

## **Working Guidelines**

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### **Q244**

#### **Inventorship of multinational inventions**

##### **Introduction**

- 1) This Working Question concerns the issue of inventorship of inventions where the inventors reside in different countries. Due to the prevalence of international corporations having geographically distributed research groups, multi-national joint venture projects, international corporate/university collaborations, and other cross-border research projects, and further due to the ease of international communications and exchange of data, international joint inventorship is today a common occurrence.
- 2) International joint inventorship presents a number of substantive and procedural challenges for the patent owner. These challenges include the following.
  - a. **Determination of inventorship.** The laws defining who is considered to be an inventor of an invention claimed in a patent application vary from country to country. Thus, in the case of multinational inventions, different laws concerning inventorship may apply to different inventors. However, the validity or enforceability of multiple patents ultimately issuing in various different countries from a single patent application directed to a multinational invention will depend on the correct identification of inventors according to each country's national laws.
  - b. **Foreign filing restrictions.** Many countries place restrictions on an inventor's ability to file a patent application in a foreign country. These restrictions generally fall in three categories, as set forth below.
    - i. **First filing requirements.** Some countries require that patent applications claiming inventions made in their country be filed first in their country. In the case of multinational inventions, it may be difficult or even impossible

for the patent owner to comply simultaneously with the first filing requirements of each of the inventors' home countries.

- ii. Foreign filing licenses. Some countries have a procedure for requesting permission to make the first filing of a patent application in another country. However, these procedures are not available in all jurisdictions and, even where available, they can differ substantially in terms of cost and delay.
  - iii. Secrecy review. First filing and foreign filing license requirements generally exist to provide governments with an opportunity to perform a secrecy review prior to a patent application being filed in another country. Some countries require that an invention that is desired to be claimed in a patent application undergo a secrecy review to determine if it relates to certain technology areas that are considered national secrets, or if it otherwise impacts national security, before it may be sent outside the country for the purpose of filing a patent application. Failure to comply with these requirements may result in loss of patent rights or even in criminal sanctions.
- c. **Inventor remuneration**. Some countries have requirements relating to the amount of remuneration an employee must receive for an invention made by the employee and filed in a patent application by the employer. This remuneration may be due at different times, such as at the time of filing the initial application, the time of issuance of a patent, and/or at the time of licensing the patent. These requirements vary from country to country, and some countries have no such requirements. Hence, inventor remuneration is an extremely complex topic in the context of multinational inventions.
- d. **Ownership of the invention**. The laws relating to who owns an employee-made invention, and the actions necessary to properly vest the ownership rights in the employer, vary from country to country. Hence, inventors of a multinational invention may need to be treated differently depending upon their country of residence or citizenship, the domicile of the employer, and/or the national law of the employment contract.
- 3) Of the various considerations listed above, ownership of the invention and inventor remuneration will not be considered in this Working Question. The topic of ownership of the invention was considered in a series of recent resolutions of AIPPI, as summarized below, and thus need not be revisited at this time. The issue of inventor remuneration has not yet been considered by AIPPI in a Working Question. While this is a very important issue for the topic of multinational inventions, it is beyond the scope of this Working Question, and will be reserved for later study.

#### **Previous work of AIPPI**

- 4) AIPPI has previously studied aspects of the subject matter of this Working Question in connection with Q183 - "Employer's rights to intellectual property." In the Resolution on this question (Geneva, 2004), AIPPI considered as follows:

- a) *That the large majority of subject matter protected by intellectual property in today's world is created within the framework of an employment relationship.*
  - b) *That the existence of considerable differences between national laws concerning employers' and employees' rights to intellectual property causes complications and problems for cross border R&D both within multinational enterprises and for cooperation between companies.*
  - c) *That the ownership of the intellectual property rights should be governed by harmonised rules since it has an impact on their prosecution and their enforcement.*
- 5) AIPPI has also studied aspects of the subject matter of this Working Question in connection with consideration of issues relating to co-ownership of inventions. In the Resolution on Q194 - "The Impact of Co-Ownership of Intellectual Property Rights on their Exploitation" (Singapore, 2007), harmonized recommendations included:
- 1) *It is recommended that all countries adopt rules in their IP laws concerning the co-ownership of IP rights and that those rules be harmonized.*
  - 2) *Co-owners should be free to organize their co-ownership arrangements. In the absence of such arrangements national law regulating co-ownership of IP rights should apply.*
- 6) In the Resolution on Q194BA – "The Impact of Co-Ownership of Intellectual Property Rights on the Exploitation" (Buenos Aires, 2009), harmonized recommendations included:
- 4) *For the sake of the legal certainty and inasmuch as the national laws are not harmonized on the co-ownership of intellectual property rights, as was held in the Singapore resolution, co-owners of an intellectual property right should be allowed to decide on the choice of law and jurisdiction in connection with resolution of disputes among co-owners.*
- When the co-owners of an intellectual property right have not entered into an agreement or have not specified the applicable law in their agreement, that relationship between the co-owners (such as, regarding the right to license, exploit or assign etc.) should be governed by a single law.*
- In determining this single law, the principles of private international law should apply, preferably by using the principle of closest connection. To this end, it is recommended that among the possible factors for deciding such closest connection are the country where the co-owners are domiciled and the place where the relevant right was predominantly created, first used or first filed.*
- In view of the importance and complexity of the issue of the law applicable to the relationship between co-owners of intellectual*

*property rights, AIPPI recommends that this issue should be addressed in the context of international regulations and/or treaties.*

*The non-contractual relations between co-owners and third parties shall be governed by the law of the country that confers protection or where the right may be enforced.*

- 7) At the Executive Committee in Hyderabad in 2011, a workshop was held entitled "Multinational Inventions – How to Reconcile IP Issues." Speakers from the United States (**US**), China, Germany, and India addressed various aspects of this topic. The presentations from that workshop are available on the AIPPI website.

## **Definitions**

- 8) **Multinational Inventions**. For the purposes of this Working Question, ***multinational inventions*** means inventions having two or more inventors where different national laws concerning inventorship apply to at least two of the inventors. In the most common case, this would involve, for example, a first joint inventor of citizenship X residing in country X who is a co-inventor of an invention with a second joint inventor of citizenship Y residing in country Y. However, different national laws may apply to the (at least) two inventors even if they are of the same citizenship, but reside in different countries. Different national laws may even apply to the two inventors if they reside in the same country, but are of different citizenship or have employment contracts under different national laws.
- 9) **First filing requirement**. For the purposes of this Working Question, a ***first filing requirement*** means a requirement that a patent application for an invention – be it all inventions or only inventions in certain technology areas – that is made or partially made in a country be filed first in that country before filing in any other country.
- 10) **Foreign filing license**. For the purposes of this Working Question, a ***foreign filing license*** means any procedure or mechanism for obtaining an exemption to a first filing requirement.
- 11) **Secrecy review**. While the first filing requirement is a procedural requirement, ***secrecy review*** as used in this Working Question refers to a substantive review by a governmental authority of the subject matter of a patent application to determine whether it implicates national security or other national interests, or includes subject matter that must be kept secret.

## **Discussion**

### **Determination of inventorship**

- 12) Existing laws defining who should be considered an inventor of an invention claimed in a patent application vary from country to country. In the case of a utility patent application with multiple joint inventors, an individual inventor may have contributed to all, some, or only one of the claims in the application. An individual involved in the research leading to the invention may have contributed to the invention in a way that falls within the definition of inventorship in one country but not in another. In some countries, customary practices may historically take precedence over a strict legal

determination of inventorship. For example, it may be a common practice to list all members of a research team as joint inventors, regardless of individual contribution. In some countries, a research team leader or lead professor may be listed as a joint inventor to show respect rather than due to an actual inventive contribution.

- 13) In China, for example, an inventor is a person who makes *creative contributions* to the *substantive features* of an invention. On the other hand, a person who is responsible only for organizational work, who offers facilities for making use of materials and technical means, or who takes part only in other *auxiliary functions*, is not considered to be an inventor. While, from a legal perspective, the “substantive features” refer to those features that distinguish the invention from the closest prior art and thus render the invention patentable, in practice they are generally considered as the act of proposing the original idea of the originally claimed invention.
- 14) Japan has a system similar to that of China. Specifically, only a person who has substantially engaged in the creative process of an invention can be named as an inventor. In contrast, the following persons may not be named as an inventor: (1) a supervisor who simply controls researchers (e.g. provides researchers with a subject without indicating any substantial solution); (2) a person who simply follows instructions from a researcher to collect data or conduct experiments; or (3) a person who contributes to the completion of an invention merely by providing the inventor with funds or facilities. This system has been established by case law.
- 15) In the US, the inventorship determination turns on who “conceived” the invention. Thus, in the case of an invention that results from a team effort, it is necessary to distinguish between the person or persons who contributed to the conception of the invention and the others who merely acted under the direction of the conceivers, for example, to reduce the invention to practice. US patent law (35 U.S.C. §116) specifically addresses joint inventorship:

*(a) JOINT INVENTIONS. — When an invention is made by two or more persons jointly, they shall apply for patent jointly and each make the required oath, except as otherwise provided in this title. Inventors may apply for a patent jointly even though (1) they did not physically work together or at the same time, (2) each did not make the same type or amount of contribution, or (3) each did not make a contribution to the subject matter of every claim of the patent.*
- 16) Indian patent law allows an application for patent to be made by “any person claiming to be the true and first inventor of the invention.” (Patent Act, Section 6(1)). “True and first inventor” is defined as one which “does not include either the first importer of an invention into India, or a person to whom an invention is first communicated outside India.” (Patent Act, Section 2(y)). The term “inventor” is not defined in the Act but has been interpreted generally to mean one who contributes any part of his ingenuity, skill, or technical knowledge towards the invention.
- 17) The European Patent Convention does not provide a definition of “inventor” or “co-inventor”. Thus, inventorship is determined according to national laws. When the Agreement on the Unified Patent Court enters into force, the national courts will remain competent for disputes regarding inventorship of European patents and European patents with unitary effect. The German case law recognizes an inventor as

a natural person who has recognized the inventive idea and developed instructions for a technical action in a creative act; a co-inventor is a person who made his or her own creative contributions to the inventive idea. In the United Kingdom (**UK**), an inventor is defined as “the actual deviser of the invention,” which generally means one who contributed to a patentable aspect of the invention. Under French case law, an inventor is the person or persons from whom the invention and the inventive step originated.

- 18) If an incorrect indication of inventorship is made on a patent application, the consequences of this error vary from country to country. The issued patent may be held to be invalid or unenforceable in some jurisdictions but not in others. The error may be correctable in some countries, but not in others.
- 19) It is apparent from the examples above that the definition of who is an inventor – if such a definition even exists – varies significantly among different jurisdictions. This presents a serious challenge to ensuring correct indication of inventorship on a patent application in the case of multinational inventions.

#### Foreign filing restrictions

- 20) Once it has been determined that the joint inventors of a desired patent application are, for example, inventor A in country X and inventor B in country Y, it is then necessary to determine how to comply with national laws relating to first filing requirements, foreign filing licenses and secrecy reviews. These laws, which exist in various forms in some countries and not in others, generally seek to force first filing in the home country so as to provide the government with an opportunity to review the subject matter and ensure that certain categories of information are not transmitted outside the country.
- 21) However, in the example, it should be evident that regardless of where the patent application is ultimately filed, the information has already been exchanged among the inventors due to their joint inventorship. Thus, national laws prohibiting sending certain information out of the country, and the *intent* if not the letter of the foreign filing requirement, may have been violated by the exchanges of a draft patent application within the research team itself, even before the issue of where to first file the patent application arises.
- 22) As to procedural compliance with the national first filing laws, if both country X and country Y have a first filing requirement, it may be impossible to comply with both laws unless one country has a foreign filing license provision that would allow obtaining a license to file in the other country. Even in this case, the procedure can be complex.
- 23) Consider a jointly made invention with one inventor in the US and another in China. Filing the application first in the US would violate Chinese law. Filing the application first in China would violate US law. Making a request for a foreign filing license in China, which would require describing the invention to the Chinese authorities, could violate US law. However, filing a request for a foreign filing license first in the US,

followed by an actual filing first in China, may satisfy both country's laws (this point is not clear under the relevant law, but many companies follow this practice). It is apparent that the complexity increases exponentially as additional joint inventors from other jurisdictions are added.

- 24) The degree of variation in this area of the law from country to country is extreme. For example, just within Europe, Austria, Estonia, Iceland, Ireland, Latvia, Monaco, San Marino, Serbia, Slovenia, Switzerland and Liechtenstein have no security / first filing provisions. Denmark has provisions that are limited to technologies related to war material or processes for the manufacture of war material. The UK, Germany, and the Netherlands have provisions that are limited to defense-related technologies. France's and Italy's security provisions apply irrespective of technology. The German provisions, when implicated by the involved technology, mandate no disclosure at all, while those of the Netherlands, the UK, France and Italy mandate a first national filing. Among these, obtaining a foreign filing license is possible in France, the UK, Germany and Italy.
- 25) The criteria for application of these provisions also differ among, for example, nationality or domicile of the applicant (Netherlands, France and Italy), residency of the inventor (UK and France), and content of the invention (Germany and Czech Republic). Outside Europe, countries including India, China, Korea (limited to defense-related technology), Russia, and the US have first filing or secrecy review requirements. No such requirements are found in other countries such as Japan, Canada, Australia and Mexico. Countries such as the US and China have provisions to obtain foreign filing licenses, while other countries such as Russia and Spain do not.
- 26) With the continued increase in multinational inventions, the substantive and procedural issues above have become increasingly problematic. A harmonized approach to determining inventorship, and a balanced, harmonized approach to protecting national security interests while providing reasonable, usable, and understandable avenues for compliance with first filing and foreign filing license requirements are strongly needed.

***You are invited to submit a Report addressing the questions below. Please refer to the 'Protocol for the preparation of Reports'.***

## **Questions**

### **I. Current law and practice**

- 1) Please describe your law defining inventorship and identify the statute, rule or other authority that establishes this law.
  - a. If person A, located outside your country, directs the efforts of person B, located in your country, for making an invention in your country, under what circumstances would person A and/or person B be considered an inventor under your law?

- b. Does your law defining inventorship rely on or look to a particular part of the patent application? For example, is inventorship under your law determined on a claim by claim basis, determined based on the content of the drawings or the examples, or determined on some other, and if so, what basis?
- 2) Does your law of inventorship depend on the citizenship of the inventor(s)?
  - 3) Does your law of inventorship depend on where the invention was made (e.g. on the residency of the inventor(s))?
  - 4) Can the inventorship of a patent application be corrected after the filing date in your country?
    - a. If yes, what are the requirements and time limits for such correction?
  - 5) What are the possible consequences of an error in the stated inventorship on a patent application in your country? Can a patent issued from such an application be invalidated or rendered not enforceable on that basis? Does it matter whether the error was intentional or unintentional?
  - 6) Does your law require that an application for a patent claiming an invention made in your country, whether in only one technical area or in all technical areas, be filed first in your country?

If the answer is yes, please answer the following:

- a. Is the law requiring first filing in your country limited to a specific area of technology or otherwise limited such that it does not apply to all inventions made in your country? If yes, please explain.
- b. Does your law provide for granting of a foreign filing license or similar mechanism that would allow a patent application for an invention made in your country to be filed first in another country? Please describe any such foreign filing license or similar mechanism as well as the procedure, timing, and cost of obtaining it.
- c. If the answer to b. above is yes, is it possible to obtain a foreign filing license retroactively, for example, if a foreign filing was made without a foreign filing license due to inadvertent error?
- d. How does your law apply to an application for a patent claiming an invention that was made jointly by an inventor in your country and an inventor in another country? Does this apply based on the citizenship of the inventor, the residency of the inventor, or both? Does the nationality of the patent owner affect your answer?
- e. In the case of an invention made jointly by an inventor in your country and an inventor in another country, would it violate your law if a request for a foreign filing license was filed in the other country before being filed in your country?



- f. What are the possible consequences for failing to comply with this law? Does it matter whether the error was intentional or inadvertent?
- 7) Does your law require that a patent application claiming an invention made, at least in part, in your country undergo a secrecy review or similar process before it can be filed in another country?
- a. If yes, does this law depend on the area of technology that is disclosed and claimed in the patent application?
- b. If yes, describe this aspect of your law as well as the procedure, timing, and cost of compliance with it.
- c. If yes, describe the possible consequences of failing to comply with this law. Does it matter whether the error was intentional or inadvertent?

## **II. Policy considerations and proposals for improvements of the current law**

- 8) If your law defines inventorship, is this definition sufficient to provide patent applicants with clear guidance as to who should be named as the inventor(s) of a patent application? Are there aspects of this definition that could be improved?
- 9) If you have laws requiring first filing of patent applications directed to inventions made in your country, are there aspects of these laws that could be improved to address multinational inventions?
- 10) If you have laws requiring a secrecy review of patent applications directed to some or all types of inventions made in your country, are there aspects of these laws that could be improved to address multinational inventions?
- 11) Are there other aspects of your law that could be improved to facilitate filing of patent applications having multinational inventorship? If yes, please explain.

## **III. Proposals for harmonisation**

- 12) Is harmonisation in this area desirable?

*If yes, please respond to the following questions without regard to your national or regional laws.*

*Even if no, please address the following questions to the extent you consider your national or regional laws could be improved.*

- 13) Please provide a definition of inventorship that you believe would be an appropriate international standard.
- 14) Please propose a standard for correction of inventorship after a patent application is filed, together with any requirements necessary to invoke this standard (e.g. intentional versus unintentional error) and any timing requirements (e.g. during pendency of the application).

- 15) If you believe such a requirement is appropriate, please propose an international standard for first filing requirements that would take into account multinational inventions.
- 16) If you believe such a requirement is appropriate, please propose an international standard for secrecy review requirements that would take into account multinational inventions.
- 17) If you believe such a requirement is appropriate, please propose an international standard for obtaining a foreign filing license.
- 18) Please propose an international standard for an ability to cure or repair an inadvertent failure to comply with a first filing requirement or a security review requirement.
- 19) Please propose any other standards relating to multinational inventions (excluding those related to inventor remuneration or ownership of the invention) that you feel would be appropriate.

***Please comment on any additional issues concerning the multinational inventions you consider relevant to this Working Question.***