

16 A Comparative Law Study on the Patent Eligibility

—Focus on the Method Invention—^(*)

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Inventions have shown variation in association with industrial development and progress in science and technology. Examples of such inventions are those of business methods that utilize computer technology based on informatization and medical-related inventions such as gene screening methods accompanying the development of biotechnology. As a result, in the U.S., the issue of patent eligibility of business method inventions has led to the increase in the number of litigations over patent eligibility and vigorous discussions have been conducted. Similarly, in Europe, the way to conduct harmonization has been sought by using various methods including the referral made by the President of the European Patent Office (“EPO”) with respect to the issue of patent eligibility of computer-software-related inventions due to the difference between the EPO and member states in terms of the determination method for such issue.

In this research study, a comparative study will be made on the requirements for determining whether or not an invention is statutory (patent eligibility) used in Japan, the U.S. and Europe based on the issue of patent eligibility in the U.S. as well as the transition in the trial and court decisions and the discussions that have traditionally been developed in the U.S. and Europe,. In particular, with respect to process invention, the issue of patent eligibility is prominent in the fields of computer software and business methods and thus such field have mainly been dealt with. First, the trends in the U.S. court decisions that have been rendered in large numbers over the last few years and that have become a major topic of debate will be examined. Specifically, the transition in the determination method used in the U.S. will be studied by focusing on the relationship between the three categories for non-statutory subject matter that have been used in determining patent eligibility and excluded from patent protection, i.e. (i) laws of nature, (ii) natural phenomenon and (iii) abstract ideas, and past court decisions. Transitions in the past trial and court decisions as well as discussions relevant thereto will be studied with respect to the EPO, Germany, the U.K. and Japan. This research study aims to be of some help to the efforts made for international systemic harmonization by considering the functions of the requirement for patent eligibility from the viewpoint of comparative law based on the abovementioned set of studies.

I Structure of this report

In making a comparative study on the requirements for determining whether or not an invention is statutory (patent eligibility)¹ used in Japan, the U.S. and Europe, past trends in the legal system, judicial precedents and trial decisions shall be reviewed in Chapter II and Chapter III below.

In Chapter II, trends in the U.S. will be studied. The determinations on patent eligibility made in the U.S. shall be analyzed based on the court decisions concerning Article 101 of the U.S. Patent Law (Inventions patentable) (software-related inventions, business method inventions and inventions of medical treatment method). Next, the relationship between non-statutory subject matters ((i) laws of nature,

((ii) natural phenomenon and (iii) abstract ideas) relevant to Article 101 of the U.S. Patent Law and transitions in the past determinations on patent eligibility will be studied. In addition, matters discussed in recent court decisions rendered in the U.S. shall also be studied.

In Chapter III, trends in Europe will be studied, covering the treatment of the issue of patent eligibility in the EPO, Germany and the U.K. First, the determination method will be studied based on the trial decisions related to Article 52 of the Convention on the Grant of European Patents (“EPC”) rendered by the EPO. The determination method for patent eligibility will also be studied with respect to Germany and the U.K.

Finally, in Chapter IV, a comparative study will be made based on the results of the

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abovementioned studies. First, the determinations on whether or not an invention is statutory based on Article 2, paragraph (1) of the Japanese Patent Act will be briefly marshaled and then, the functions of the requirement for patent eligibility will be studied from the viewpoint of comparative law based on the studies on the transitions in the trial and court decisions as well as the determination method used and current discussions made in the U.S., the EPO, Germany, the U.K. and Japan.

II Discussions over patent eligibility in the U.S.²

1 Patent eligibility in the U.S. Patent Law (Article 101)³

Article 101 of the U.S. Patent Law prescribes that if the relevant invention or discovery falls under any of the four categories (i.e., process, machine, manufacture, or composition of matter), it has patent eligibility and such category may be divided into two major types, i.e. product and process. In determining patent eligibility in the U.S., focus is placed on the applicable test to determine patent eligibility as well as whether or not the relevant invention falls under any of the non-statutory subject matters ((i) laws of nature, (ii) natural phenomenon and (iii) abstract ideas) relevant to Article 101 of the U.S. Patent Law.

2 Transition in inventions related to computer software and business methods in the U.S.

(1) Situation prior to the Bilski decision⁴

Decisions of the Supreme Court of the United States (referred to as the “Supreme Court” in this Chapter) dealing with computer software inventions that have been rendered prior to the Bilski decision date back to the Diehr decision (1981)⁵. At that time, the commercial Internet was yet to be commenced and computer-implemented inventions were extremely few, and the three categories for non-statutory subject matter under the current Article 101 of the U.S. Patent Law were established based on the decision of the Supreme Court which held that basic principles such as mathematic formulas may not be patented.⁶ Over the following 30 years, until the Bilski decision (2010)⁷ was rendered, the Supreme Court did not deal with the issue of patent eligibility against the background of a pro-patent policy. Meanwhile, Internet business became popular from the mid-1990s and attention was paid to the issue of whether or not business

method inventions are eligible for patent protection. The State Street Bank decision (Fed. 1998)⁸ is one of the decisions that may serve as an indicator for business method inventions.

(2) Situation after the Bilski decision^{9, 10}

In this section, the situation after the rendition of the Bilski decision that added momentum to the discussion on patent eligibility in the U.S. will be summarized (Table 1).

Table 1. Situation after the Bilski decision

October 30, 2008	en banc decision of the United States Court of Appeals for the Federal Circuit (CAFC) in the Bilski case (denied patent eligibility)
June 28, 2010	Supreme Court Decision in the Bilski case (denied patent eligibility)
September 15, 2011	First decision of the CAFC in the Ultramercial case (approved patent eligibility)
March 20, 2012	Supreme Court Decision in the Prometheus case (denied patent eligibility of method of treatment)
July 9, 2012	First decision of the CAFC in the CLS Bank case (approved patent eligibility)
May 10, 2013	en banc decision of the CAFC in CLS Bank case (denied patent eligibility)
June 13, 2013	Supreme Court's decision in the Myriad case (denied patent eligibility of gene sequences)
June 21, 2013	Ultramercial case remanded to the lower court (approved patent eligibility)
September 5, 2013	Decision of the CAFC in the Accenture case (Issue: System claims alone; denied eligibility for protection)
March 4, 2014	The United States Patent and Trademark Office (USPTO) published a guidance for eligibility for patent protection under Article 101 of the U.S. Patent Law of claims reciting or involving laws of nature, natural phenomenon and natural products.
June 19, 2014	Supreme Court's decision in the CLS Bank case (denied patent eligibility)
June 25, 2014	The USPTO published the Preliminary Examination Instructions in view of the Supreme Court Decisions in the CLS Bank case

The Bilski decision (2010)¹¹ was rendered with respect to a business method invention. In this case, the invention in question was a pure business method that does not use computers and attention was paid to the determinations on the patent eligibility of such invention. The CAFC maintained the trial decision rendered by the USPTO by finding that the invention in question does not comply with the “machine-or-transformation test” (hereinafter referred to as the “MOT test”) and presented the MOT test as the sole criteria for determination. The U.S. Supreme Court, while denying the invention's patent eligibility as denied in the decision rendered by the CAFC and finding that the invention claimed in the patent application in question is nothing but an “abstract idea” based on past court decisions, held that the MOT test is useful but not the sole test for determining patent eligibility of a process.

The Prometheus decision (2012)¹² was rendered with respect to an invention of an administration route. The CAFC adopted the MOT test and determined that the invention in question has patent eligibility by finding that physical and chemical changes were produced in the process of metabolism of drugs. However, the judges of the Supreme Court unanimously denied patent eligibility of such invention on the grounds that protection was sought for the laws of nature per se.

(3) CLS Bank decision (2014)¹³

After the Bilski decision (2010)¹⁴ was rendered, the requirement for patent eligibility received attention and opinions over such requirement were divided within the CAFC. Amidst such situation, the Supreme Court rendered the CLS Bank decision (2014) which may be cited as the decision in which the Supreme Court presented a certain determination. In this case, the invention in question was related to a software patent relevant to a business method which only allows secure transactions by confirming whether or not both parties have the ability to perform the obligations through a third party intermediary (which is referred to as trusted third party or escrow) as well as the system thereof. The claims for such patent contained process, apparatus and system and all of the claims were designed to be implemented by computers.

(i) Court decision (U.S. district court, en banc decision of the CAFC and Supreme Court Decision)

In this case, on May 24, 2007, CLS Bank International (“CLS Bank”) filed against Alice Corporation (“Alice”) an action seeking confirmation of invalidity of the patents held by Alice (U.S. Patent No. 5970479, No. 6912510, No. 7149720 and No. 7725375) with the U.S. district

court of the District of Columbia. In response to this, Alice filed a counterclaim by alleging infringement of the patents by CLS. The outline of Alice's disputed patents is as follows: [i] business method for risk avoidance using an escrow;¹⁵ [ii] computer program apparatus having

storage means to confirm the performance ability by using an escrow;¹⁶ and [iii] system to confirm by computers the performance ability by using an escrow.¹⁷ Transition in the CLS Bank decision will be summarized (Table 2).

Table 2. Transition in the CLS Bank decision

May 24, 2007	CLS Bank filed an action while Alice filed a counterclaim
March 9, 2011	Decision rendered by the U.S. district court of the District of Columbia
July 9, 2012	First decision rendered by the CAFC
May 10, 2013	En banc decision rendered by the CAFC

The U.S. district court rendered a decision to invalidate the patents in question based on the following findings: [a] Alice's patent mentioned in [i] above is nothing but an abstract idea and thus does not have patent eligibility; and [b] while Alice's patents mentioned in [ii] and [iii] have limitation on the apparatus and system, their practical contents are identical to the business methods per se and thus they are nothing but abstract ideas and do not have patent eligibility. In the first decision of the CAFC, in response to the appeal filed by Alice, the panel (comprised of Judge Linn, Judge Prost and Judge O'Malley) decided by 2-1 to reverse the decision of the U.S. district court and approved the patent eligibility of Alice's patents mentioned above on the grounds that all of the claims are directed toward the practical application of the invention. Later, the CAFC rescinded the first decision mentioned above and, in the en banc decision of the CAFC¹⁸ that performed the rehearing, seven out of ten judges denied patent eligibility with respect to Alice's patents mentioned in [i] and [ii] above. With respect to Alice's patent mentioned in [iii] above, opinions were divided and the decision rendered by the U.S. district court was upheld without any change. Consequently, a uniform standard could not be drafted and thus, this CAFC decision is not binding as a judicial precedent.

In the Supreme Court decision, all of the judges (nine in total) denied patent eligibility on the grounds that the relevant invention covers abstract ideas. In addition, the Supreme Court referred to the framework presented in the Prometheus decision (2012)¹⁹ to discriminate inventions that only state non-statutory subject matters from patent-eligible inventions that are based on non-statutory subject matters and held that this framework also apply in this case. This framework is structured by the following two parts and is called the two part test. Specifically,

determinations are made on the issues of [i] whether or not the claimed invention falls under any of process, machine, manufacture, or composition of matter; and [ii] whether or not the claimed invention falls under the laws of nature, natural phenomenon or abstract idea and whether or not the added factor contains an inventive concept that is sufficient to transform the claimed invention into a patent eligible invention.

(ii) Significance of the CLS Bank decision

In this decision, although the Supreme Court affirmed the en banc decision of the CAFC, two major significances may be found. The first significance is that the Supreme Court showed its clear stance regarding computerization of general business methods. In this case, the Supreme Court held that the relevant invention does not have patent eligibility since it is an abstract idea such as settlement through a third party and does not have an inventive concept necessary to transform the claimed abstract idea into a patent eligible invention. In other words, inventions that are created by only having computers process abstract ideas would be denied to have patent eligibility. Thus, this Supreme Court decision may be regarded as having shown a certain indicator for business method inventions. The second significance may be found in the point that, in performing the determination test, the Supreme Court not only cited the Bilski decision (2010)²⁰ but also decided to apply the two part test presented in the Prometheus decision (2012).²¹ As a result, determinations on patent eligibility would also cover "abstract ideas" and the Supreme Court may be regarded to have clearly indicated its intention to apply the two parts test in future cases. Subsequently, the USPTO published Preliminary Examination Instructions²² in view of the Supreme Court decision and decided to adopt the two part test mentioned above for determining the applicability of Article

101 of the U.S. Patent Law for claims subject to examination and to apply such test to abstract ideas in addition to the invention in which the laws of nature or natural phenomenon are claimed, in conformity with the U.S. Supreme Court decision.

(4) Functions of Article 101 of the U.S. Patent Law: “Inventions patentable”

Based on the trends in the past court decisions, it may be found that the concept “Inventions patentable” is used to examine an invention which solved a specific technical problem based on the wording “physical embodiment or transformation.” For example, even if a person discovers a native grass with high efficacy, such person may not obtain a patent for the native grass per se but instead may obtain a patent for other factors related to such native grass such as the process to extract the active ingredient of such native grass or the application process thereof. In sum, it may be regarded that the purpose of Article 101 of the U.S. Patent Law is to transform the laws of nature, natural phenomenon and abstract ideas into practical technologies that are useful for human being. In other words, moreover, it may be considered that such concept is used to determine how the relevant invention has been converted into a useful invention that has been defined by common scientific knowledge. Thus the requirement for patent eligibility may be found to be performing a restrictive function to maintain the normative matters of the patent system and a function to secure the qualitative basis thereof.

III Discussions over patent eligibility in Europe²³

1 Transition in the determination method used by the EPO

In Europe, Article 52 of the EPC²⁴ prescribes patentable inventions and those which may be excluded from the category of “inventions.” Currently, the determination on patent eligibility is made by determining whether or not the relevant invention has “technical character”²⁵ and then the invention is found to have patent eligibility if it does not fall under the exclusions prescribed in said Article.

Many trial decisions rendered over patent eligibility dealt with the issue of whether or not the relevant invention falls under the exclusions prescribed in Article 52 of the EPC and in particular, the construction of computer programs

“as such” was the focal point.²⁶ Until the 1990s, the court adopted the technical contribution approach and from around 2000, the court started to adopt the means of determining whether or not the invention has technical nature. This change in the EPO’s determination method affected the determination on patent eligibility of computer software related invention in the U.K. mentioned below and as a result, the President of the EPO made G3/08 referral²⁷ to the Enlarged Board of Appeals, questioning the consistency in the EPO’s determinations on patent eligibility of computer software related inventions.

(1) Referral to the Enlarged Board of Appeals (G3/08)

The President of the EPO took it seriously that no consistency could be found in the determinations made in past trial decisions concerning patent eligibility of computer programs (i.e. T1173/97: IBM trial decision, T424/03: Microsoft trial decision and T258/03: Hitachi Trial Decision) and made referral to the Enlarged Board of Appeals on October 22, 2008. However, in May 2010, the Enlarged Board of Appeals determined that all of the questions did not satisfy the requirements for referral to the Enlarged Board of Appeals (Article 112, paragraph (1) of the EPC) and showed its stance to support the EPO trial decisions by daring to state its opinion that there are no discrepancies in the trial decisions in the course of the development of laws (G3/08).²⁸

2 Germany

(1) Concept of patent eligibility in Germany^{29, 30}

One of the important German decisions that is referred to in the Guidelines for the Examination Procedure of Germany to serve as a guideline for determining patent eligibility is XZB 11/98 (Logikverifikation; logic verification; 1999)^{31, 32}. In this case, the court stated that “even if the means to solve the problem does not directly utilize controllable natural forces, if it develops the possibility of manufacturing useful products by making use of knowledge based on technical considerations, such means to solve the problem would, by no means, be excluded from patent protection.” Accordingly, there is a common concept concerning patent eligibility in German decisions that the technical problem must be presented and solved rather than technical means being used.^{33, 34} This means that a patent right would not be granted if the means used in the invention only solves problem other than technical

problems such as problems found in economic activities.

3 U.K.

(1) Concept of patent eligibility in the U.K.³⁵

Since a common law system is adopted in the U.K., future court decisions would be bound by precedents. In the past, court decisions were developed by citing the trial decisions rendered by the EPO. However, the U.K. court held in the *Aerotel & Macrossan* decision (2006)³⁶ that the EPO's policy change since 2000 has no consistency and adopted the Four Part Test (*Aerotel* test)³⁷ as its own determination method. In the U.K., in determining patent eligibility, the invention's contribution must be determined, and based on the determination on novelty and inventive steps, the invention's technical contribution to prior art shall be determined.

IV Comparative study -Based on the trends in Japan, the U.S. and Europe-

1 Determination on whether or not an invention is statutory in Japan

(1) "Creation of technical ideas utilizing the laws of nature" as prescribed in Article 2, paragraph (1) of the Japanese Patent Act

In the Japanese Patent Act, Article 1 prescribes the purpose of the Act while Article 2, paragraph (1) defines inventions; an "invention" is clearly defined to mean a "highly advanced creation of technical ideas utilizing the laws of nature." Currently, with respect to "the laws of nature" as prescribed in Article 2, paragraph (1) of the Japanese Patent Act, "the laws of nature" is regarded as referring to fundamental rules and principles that have physical, chemical or biological rules such as mere mental activities, simple academic rules and man-made agreements. Yet, technical ideas utilizing such fundamental rules or principles are regarded as inventions^{38, 39}. The examination guidelines clearly lists mere mental activities, simple academic rules and artificial agreements as the typical examples to be excluded. In addition, the issue of whether or not an invention is statutory is determined by grasping the invention in whole stated in the claims.⁴⁰

(2) "Inventions" to be protected as patents -Based on the transition in court decisions-

When the transition in the court decisions

concerning the requirement of "utilizing the laws of nature" in Japan is examined, among process inventions, computer software-related inventions are often subject to the issue of whether or not they satisfy the requirement of "utilizing the laws of nature"^{41, 42}. For example, the Intellectual Property High Court found that an idea which utilizes mental activity of a human being is an invention utilizing computer software as the technical means (*Interactive dental treatment network* case; judgment of the Intellectual Property High Court of June 24, 2008, (Gyo-Ke) No. 10369). In this case, the court held that the mere indication of the mathematical calculation procedure or recording of data in general computers cannot be found to be a creation of technical ideas "utilizing the laws of nature."⁴³ Thus, The requirement for patent eligibility functions to objectively define "invention" that is eligible for patent protection in a flexible manner in response to new technologies and their development based on the mitigative construction of the requirement that an invention must be a "creation of technical ideas utilizing the laws of nature" while serving as a basis for determining patentability in terms of novelty and inventive steps.

2 Patent system and the determination on whether or not an invention is statutory (patent eligibility)

Since the Patent Act is a law in which the protection and use of inventions are placed at the center of its purpose⁴⁴ and its framework is closely related to innovation on a continuous basis, flexible responses must always be made to the needs of the time. In examining the invention's subject matter that is eligible for protection, if the concept of inventions is fixed by clearly defining inventions, it would be difficult to respond to the new needs of the time.⁴⁵ Moreover, a conclusion that is against the purpose of the patent system should not be reached. However, if the requirement for an invention to be statutory (patent eligibility) is considered based on the standpoint of protection and use of inventions by returning to the purpose of the patent system, such requirement may be considered as representing an issue of "monopoly" and "dedication to the public" of "proprietary information" which is an invention. In other words, even if there are difference in terms of the legal system and political aspects, the direction to aim for is the same.

3 Functions of the requirement for patent eligibility considered from the current situation

The comprehensive function of the requirement for an invention to be statutory (patent eligibility) shall be considered based on the analysis of current situations. The first function is the “normativeness” with respect to the system of determining whether or not an invention is statutory (patent eligibility). This means that the requirement for patent eligibility functions to protect the norms of the patent system which can be easily understood from the fact that some kind of basis provisions or guidelines are developed in order to achieve the purpose of the patent system. The second function is the “valuation” to serve as the basic material for determining novelty and inventive steps. This shows that the requirement for patent eligibility functions to secure the qualitative basis of the patent system. The last function is the “harmonization” provided to each country. The fact that the function of valuation produced by the requirement for patent eligibility was reconsidered in the U.S. provided the opportunity to reevaluate their own systems in Europe and Japan. As a result, the requirement for patent eligibility may be regarded as functioning to confirm consistency with the patent system while encouraging harmonization between the countries.

V Conclusion

In this paper, the respective requirements for determining whether or not an invention is statutory (patent eligibility) used in Japan, the U.S. and Europe were studied from a comparative perspective based on the major changes in the determinations on patent eligibility in the U.S. As a result, although the abovementioned requirements pose a problem to find out the necessary requirements for protection eligibility such as “the contents of subject matter eligible for patent protection,” in reality, such requirements may be understood as posing an issue of clarifying “the invention’s specific parts subject to monopoly or dedication to the public.” The requirement for patent eligibility further functions to contribute to the determination concerning the requirements for patentability by evaluating the basic principles of the technical information to be monopolized and the social activities to be dedicated to the public with respect to proprietary information and thereby defining the outer limits of the invention.

The current issue of protection eligibility

faced in the U.S. was caused by the occurrence of situations where conventional determination tests were insufficient to respond and as a result, a two part test was adopted based on the deeply rooted ideas developed over the ages (non-statutory matters) in the U.S. The direction led by this determination test is in harmony with the concepts used in Europe and Japan. Yet, in terms of the solution of the technical problem, the issue of whether or not the relevant invention exceeds the basic principles per se in social activities is determined based on its technical effects in Europe and the U.S. In contrast, in Japan, the technical significance of the invention is found in the specific method used for realizing the invention and if such technical significance is specified in the claim, the relevant invention is found to be statutory. Assuming the objective evaluation of the invention, the method of finding the technical significance of the relevant invention in the fact that the specific method for realizing the invention is specified in the claim is responsive to the modern advanced information society.⁴⁶ In addition, since the balance adjustment with the advanced information society is expected to continue in the future, it would be necessary to review the consistency between the patent system and the framework for objective evaluation of the outer limits of the scope of invention to be protected.

As described above, there is a sign of a change in the past situation where Japan and Europe sought harmonization with the U.S. which had taken the lead in the field of intellectual property as the major power. In other words, the past stance taken by Japan, which has been dealing with the issue of patent eligibility on a neutral footing, is expected to possibly provide a new solution.⁴⁷

¹ In the discussion on eligibility for patent protection, two concepts are used; “eligibility” for considering whether or not the relevant invention contains subject matter eligible for patent protection and “patentability” for considering the possibility of establishing a patent (novelty and inventive steps). In the U.S., consideration is made on “eligibility” while in European countries including Germany, in many cases, consideration is made by attaching more weight on “patentability” than on “eligibility” in discussing patent eligibility (Germany: Patentfähigkeit). In the U.K., the issue is expressed by the term “patentable subject matter” and consideration is made based on “eligibility” and “patentability.”

² For details, see the co-edited report by the Institute of Intellectual Property, Akira Ojima “America no Saikōsai Hanrei wo Yomu – 21 seiki no Chizai Bijinesu Hanrei Hyōshaku Shu (Interpretation of the U.S. Supreme

Court Decisions – Collection of commentaries on the intellectual property and business related court decisions in the 21st century)” [Collection of Research Studies of IIP] (2015) at 44-139; Yoshikazu Tani, Kenji Ushiku, Masashi Shinkai, Hidedhito Kawano “Sekaino Sofutowea Tokkyo – Sono Riron to Jitsumu (Software patents in the world – Its theory and practice-)” (Japan Institute for Promoting Invention and Innovation, 2013)

³ Article 101 of the U.S. Patent Law: Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or a new and useful improvement therefor, subject to the conditions and requirements of this title.

⁴ John F. Duffy “Rules and Standards on the Forefront of Patentability” William & Mary Law Review. 51,609-653(2009).

⁵ Diamond v. Diehr 450 U. S. 175 (1981).

⁶ As early precedents, refer to Benson, 409 U.S. 63, 72 (1972); Parker v. Flook, 437 U.S. 584, 198 USPQ 193 (1978).

⁷ Bilski v. Kappos, 130 S. Ct.3218 (2010).

⁸ State Street Bank and Trust Company v. Signature Financial Group, Inc. (149 F.3d 1368 (Fed.Cir. 1998)

⁹ Joshua D. Sarnoff “Patent-Eligible Inventions after Bilski: History and Theory” Hastings Law Journal, 63, 53-125(2011).

¹⁰ DONALD S. CHISUM, CHISUM ON PATENTS § 1.03[6][n](2013).

¹¹ Bilski v. Kappos, 130 S. Ct.3218 (2010).

¹² Mayo Collaborative Services v. Prometheus Laboratories, Inc. 132 S. Ct 1289 (2012).

¹³ Alice Corp. v. CLS Bank Int’l., 134 S. Ct. 2347 (2014).

¹⁴ Bilski v. Kappos, 130 S. Ct.3218 (2010).

¹⁵ U.S. Patent No. 5970479 (Claim 33).

¹⁶ U.S. Patent No. 7725375 (Claim 39).

¹⁷ U.S. Patent No. 7725375 (Claim 26).

¹⁸ CLS Bank Int’l. v. Alice Corp., 717 F.3d 1269 (Fed. Cir. 2013).

¹⁹ Mayo Collaborative Services v. Prometheus Laboratories, Inc. 132 S. Ct 1289 (2012).

²⁰ Bilski v. Kappos, 130 S. Ct.3218 (2010).

²¹ Mayo Collaborative Services v. Prometheus Laboratories, Inc. 132 S. Ct 1289 (2012).

²² http://www.uspto.gov/patents/announce/alice_pec_25jun2014.pdf.

²³ Nobuyuki Taniguchi, “Compyūtā Sofutowea Kanren Hatsumei ni Okeru Higijutsuteki Tokuchou no Hyouka no Genjou to Kadai (Current situation and issues of nontechnical features of computer software-related inventions” Takeda Minoru Sanju Kinen “Chizairikkoku no Hatten he ((For the development of an intellectual property-based nation; publication of articles in commemoration of the 80th birthday of Minoru Takeda)” at 739 (Japan Institute for Promoting Invention and Innovation, 2013) has analyzed in detail the theory and practice in Europe from the standpoint of a practitioner.

²⁴ Article 52 of the European Patent Convention <https://www.jpo.go.jp/shiryou/s_sonota/fips/pdf/epo/mokuji.pdf> (2015/03/31)

(1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible to industrial application.

(2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:

(a) discoveries, scientific theories and mathematical methods;

(b) aesthetic creations;

(c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;

(d) presentations of information.

(3) Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.

²⁵ “Technical character” is also called “technical features” and although it may not be read from the provisions, a detailed explanation is provided in Rules 42 and 43 of the Implementing Regulations to the European Patent Convention and G-I2(II) of the Guidelines for Examination in the European Patent Office

²⁶ Benkard/ Melullis, Europäisches Patentübereinkommen, 2. Aufl. (2012), EPÜ Art. 52 Rn. 190-199.

²⁷ Referral to the Enlarged Board of Appeals: OJ EPO 2009, 32, Opinion of the Enlarged Board of Appeal with respect to the referral: OJ EPO 2011,10.

²⁸ OJ EPO 2011, 10. For explanation, see Jun Sugiura, Seiko Saku, “Compyūtā Sofutowea Kanren Hantsumei ni Kansuru Nichi Bei Ou no Shinsakijun to Tokkyo Tekikakusei Youken ni Kansuru Kousatsu (Consideration on the examination guidelines used in Japan, the U.S. and the E.U. and patent eligibility requirements with respect to computer software related inventions)” Chizaiken Forum Vol. 84 (2009) at 27.

²⁹ Michele Baccelli, Markus Müller, translated by Mitsuyoshi Hiratsuka and the Secretariat of AIPPI, “Computer implemented inventions in Germany and a comparative view with the EPO” AIPPI (2010) Vol. 55 No. 12 at 12 to 24.

³⁰ Schulte/ Moufang, Patentgesetz mit EPÜ (Kommentar), 9. Aufl. (2014), “Patentfähige Erfindungen,” Rn. 131 to 133.

³¹ GRUR 2000, 498; 33 IIC 2002 231.

³² Yasuhide Ono, Kazuo Harada, Kenji Ushiku “Doitsu Saikou Saibansho ‘Rojikku Kenshoho’ Jiken (“‘Logic verification’ case in the German Supreme Court”)” Patent Vol. 55 (2002) at 21 to 30.

³³ Schulte, ibid, Rn. 134.

³⁴ Katsuya Tamai “‘Hatsumei’ no Gainen – Tokuni Shinposei tono Kanren ni tsuite- (Concept of ‘Invention’ - Especially in relation to inventive steps-)” Monya Nobuo Koki Kinen Chitekizaisanho to Kyosoho no Gendaiteki Tenkai (Recent development of the academic disputes on the intellectual property laws and the competition law: publication of articles in commemoration of the 70th birthday of professor Dr. Nobuo Monya) on pages 147 to 148 (Japan Institute for Promoting Invention and Innovation, 2006)

³⁵ Brad Sherman “The Patentability of Computer-related Inventions in the United Kingdom and the European Patent Office” [1991] 3 EIPR 85.

³⁶ Aerotel Limited v Telco Limitd; Macrossan’s Appication [2007] R.P.C.7; [2006] EWCA Civ 1371.

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- ³⁷ See UK Intellectual Property Office, Manual of Patent Practice-Patent Act 1977, Part 1: New Domestic Law, Patentability, Section 1: Patentable inventions (Jan. 2015), at 1.18.
- ³⁸ Nobuhiro Nakayama “Tokkyohou (Patent Act)” at 98 to 102 (Koubundou, 2nd ed., 2012).
- ³⁹ Ryu Takabayashi “Hyoujun Tokkyohou 5th ed. (Standard Patent Law 5th ed.)” at 26 to 33 (Yuhikaku, 5th ed., 2014).
- ⁴⁰ Japan Patent Office “Examination Guidelines for Patent and Utility Model” Part II, Chapter 1, 1.1 (4); Revision of the examination guidelines in 1997: Protection of recording medium in which programs are recorded, Revision of the examination guidelines in 2000: Handling of computer programs as “product invention.”
- ⁴¹ Yoshiyuki Tamura, “Tokkyo Hatsumei no Teigi –‘Shizen Housoku no Riyou’ no Igi (Definition of Patented Inventions –Meaning of “Utilization of the Laws of Nature”)” Hougaku Kyoushitsu, 2001, Vol.9 at 13 to 18.
- ⁴² Ryuta Hirashima, Sofutowea Kanren Hatsumei ni okeru Shizen Housoku Riyousei no Hyouka ni tsuite –Kairo Shimyureishon Houhou Jiken wo Tancho to shita Kento (Regarding the determination on the utilization of the laws of nature in software-related invention –Consideration based on the circuit simulation method case)” Chiteki Zaisanho Seisakugaku Kenkyu No. 20 (2008) at 65 to 95.
- ⁴³ Judgment of the Tokyo District Court of January 20, 2003, 2002 (Wa) 5502 (Case of funds classification balance sheet), judgment of the Tokyo High Court of December 21, 2004, 2004 (Gyo-Ke) 188, Hanji No. 1891 at 139 (Circuit simulation method case), judgment of the Intellectual Property High Court of February 29, 2008, 2007 (Gyo-Ke) 10239 (Hash function case).
- ⁴⁴ Nobuhiro Nakayama and Naoki Koizumi, eds., “Shinchukai Tokkyohou Jou (New Explanation on the Patent Law First Volume)” at 11 [Hirashima] (Seirin Shoin, 2011).
- ⁴⁵ *supra* note (38) at 98.
- ⁴⁶ Nobuyuki Taniguchi, *supra* note 23 at 761 : This paper supports the modest determination on protection eligibility and the Japanese practice in evaluating inventive steps on the grounds that the dichotomy between technical and nontechnical has become ineffective in evaluating inventive steps of computer software inventions.
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