

6 Recognition of Joint Inventors and the Place of Invention in International Joint Research Projects

In recent years, researchers have come to carry out joint research activities without geographical restrictions due to the progress of information and communication technology. This situation is considered to be dramatically improving the efficiency of R&D. However, for cases where researchers in multiple countries jointly complete an invention, two problems have been pointed out from the viewpoint of operation of the patent system. One is the problem that, if the standards for recognition of joint inventors differ among countries, the patenting procedure, etc. may become extremely complicated. The other problem is the question of which country is to be the place of invention. In a country that obligates an applicant filing a foreign application to have filed the first application in that country, this question will be an important determination factor when complying with such obligation. In this study, a survey was conducted in seven countries (including Japan) on statutory laws and regulation, trial decisions by administrative organs, guidelines, court judgments, case examples and academic theories concerning recognition of joint inventors and the place of invention in international joint research projects. The survey results were organized, analyzed and summarized by country, and the points to be noted by Japanese researchers conducting international joint research projects were identified.

I Introduction

In recent years, due to the progress of information and communication technology, researchers have come to carry out joint research activities without geographical restrictions under an environment where information is distributed freely across national borders. Such situation is considered to dramatically improve the efficiency of R&D and contribute to the development of industry. However, two problems have been pointed out from the viewpoint of operation of the patent system. One problem is that, in cases where researchers located in multiple countries jointly complete an invention, if the standards for determining the persons recognized as joint inventors differ among countries, the patenting procedure and patent enforcement may become extremely complicated. The other problem is the question of which country is to be the place of invention for an invention that is jointly completed by researchers located in multiple countries. In a country that obligates an applicant filing a foreign application to have

filed the first application in that country, this question will be an important determination factor when complying with such obligation.

Thus, in this study, a survey was conducted on statutory laws and regulations, trial decisions by administrative organs, guidelines, court judgments, case examples and academic theories concerning recognition of joint inventors and the place of invention in international joint research projects, in Japan, the United States, Germany, the United Kingdom, France, China and South Korea. The survey results were organized, analyzed and summarized by country, and the points to be noted by Japanese researchers conducting international joint research projects were identified.

II Joint Inventors

Section 1 summarizes matters concerning the definitions of inventors and joint inventors, recognition of joint inventors, and application of foreign laws on a country-by-country basis.

In cases where a patent application procedure is carried out while there is an

unnamed inventor due to a mistake in the recognition of inventors, the following points should be noted:

- One of the points is the presence or absence of provisions permitting the Patent Office to refuse an application or invalidate the patent when an application has been filed with a mistake in the recognition of inventors. This point is summarized in Section 2.
- Another point is whether or not an application could be refused or a patent could be invalidated on the basis of any inconsistency between the persons who have the right to obtain a patent and the applicants. This point is summarized in Section 3.
- There is also a point of whether or not a joint owner of a patent may institute a lawsuit against exploitation of the invention, patent licensing, transfer of a share of the patent right, or patent infringement, independently without the consent of the other joint owners, when no agreement exists between the joint owners. Since the unnamed inventor has the right to obtain a patent, there is a possibility that he/she will be added to the applicants or will receive transfer of a share of the patent right after the patent right has been granted. Also, since the applicants had not recognized the unnamed inventor as an inventor at the time that the application was filed, it is very unlikely that the applicants and the unnamed inventor have concluded a joint application contract or the like between them. This point is also summarized in Section 3.

1 Recognition of joint owners

For all countries surveyed, the major view was to apply the laws of the home country instead of foreign laws to recognition of inventors when establishing a patent right. Also, no provisions of patent law or other laws, case law or court judgments were found concerning recognition of joint inventors in international joint research projects.

As for the definitions of inventors and joint inventors, requirements for recognition, and recognition methods, it seems to be

common to all of the countries surveyed that a mere assistant, advisor or fund provider or a person who merely gave orders would not be recognized as a joint inventor, but there seems to be no unified viewpoint that could be used in practice.

Therefore, recognition of joint inventors in international joint research projects would have to be carried out in each country where the application is filed and the patent is granted, in accordance with the statutory law and case law of that country.

The key points on recognition of joint inventors in each country are indicated below.

(1) Japan

Academic theories are divided between a theory that regards an inventor to be only a natural person who has truly made an invention and who has actually taken part in the act of creating said invention, and a theory that regards an inventor to be a person who has completed a specific technical means stated in the patent claims.

Meanwhile, there are various academic theories and court holdings concerning recognition of joint inventors, and one cannot make a sweeping generalization of the requirements for recognition of joint inventors under the current situation. However, the past court judgment can roughly be divided into 1) cases where the court determined the inventorship from the viewpoint of his/her involvement in the characteristic features of the invention and 2) cases where the court determined the inventorship from the viewpoint of the time that the invention was completed.

(2) United States

There is a view that the inventor is the person who conceived the subject matter at issue, as recited in a claim or otherwise. According to case law, conception is “the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention.”

With regard to recognition of the inventor, there is a view stating that the question of

whether an invention is deemed to have been completed at the time the invention was conceived or it is deemed to have been completed only when it has been reduced to practice, is irrelevant, and that only the person who devised the subject matter of the claims is deemed to be the inventor, with joint inventors being required of at least some quantum of collaboration or connection.

(3) Germany

Case law adopts a view that there are three crucial elements for recognition of an inventor. The first element is the understanding that only the human being, who developed the gist of the invention by means of a creative act, can be an inventor. The second element is that the invention must be communicated. The third element is a creative contribution to the invention. The creative contribution means a contribution exceeding the ordinary skill of the person skilled in the art.

(4) United Kingdom

An inventor is the actual deviser of the invention. There is a case law that focuses on creation of the concept of the invention, that is, conception of the invention, as the requirement for recognition of the inventor, while there is also a case law that focuses on not only the conception at the basis of the invention, but also its reduction to practice.

Not many court judgments discuss issues concerning the mode and extent of the contribution to invention that are required for recognition of a joint inventor. Thus, there is a view that the inventors are recognized on a case-by-case basis at the discretion of the court judge, since no precise standards are specified in statutory law or case law.

(5) France

There is a view that an inventor is a person who had successfully conducted research to find the technical means for solving a technical problem and/or who participated in finding these technical means to be implemented to solve that technical problem.

There is a view that, to be recognized as a joint inventor, a person must have indeed participated in finding the technical means for solving the technical problem at the basis of the invention by having a real personal contribution to the intellectual and practical determination of this technical means, but not only by merely executing instructions given by another person or by only using his/her know-how.

(6) China

An inventor as referred to in the Patent Law is a person who has made a creative contribution to the substantive features of the invention-creation. There is a court holding indicating that joint inventors are recognized through the following determination procedure in judicial practices.

Firstly, the extent of contributions to the achievement provided by the persons who participated in the invention is determined based on facts. Such contributions include selection of the theme, submission of devices, and submission of ideas that involve inventive steps and ideas on specific modes for carrying out the invention.

Secondly, by comparing the extent of contributions provided by all persons who participated in the research, the person who made a creative contribution to the substantive problem solving is determined to be the inventor. If two or more persons have made creative contributions, they are all considered to be joint inventors.

With regard to the former of the two elements above, persons who are not related to the invention-creation based on the requirements for the invention-creation shall be excluded. As for the creativity of invention in the latter, the invention-creation must have substantive features, and such substantive features must be such that there are substantive differences, which can be imagined in association by persons skilled in the art, between the technical features of the invention-creation and prior art. Persons who have made creative contributions include persons who have submitted the idea of the invention and related specific technical

devices.

(7) South Korea

An inventor is defined as a person who has created technical matters using the rules of nature.

There are guidelines stating that, in order to be joint inventors, each joint inventor must have made beneficial contributions to the completion of the invention through technical mutual complementation at least in one part of the process of completion of the invention. In addition, specific case examples of recognition are provided in the standards for recognition of joint invention in employees' inventions.

2 Naming of the inventors in the patent certificate, etc.

All of the countries surveyed have provisions to the effect that the names of the inventors should be published in the patent certificate or the patent gazette, and procedural provisions stating that the names of the inventors of the invention in question should be indicated in the application.

Only the United States has a system where an application is refused or the patent is invalidated based on a mistake in the naming of inventors. In the United States, provided that the mistake in the naming of the inventors has occurred without deceptive intention on the part of the mistakenly named or unnamed inventor, and with the consent of all of the inventors and transferees, the mistakenly unnamed inventor may be added to the list of inventors or the mistakenly named inventor may be deleted from the list of inventors. If such correction is made, the patent will not be invalidated.

3 Legal relationships between inventors

Among all the countries surveyed, Japan, China and South Korea seem to be the only countries that have a system where applicants are obligated to file a joint application when two or more persons jointly

own the right to obtain a patent, and a failure to comply with this obligation leads to refusal of the application or invalidation of the patent.

The countries do not have a unified system, but do have systems with their respective characteristics with regard to whether or not a joint owner of a patent may independently institute a lawsuit seeking exploitation of the invention, licensing to a third party, or an injunction against a third party or transfer his/her share of right to a third party, when the patent right is jointly owned. Roughly divided, the countries that have detailed provisions concerning acts conducted independently by a joint owner of a patent are Japan, the United Kingdom, France, China and South Korea, while the countries that do not have such detailed provisions are the United States and Germany.

The key points for each country are indicated below.

(1) Japan

There are provisions on an obligation to file a joint application when the right to obtain a patent is jointly owned. When these provisions are not met, the application will be refused or the granted patent will be invalidated.

The Patent Act provides that amendments concerning the applicants may be made while the application is pending before the Patent Office.

There are court judgments holding that a demand seeking transfer of a share of a right, made after the grant of the right, by a person who had the right to obtain a patent is not accepted in the case of a misappropriated application.

As acts that a joint owner of a patent right may conduct independently without obtaining the consent of the other joint owners when the patent right is jointly owned and no agreement exists between the joint owners, the Patent Act provides for "exploitation of the invention" and academic theories indicate "institution of lawsuits." As acts that require the consent of the other

joint owners in the same case, the Patent Act provides for “licensing” and “transfer of a share of the patent right.”

(2) United States

Since an application must be filed by the inventors, there are no provisions obligating the persons who have the right to obtain a patent to file a joint application when the right to obtain a patent is jointly owned.

There is a view that, when a patent right is jointly owned, a joint owner of the patent may not grant an exclusive license to third parties, nor institute a lawsuit in actuality, without the consent of the other joint owners. There is a view that a joint owner of a patent may independently exploit the invention, grant a non-exclusive license, or transfer a share of the patent, without the consent of the other joint owners.

(3) Germany

There are no provisions obligating the persons who have the right to obtain a patent to file a joint application when the right to obtain a patent is jointly owned. However, when a person who has the right to obtain a patent is not named as an applicant, it is possible to file a legal action for adding such unnamed person to the joint applicants or, if the patent has already been granted, file a legal action seeking transfer of his/her share of the joint ownership.

There is a view that, when a patent right is jointly owned, a license may be only granted jointly, and institution of a lawsuit and transfer of a share of a patent may be carried out independently without the consent of the other joint owners.

(4) United Kingdom

There are no provisions obligating the persons who have the right to obtain a patent to file a joint application when the right to obtain a patent is jointly owned. However, when a person who has the right to obtain a patent is not named as an applicant at the time of the filing, it is possible to make an application to the Court or Patent Office to decide on the issue of ownership.

The Patent Act provides that, when a patent right is jointly owned, a joint owner may independently exploit the invention and institute a lawsuit without the consent of the other joint owners, but he/she must obtain the consent of the other joint owners to grant a license or transfer a share of the patent.

(5) France

There is a view that, when the right to obtain a patent is jointly owned, and a joint owner of the right to obtain a patent is not named as an applicant or an owner of the patent, such joint owner may demand a procedure to transfer his/her share of the right.

There are provisions stating that the consent of the other joint owners is not required for exploitation of the invention, grant of a non-exclusive license, institution of a lawsuit and transfer of a share of the patent. However, there are also provisions stating that a joint owner may independently exploit the invention or grant a non-exclusive license, but must equitably indemnify the other joint owners who do not exploit the invention or who have not granted a non-exclusive license, and with regard to transfer of a share of the patent, the other joint owners will have a pre-emption right.

(6) China

There are provisions on an obligation to file a joint application when the right to obtain a patent is jointly owned. When these provisions are not met, the patent application will be deemed not to have been filed, or notification of an order of amendment requesting transfer of a share of the right will be sent.

There are no express provisions on whether or not a joint owner may exploit the invention without the consent of the other joint owners when a patent right is jointly owned. There are provisions stating that the consent of the other joint owners is required for granting a license, and there is a view that the consent of the other joint owners is required for transfer of a share of the patent.

(7) South Korea

There are provisions on an obligation to file a joint application when the right to obtain a patent is jointly owned. When these provisions are not met, the patent application is refused or the patent is invalidated. There is a view that a remedy would be to transfer a share of the right to the unnamed owner.

There are provisions stating that, when a patent right is jointly owned, the consent of the other joint owners is not required to exploit the invention, but the consent of the other joint owners is required to transfer a share of the right. There are neither provisions nor court judgments concerning the institution of a lawsuit by a joint owner.

4 Points to be noted by Japanese researchers when conducting international joint research projects

For all countries surveyed, the major view was not to apply foreign laws to recognition of inventors with regard to establishment of a patent right. Recognition of joint inventors is a matter related to validity or invalidity of the patent, that is, a matter related to establishment of the patent right. From this viewpoint, it can naturally be deduced from the Paris Convention framework, which provides for the principle of independence of patents, that each country is to independently regulate the contents or extinguishment of granted patents by express provisions, within its own territory and based solely on its national laws, and that there is no room to discuss application of foreign laws in that context. Therefore, recognition of inventors would have to be determined in each country where the patent application was filed.

Accordingly, when Japanese researchers carry out an international joint research project and file patent applications with multiple countries, they must file the applications by giving sufficient consideration to the national laws of each country.

III Place of Invention

The presence or absence of a system obligating the filing of the first application in the home country and a foreign filing license system, as well as the outline of such systems, are summarized below for each country.

1 Japan

There are neither provisions on an obligation of first application nor those on a foreign filing license. Due to such a lack of provisions requiring recognition of the place of invention, there are no academic theories or court judgments concerning recognition of the place of invention.

With regard to application of foreign laws, the major view adopts the principle of not applying foreign public laws.

2 United States

There is a foreign filing license system. There are two procedures for issuing a foreign filing license. One is the procedure to file a petition for issuance of a foreign filing license. An applicant may file an application with a country other than the United States after acquiring the foreign filing license. The other is the procedure to file a patent application with the U.S. Patent and Trademark Office (USPTO). A patent application is deemed to be a petition for a foreign filing license, and is deemed to be a foreign filing license after six months from the filing. Therefore, an applicant may file an application with a country other than the United States when six months have passed from the filing date. However, this automatic foreign filing license may be revoked by the imposition of a secrecy order. Such secrecy order is imposed when disclosure of the invention involves national security concerns.

When an application relating to an invention subject to a secrecy order has been filed with a foreign country, the patent application filed with the United States is deemed to have been abandoned. Further, the

person who has filed such application may be fined not more than 10,000 dollars or imprisoned with or without work for not more than two years.

With regard to recognition of the place of invention, that is, the question of whether or not the invention was made in the United States, there is a view that the invention needs to have been conceived or reduced to practice at that place.

As for application of foreign laws, there is a view that U.S. laws should be observed without giving consideration to the laws of other countries.

3 Germany

There is no obligation of first application. There is a system of foreign filing license only for an invention that constitutes a state secret. If an invention constitutes a state secret pursuant to §93 of the German criminal act, the applicant must first apply for a foreign filing license with the Ministry of Defense and obtain its written consent.

When filing a European patent application that may constitute a state secret, the applicant must file the application with the German Patent and Trademark Office (GPTO) along with an annex indicating that the application may contain a state secret. If there is no state secret in the invention, the application is forwarded to the European Patent Office (EPO). Otherwise, the application stays with the GPTO and will not be published.

As for PCT applications, for all those filed with the GPTO serving as the receiving office, the GPTO must examine whether or not they contain a state secret. If a PCT application does contain a state secret, it will be automatically converted into a national German patent application, which is not published.

A state secret can relate, for instance, to weapon technology, cryptography, and nuclear power plant technology.

As for penal provisions, persons intentionally contravening the provisions above may be punished with a monetary fine

or imprisonment without work for not more than five years.

There is a view that the place of invention is irrelevant under the German patent law system. Therefore, the survey did not find any court judgments in which foreign laws were applied with regard to recognition of the place of invention.

4 United Kingdom

There is a foreign filing license system. However, this system is applied only when an application contains information that relates to military technology, or publication of the information might be prejudicial to national security or to the safety of the public.

When filing such application with a foreign country, an applicant must file the application after obtaining written authority by the comptroller to allow the application to be filed abroad, or file the application after six weeks have passed from the filing with the U.K. Intellectual Property Office (UK-IPO).

As for penal provisions, a person who fails to comply with the provisions above shall be imposed a fine of not more than £1,000 or imprisonment without work for not more than two years.

There is a view that the place of invention is irrelevant under the U.K. patent law system. Therefore, the survey did not find any court judgments in which foreign laws were applied with regard to recognition of the place of invention.

5 France

There is a system similar to the system of obligation of first application. When the applicant has his/her place of residence or business in France, then he/she may file as a first filing a European patent application, but this European patent application must be filed in France.

In addition, there are provisions stating that the international application for the protection of an invention filed by natural or moral persons having their place of residence

or business in France must be filed with the National Institute of Industrial Property of France (INPI) and priority must be claimed based on an earlier application filed in France. Therefore, the first filing may be applied for in France via a PCT application, but that PCT application must be filed in France when the applicant has his/her place of residence or business in France.

As for penal provisions, without prejudice of the heavier penalties provided for with regard to violation of state security, any person who knowingly violates any of the obligations above may be liable for a fine of 4500 €. Where the violation has prejudiced national defense, the violator may be sentenced to a five-year term of imprisonment with work. However, the patent is not invalidated.

There is a view that the place of invention is irrelevant under the French patent law system. Therefore, the survey did not find any court judgments in which foreign laws were applied with regard to recognition of the place of invention.

6 China

There is a system of obligation of first application. There are provisions stating that, when filing a foreign patent application for an invention-creation made in China, the applicant must first file the application with the State Intellectual Property Office of the People's Republic of China (SIPO), that is, the patent administration department under the State Council. Where an invention-creation for which a patent is applied for relates to the security or other vital interests of the State and is required to be kept secret, the application shall be treated in accordance with the relevant prescriptions of the State.

An international patent application under the PCT must also be filed with SIPO serving as the receiving office, and the application will be processed in the same manner after the filing.

The view on the first application system is divided between one that deems the system

as applicable to all persons who have the right to obtain a patent relating to an invention-creation made in China, and one that deems the system as not applicable when, for instance, a Japanese company has acquired, based on a contract, rights for an invention-creation prior to the filing of a patent application.

As for penal provisions, there are provisions stating that any person who has failed to comply with the first application obligation or has divulged a State secret shall be subject to disciplinary sanction, and where a crime is established, the person concerned shall be prosecuted for his/her criminal liability according to the law.

There is a view that foreign laws are not applied.

7 South Korea

There are no provisions on the first application obligation.

With regard to foreign filing license, there are provisions stating that, if an invention is necessary for national defense, the government may order an inventor, etc. not to file a patent application for the invention in the foreign patent offices concerned or to keep the invention confidential, but if such persons obtain permission from the government, they may file an application in foreign patent offices. Therefore, an applicant may freely file applications with foreign patent offices unless such measure has been taken by the government.

8 Points to be noted by Japanese researchers conducting international joint research projects

This section indicates the points that researchers in Japan should take note of with regard to recognition of the place of invention, the first application obligation and the foreign filing license, when carrying out international joint research projects with researchers domiciled in the countries surveyed.

(1) Joint research project between Japan and the United States

Attention should be paid to whether or not the invention was conceived and reduced to practice in the United States. Considering that even an inventor who contributed only to a dependent claim is recognized as a joint inventor, attention should also be paid to whether or not the invention defined in any dependent claim was conceived and reduced to practice in the United States.

When it is determined that the invention has been completed in the United States, the researchers should either file a petition for issuance of a U.S. foreign filing license and file applications with countries other than the United States after the issuance of said license, or file a patent application with the USPTO and file applications with countries other than the United States after six months from such filing.

(2) Joint research project between Japan and Germany

Attention should be paid to whether or not the invention has the nature of a state secret. Special attention must be paid to whether such state secret includes not only weapon technology, but also cryptography and nuclear power plant technology.

When the invention has the nature of such a state secret, the researchers should file applications with countries other than Germany by any of the following methods.

- Apply for a foreign filing license with the Ministry of Defense, and file foreign applications after obtaining its consent in writing.
- File a European patent application by filing the application with the GPTO along with an annex indicating that the application may contain a state secret.
- File an international application based on the PCT with the GPTO serving as the receiving office.

It should be noted that the provisions on the foreign filing license system in Germany are applied to cases where an invention has the nature of a state secret, regardless of whether or not the invention was conceived

or completed in Germany.

(3) Joint research project between Japan and the United Kingdom

Attention should be paid to whether or not an application contains information that relates to military technology or information that might be prejudicial to national security or to the safety of the public.

It should be noted that, when filing an application containing such information with a foreign country, it is necessary to file the application after obtaining written authority by the comptroller to allow the application to be filed abroad, or file the application after six weeks have passed from the filing with the UK-IPO.

It should be noted that the provisions on the foreign filing license system in the United Kingdom are applied to cases where an invention contains information that relates to military technology or information that might be prejudicial to national security or to the safety of the public, regardless of whether or not the invention was conceived or completed in the United Kingdom.

(4) Joint research project between Japan and France

It should be noted that, when filing a European patent application, if the applicant has his/her place of residence or business in France, then he/she may file as a first filing a European patent application but this European patent application must be filed in France.

With regard to a PCT application, it should be noted that, if the applicant has his/her place of residence or business in France, he/she must file the PCT application with the INPI serving as the receiving office, and priority must be claimed based on an earlier application filed in France.

An inventor who has a French nationality or who has his/her habitual residence in France must also comply with these matters.

(5) Joint research project between Japan and China

It should be noted that views are divided with regard to the provisions on the first application obligation.

Attention should be paid to the fact that, from the viewpoint that the system is not applied when a Japanese company has acquired rights for an invention-creation prior to the filing of a patent application, all rights to obtain a patent relating to an invention completed in China should be transferred to a person who does not have Chinese nationality or to a non-Chinese juridical person based on a research commission contract or a transfer contract prior to the filing of the patent application.

From the viewpoint that the provisions on the first application obligation are applied to all persons having the right to obtain a patent relating to an invention completed in China, attention should be paid to whether or not the invention was completed in China. It should be noted that, if the invention was completed in China, an application should be filed with SIPO or an international application based on the PCT should be filed with SIPO serving as the receiving office. Applications should then be filed with countries other than China, or the PCT application should enter the national phase in countries other than China.

(6) Joint research project between Japan and South Korea

An applicant may freely file an application with any country, in principle. It should be noted, however, that, only when the South Korean government has ordered the applicant, etc. not to file applications relating to an invention necessary for national defense with foreign countries or to keep such invention confidential, such applicant, etc. may file applications with countries other than South Korea after obtaining permission from the government.

IV Closing Remarks

As a result of the survey, the major view

was not to apply foreign laws to recognition of inventors with regard to establishment of a patent right and to the obligation of first application or foreign filing license. As for uniformity of the provisions in the countries surveyed, there were no practical matters that were found to be common to all of the countries, except for basic matters concerning joint inventors. In all the countries surveyed, recognition of inventors seems to be relevant to provisions on the requirements for the filing procedure, etc. On the other hand, the place of invention is relevant only in the United States and China, and not in the other countries.

When an international joint research project is carried out and the researchers intend to file an application relating to an invention made in the project, they must first examine the provisions of the country where the research was conducted, and comply with the first application obligation or other obligations on foreign filings. Then they must determine the joint inventors based on the provisions of the countries with which they intend to file applications.

Lastly, invention is a factual act. Recognition of joint inventors and that of the place of invention are carried out based on such factual act. This also applies when using a communication means via the Internet, when the research is conducted at places located in multiple countries, or when research is conducted in an airplane or on a ship. Therefore, in order to recognize joint inventors and the place of invention based on the different provisions of different countries, it is important to keep detailed records of the R&D process. Depending on the combination of the countries in which research is conducted, there will be a risk of not being able to file an application with any country due to the obligation of first application or other obligations on foreign filings in those countries. Therefore, if possible, researchers should sufficiently examine and carefully select the countries in which the research is to be conducted or the places for conducting the research, before starting the R&D.

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