have been preferred by inventors, in that patents can give a very powerful and desirable protection, so that the owner of patent may prevent any unauthorized person from making, using, or selling the patented software invention. Software patents, on the other side, also have negative respects, including that it is hard to grasp the scope of patented invention. Software inventions usually claimed in the form of means-plus-function because it is hard to be expressed by conventional ways such as structures, materials of invention. This way of claiming seems to make the scope of software patent more difficult to be understood, and the scope of claim could be overbroad than it should be. To solve these problems, each country has been tried to give some standards such as the way that the scope of protection is interpreted only to the extent that the persons ordinarily skilled in the art could work based on description concretely disclosed in the specification. This interpretation rule seems to be applied in a same way in Japan and Korea, however, the specific standards would be different, and this difference could affect the status of software patent protection in each country. In this respect, this research aims to analyze the status of software patent protection specifically in Japan and Korea, especially focusing on the scope of claim for software invention, in order to have a better understanding of the scope of software patent protection.

I Introduction

Computer software is an instruction for computer to realize some functions through steps for method. There are algorithms as technical ideas, but the appearance of software is in the form of computer language with thousands of lines. And the technical ideas cannot be matched up with physical existence. Therefore, to reveal the real shape of software invention by human language seems to be hard, and we can just express software invention as methods controlling something. This feature makes harder for us to understand the boundary of software invention, and it could be ground the criticisms that software patent could be expressed by vague words and it could be the reason that makes the scope of patent protection overbroad.¹

In the other hand, patent system tries to make the invention protected under patent law clear, using claim, detailed explanation of invention, drawings, summary of invention. As the rule set under patent law, the determination of what is the invention in a certain application is based on the words in the claim, and the specification² is considered to understand the truth of invention. And the scope of patent protection, which is the right to exclude other's working in real (in this report, it will be called 'the scope of protection'), can be different from the scope of invention, because to determine the scope of protection, the balance with alleged infringer should be considered.

To demarcate the invention in the claim, the words in claim and specification should be interpreted in a proper way. The general approach to interpreting the words above could be expressed as following principles, such as "don't read in limitations", "refer the specification". They mean that the invention in the claim should be determined by factors in only claim, but to understand the invention in the claim, such as to understand the meaning of words consisting of claims, the specification can be referred.³ In other words, the width of claim should not be affected by specification. However, there is an exception that if there are expressions which may reveal the applicant's intention that restricts a word's meaning and clearly disavows the broader scope, the scope of invention in the claim would be reduced by the expressions in the specification.⁴

This approach to the determination of the invention in the claim is reflected in the Patent law of Japan and Korea. However, to realize this approach, what specific standards are applying could be different in each country, and the result from difference of specific standards can make the scope of protection in each country different. Therefore, to discuss the status and scope of software patent protection in Japan, there is a need to start from general principle for demarcating the scope of claim.

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II The status of software patent protection in Japan

1 Overall

Software can be protected under Japanese patent law in the case of where it is considered as a invention, “the highly advanced creation of technical ideas utilizing the laws of nature (Article 2, paragraph (1) of the Japanese Patent Act (Act No. 121 of 1959)),” and it can be claimed by various types of claim. It can be claimed by invention of method and invention of product as well. Software invention of product can be expressed by apparatus, computer or system claim, and it can be claimed with computer readable recording medium, it also claimed itself, computer program, data having a structure or data structure.⁵ The type of computer program claim can be supported by Article 2, paragraph (3), item (i) which states that “a product (including a computer program, etc., the same apply hereinafter).” It is explained that this statute is for making clear that software invention can be regarded as a product invention and transmission of software invention fall under the scope of working.⁶

In the other hand, despite of difference of types, the way of determination of the scope of claim, especially to find out the meaning of expressions in the claim, doesn't seem to be very different from one another, but it is important to the concept of working. Therefore, to discuss the status and scope of software patent protection in Japan, there is a need to start from general principle for demarcating the scope of claim. It can be discussed in two respects, one is for understanding the invention in the claim and deciding whether the invention could be considered better technical idea comparing prior art, the other one is for determining the scope of patent protection for the invention from the standpoint of banning the other's business.

2 Statutes and Guidelines

As for the scope of claim, Japanese Patent Act provides that how to describe the invention in the claim, and how to recognize and accept the invention described in the claim. For the description of the invention, it provides that patent claim shall state all matters necessary to specify the invention for which the applicant requests the grant of a patent, and the claim shall be supported by detailed explanation of the invention, and it shall be clear and concise (Article 36, paragraph (5), (6)). For the recognition of the invention, it provides that technical scope of a patented invention shall be determined based upon the statements in the scope of claims attached to the application. And the meaning of each term used in the scope of claims shall be interpreted in consideration of the statements in the description and drawings attached to the application (Article 70). These statutes are for all types of claim, including Means-plus-function claim

which is frequently used for software invention, because there is no statute for means-plus-function claim in Japanese Patent Act. This respect is different from U.S. Patent Act, but same as Korean Patent Act.

Meanwhile, JPO provides the guidelines concerning the scope of invention in the claim in the stage of obtaining a patent right. It says that specifying the claimed invention should be based on the description in the claim, and the meaning of words in the claim is understood by considering the specification and the common general knowledge at the filing into consideration,⁷ and it uses same expression with Japanese Patent Act Article 70, paragraph (2). It provides more specific guidelines for understanding the meaning of words in the claim, such as how to consider specification in specifying the claimed invention. If there are terms not correspond to the claim and specification, the statement of claim become the object to examine the patentability. The terms in the claim is interpreted based on the usual meaning though, where meanings of the terms described in the claims are defined or explained in the specification, the definition or explanation is considered. However, the statements of specification is doing a role of examples or additional supplement, the statements are not considered when the meaning in the claims is interpreted.⁸

3 Cases

As for the scope of claim, there have been a lot of discussions concerning whether the specification could be considered or not, under what circumstances it could be considered, the way of considering specification should be different between claimed invention and patented invention, or the way of considering specification should be different between in the process of invalidation suit of infringement suit, etc. Although this discussion is continued even now, it is explained that since sometime the single standard became the leading opinion.⁹ And this opinion would be supported by Kilby¹⁰ case judged by Japanese Supreme Court and amending the Article 104 of 3, which could prevent the infringement of patent which could be invalidated, and the recent supplement opinion in the Supreme Court Judgment (2012 (Ju) 1204), decided last year, concerning Product by Process claim though, seems to show this trend.¹¹

As for the scope of protection, Japanese Patent Act Article 70, stated above, would be basic standard. However, the scope of protection could be different from the scope of patented invention in that a balance with alleged infringer should be considered. Especially with regard to means-plus-function claim, the tendency that the scope of protection is limited to embodiment and the extent that persons who ordinarily skilled in the art can work based on the embodiment, could be found.¹²

4 Discussions for Software Patent Protection

To discuss the software invention, it is needed to consider characteristics of software that it consists of conceptual method such as algorithm, and it can include range wide-abstract step from specific-concrete step with computer language. And it has high possibility that there are a lot of functional expressions as specific information in the specification as well, the functional expressions in the specification could be more specific concrete than functional expressions in the claim though.¹³

Therefore, the scope of software invention has been interpreted under the way of interpreting means-plus-function claim. It seems to be the most important character in determining the scope of software patent protection, and it's hard to find any other special treatment or standard considering the feature of software or software invention in statutes, guidelines and cases considering this respect.

However, it should be noted that the current rule for interpreting means-plus-function claim has been developed under cases almost concerns mechanic invention or invention has specific structures,¹⁴ and the difference of technical features between invention which has specific structures such as mechanic invention and invention which doesn't have specific structures such as software invention, should be considered.

III The status of software patent protection in Korea

1 Overall

The software patent system in Korea seems quite similar to Japan. To be patented the software should fall under the concept of invention, "the highly advanced creation of technical ideas utilizing laws of nature (Article 2, item (i) of Korean Patent Act (Act No. 13096 of 2015)). And it can be claimed by invention of method and product, software invention of product can be claimed by apparatus, computer or system claim, and computer readable recording medium.

However, it cannot be claimed software itself, and it only can be claimed by computer program stored in the medium in order to solve a certain problem combined with hardware. It means that software invention cannot be claimed itself, even if it can be regarded as the highly advanced creation of technical ideas utilizing laws of nature. And Korean Patent Examination Guideline provides that computer program as such is one example of non-statutory invention.¹⁵ It can be read that Korean patent system for software put emphasis on hardware in software invention.

2 Statutes and Regulations

Korean Patent Act provides that how to describe the invention in the claim and how to recognize and

determine the invention described in the claim in a similar way to Japan. For the description of the invention, it provides that "the claims shall state such matters deemed necessary to specify and invention as structures, methods, functions and materials or combination thereof to clarify what to be protected (Article 42, paragraph (6) of the Korean Patent Act)." And it also provides that "the claims shall be supported by detailed description and the claims shall define the invention clearly and in detail (paragraph (4) of said Article)." For the recognition of the invention, it provides that "the scope of protection conferred by a patented invention shall be determined by the subject matters described in the scope of claims."

KIPO provides the guidelines concerning the scope of invention in the claim in the stage of obtaining a patent right. There are two concepts about this issue, "the recognition of the invention", and "definition of the claimed invention." The first one concerns so-called "Don't read in limitations" approach, and second one concerns so-called "Refer the specification" approach.¹⁶ As for the first part, Korean patent examination guideline provides that since "description of claims holds significance in that the scope of protection of a patent right is determined based on the description," "the recognition of the invention for which patent protection is sought shall be made based on the description disclosed in each of the claims."¹⁷ As for second concept, we can see the guideline on the way of definition of the claimed invention, and it seems to be similar to specifying the claimed invention of JPO's guideline. According to the guideline, if the statement of claimed invention is clear, defining the claimed invention should be made as stated in the claim. The term in the claims is interpreted as having a general meaning and scope generally accepted in the technical field. And if there are terms not correspond to the claim and specification, the statement of claim become the object to examine the patentability.

3 Cases

As for scope of claim, although Korean Supreme Court has not shown consistent attitude, there could be found a tendency which seems to show that it's harder to consider the specification in determining claimed invention in Korea comparing to Japan, could be found in judgments by Korean Supreme Court.¹⁸ It can be learned from the statement like "in the case of where the scope of claim is clear under the statement of claim, the scope of claim should not be limited by specification," or "in the case of where the term has a specific meaning and it is explicitly define in the specification, it should be interpreted in an objective and reasonable way by taking into consideration of its technical meaning, taken together with the common general knowledge at the time of filing, based on the general meaning of the terminology."¹⁹

As for scope of protection, considering Korean

Supreme Court judgments, in determining the scope of protection, factors like legal stability for the third party, can make the scope of protection narrower than the scope of claim itself.²⁰ And with regard to means-plus-function claim, there seems to be a tendency that the scope of protection based on the description in the specification, and interpreted to the extent that the persons ordinarily skilled in the art could work based on constitution disclosed concretely in the specification.²¹ In this case, according to the Korean Supreme Court, the person is considered as those who ordinarily skilled in the technical field concerning allegedly infringing invention, not patented invention.²²

4 Discussions for Software Patent Protection

In Korea, in that there are not many discussions concerning the scope of software invention, it is hard to find the special treatment for software, and it is just interpreted considering the feature of means-plus-function claim. However, as for the scope of protection, Seoul High Court Judgment, 2001Na60578 which stated that “in determining whether there is an infringement or not, the defendant should have worked not only all the composition of the invention, but also ‘time-series and systemic relationship among the composition of invention’,” could be utilized as a tip in demarcating the scope of software patent protection.

IV Conclusion

1 Overall

In this research, the status of patent protection can be understood using two concepts, the scope of claim and the scope of protection. The scope of claim can include the concept of claimed invention and patented invention, and both of them logically should be considered same. It could be regarded relatively stable concept in that it is determined under statement from applicant and general technology at the filing. In other hand, the scope of protection could be regarded relatively variable concept, in that it should be determined considering balance with alleged infringer.

As for overall protection status in Japan and Korea seems to be similar to each other. However, the scope of claim could be interpreted differently in the process of patent examination in invalidation suit, and it can be said that there is possibility that the gap between scope of claim and protection could be larger in Korea than in Japan.

2 In Respect of the Scope of Claim

To begin with, it can be said that in recognizing and determining the scope of claimed invention, basically similar standards could be found, such as "the scope of claim is determined based on the claim", and "if there are

definition of term of the claim in the specification, they should be considered into understanding the meaning of the term, the general principle.” However, as for the way of treating the description of invention in the claim, it is explained that the tendency which seems to show that it’s harder to consider the specification in determining claimed invention in Korea comparing to Japan, is found in judgments by Korean Supreme Court.²³ Comparing the expressions used in Patent examination guideline of JPO and KIPO, the requirements for considering specification of KIPO’s guideline seem to be stricter.

As for means-plus-function claim, basically similar standards to each other could be found, such as “this type of claim is treated as the whole products which have the function, characters etc. by the expression in the claimed invention, however it can be reduced by statements in specification, and common general knowledge.” However, as for the way of treating the description in the specification in understanding functional expression in the claim could be stricter in Korea, like other types of claim, in that the expressions in the examination guideline in Japan and Korea seem to show difference of attitudes. This respect can affect the patentability of claimed invention. If the claimed invention is in the technical field in which prior art can be found easily, the patentability could be lower. In the opposite case, the patentability could be higher and there is possibility that there could be more wide-broad patents in that technical field. Although these wide-broad patents could be restricted to the scope of protection by court, not all the patent disputes can be contended in court.

3 In Respect of the Scope of Protection

Since patent protection should be based on the invention in the claim, the basic interpretation of the scope of patent would be same as the scope of claim. In determining the scope of protection, however, since the balance with alleged infringer should be considered, the scope of protection tends to be interpreted narrower than the scope of claim itself. This is a basic tendency in each country. Especially, as for Korea, it could be learned from such cases which stated that “in the case of determination of technical scope of invention under the statement in the claim is obviously unreasonable referring the specification, it should be interpreted under justice and equity, considering technical idea, specification, intent of applicant, and legal stability for the third party.”²⁴ According to these judgment, in determining the scope of protection, factors like legal stability for the third party, can make the scope of protection narrower than the scope of claim itself. In this respect, considering that there are possibilities that the scope of claimed invention could be interpreted wider in the process of examination, the gap between the scope of claim and protection could be found more easily.

4 In Respect of Software Patent

Since software patents usually have been claimed using functional expressions, with regard to the scope of software patent, it is basically explained that in respect of interpretation of means-plus-function claim. And there is no statute for interpretation of means-plus-function claim separately under Patent Act in Japan and Korea, the general rule for claim interpretation would be applied to software patent basically. Therefore, in principle, the scope of claim for software would be interpreted based on only words in the claim, and the meaning and scope of meaning would be interpreted in light of common usage and knowledge in the field of the art. If the words have special meaning or limited scope, and it is reflected in the specification, these specialties could be considered, in both countries. However, the requirements of description for these specialties to be considered would be different, and the thing and ground that the requirements in Korea could be regarded stricter, is as it is said in the chapter 3 above.

In other hand, as for the scope of protection for software, it doesn't seem to be too much to say that it would be interpreted based on the description in the specification, in that the Courts in both countries have stated that the scope of protection for means-plus-function should have been interpreted the extent to that persons who ordinarily skilled in the art could work based on the concrete description in the specification. That's why the role of embodiment seems to be very important in both countries. However, it should be noted that the case law for the scope of protection for means-plus-function claim has been developed from cases concerning machinery invention or invention which has concrete structures, and the feature of software invention is different from them. Considering that the history of software patent is relatively short, the thing that there aren't many discussions on the interpretation with regard to software patent protection considering the features of software, is not surprising. It is just to be hoped that there will be more cases and discussions concerning the technical features of software invention and it will be reflected into the rule of interpretation for software patent claim and protection.

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- ¹ Peter Menell, It's Time to Make Vague Software Patents More Clear, WIRE (Feb. 7, 2013), <http://www.wired.com/opinion/2013/02/its-time-to-make-vague-software-patents-more-clear/>; Kristen Osenga, DEBUGGING SOFTWARE'S SCHEMAS, 82 Geo. Wash. L. Rev. 1832, 1845-6 (2014).
 - ² In this report, specification will be used as the concept, which includes detailed explanation of invention, drawings, summary of invention, etc.
 - ³ Robert Patrick Merges & John Fitzgerald Duffy, Patent Law and Policy: Cases and Materials (Fifth Edition), LexisNexis, 2012,

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- p.336.
 - ⁴ Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed. Cir. 2005), cert. denied, 126 S. Ct. 1332 (U.S. 2006); CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002), etc.
 - ⁵ JPO, Patent Examination Handbook, Annex B Part 1, Chapter 1, 1.2.1.1
 - ⁶ JPO Webpage, 産業財産権法 (工業所有権法) の解説、平成14年法律改正 (平成14年法律第24号)、14-17頁、https://www.jpo.go.jp/shiryoku/hourei/kakokai/pdf/h14_kaisei/h14_kaisei_1.pdf (last access: March 30, 2016).
 - ⁷ JPO, Patent Examination Handbook, Part 1, Chapter 2, Section 1, 2.
 - ⁸ JPO, Patent Examination Handbook, Part 3, Chapter 2, Section 3.
 - ⁹ 大淵哲也「統一的クレーム解釈論」中山信弘他編「知的財産権：法理と提言」224-225頁 (青林書院、2013)
 - ¹⁰ 最高裁判所平成12年4月11日 (平成10年(オ)第364号)
 - ¹¹ In this regard, 北田明ほか「発明の技術的範囲」と「発明の要旨認定」との間に、ダブルスタンダードは存在するか?」パテント68巻12号136頁(2015) says that “Recent cases judged by lower courts show the tendency that claim would be interpreted in a same way in determining the scope of claimed invention and patented invention as well. And in this respect 最判平成27年6月5日 (平成24年(受)第1204号, 平成24年(受)第2658号 means a lot.”
 - ¹² 東京高裁昭和53年12月30日判決 (昭和51年(ネ)第783号), 東京地裁平成10年12月11日判決 (平成8年(ワ)第22124号); 東京地裁平成16年12月28日判決 (平成15年(ワ)第19733号) etc.
 - ¹³ 水谷直樹「機能的クレームの形式で記述されたソフトウェア関連発明の技術的範囲」飯村敏明先生退官記念『現代知的財産法—実務と課題』522頁 (発明推進協会、2015)
 - ¹⁴ 特許第2委員会第4小委員会「侵害訴訟における近年のクレーム解釈に関する研究—特に機能的クレームについて—」知財管理66巻1号50頁 (日本知的財産協会、2016)
 - ¹⁵ KIPO, Patent Examination Guidelines, Part3, Chapter 1, 4.1.8.
 - ¹⁶ Robert Patrick Merges & John Fitzgerald Duffy, Patent Law and Policy: Cases and Materials (Fifth Edition), LexisNexis, 2012, p.336.
 - ¹⁷ KIPO, Patent Examination Guidelines, Part2, Chapter 4, 2.
 - ¹⁸ Kim, Byeong Pil, Using Description and Drawings in Claim Construction in Korea and Comparison with Foreign Cases, The Journal of Intellectual Property Vol.9 No.2 June 2014 Shows the flow and tendency of Korean Supreme Court, concerning the rule of considering the specification of invention in determining the scope of claim in the process of invalidation suit and infringement suit.
 - ¹⁹ In the other hand, there are different interpretations. For example, Kim, Dong-jun, Considering the description of the invention in interpreting patent claim, Journal of Korea Information Law, Vol.16 No.3 December 2012, p.219-223 says that Korean Supreme Court judgments also should be read that they didn't deny considering specification in determining the scope of the invention in the claim and they were consistent. However, according to Kim, Byeong Pil's analysis on the flow of judgments by Korean Supreme Court, it seemed hard to deny that it could be found a tendency that different standards for considering the specification applied to the case of determination of patent validity and infringement at least after 2010.
 - ²⁰ Korean Supreme Court Judgment 2005Da77350 Decided February 28, 2008; Korean Supreme Court Judgment 96Hu1040 Decided April 10, 1998; Korean Supreme Court Judgment 2002Hu130 Decided November 28, 2003, etc.
 - ²¹ 知財高裁平成15年2月27日判決 (平成12年(ネ)第4200号)

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- ²² Korean Supreme Court Judgment 2005Da77350 Decided February 28, 2008
- ²³ Kim, Byeong Pil, Using Description and Drawings in Claim Construction in Korea and Comparison with Foreign Cases, *The Journal of Intellectual Property* Vol.9 No.2 June 2014 Shows the flow and tendency of Korean Supreme Court, concerning the rule of considering the specification of invention in determining the scope of claim in the process of invalidation suit and infringement suit.
- ²⁴ Korean Supreme Court Judgment 2005Da77350 Decided February 28, 2008; Korean Supreme Court Judgment 96Hu1040 Decided April 10, 1998; Korean Supreme Court Judgment 2002Hu130 Decided November 28, 2003, etc.