

## **Standing Committee on the Law of Patents**

**Twenty-Ninth Session**  
**Geneva, December 3 to 6, 2018**

### **PATENT LAW PROVISIONS THAT CONTRIBUTE TO EFFECTIVE TRANSFER OF TECHNOLOGY, INCLUDING SUFFICIENCY OF DISCLOSURE**

*Document prepared by the Secretariat*

1. The Standing Committee on the Law of Patents (SCP), at its twenty-eighth session, held in Geneva from July 9 to 12, 2018, agreed that, based on the discussions within the SCP, including those during the sharing sessions, the Secretariat would compile information on patent law provisions that contributed to effective transfer of technology, including sufficiency of disclosure. On this subject, Member States shared information and their experiences during, in particular, the twenty-seventh and twenty-eighth sessions of the SCP held in December 2017 and July 2018, respectively. The present document contains the compilation of such information, based on the discussions within the SCP.
2. While the principles that underpin patent law may be similar in various jurisdictions, national patent law provisions may vary from one country to another. Yet, it is expected that each patent law provision, implemented as a whole, would contribute to the overall policy objective of a national patent system, including dissemination and transfer of technology for the economic growth and wellbeing of societies. This document therefore presents the information on country-by-country basis, so that it could be understood in the context of the comprehensive national patent law framework of each country.
3. The discussions within the SCP on patent law provisions that contributed to effective transfer of technology touched upon not only the specific legal provisions under the patent law but also practical tools, programs and initiatives, which are based on, or promote the use of, such legal provisions. This document therefore contains those two aspects addressed by the Member States during the SCP. As to the legal provisions under the patent law *per se*, the

following provisions were discussed in the Committee: sufficiency of disclosure;<sup>1</sup> contents of patent applications; publication of patent applications and patents; license of rights (incentivizing voluntary licensing offers); IP ownership and licensing by universities and spin-off companies; fee reduction for universities and small or micro entities; and quality advice from patent agents. In this regard, reference is also made to Section VII of document SCP/14/4 Rev. (Transfer of Technology).<sup>2</sup>

### *Canada*

4. On April 26, 2018, Canada launched a new intellectual property strategy to help entrepreneurs better understand, commercialize, utilize, and protect intellectual property. Commercialization is viewed as an essential component of technology transfer, since it is an important factor in disseminating new technology to ensure that society could effectively benefit from technological innovations. Canada's intellectual property strategy includes both legislative changes and program initiatives. On the legislative side, the IP strategy will amend key IP laws to clarify expectations and reduce barriers to innovation, and will be creating a new governance regime for IP agents under a new College of Patent and Trademark Agents, which will ensure maintaining professional and ethical standards and supporting the provision of quality advice from IP professionals.

5. On the program side, a number of initiatives have been proposed to better position Canada's use of the IP system to support innovation and to help businesses drive growth. The initiatives fall into two categories: (i) increasing education, awareness and outreach; and (ii) strategic tools for growth. For example, the Canadian Intellectual Property Office will promote learning tools and resources to develop new educational resources to increase businesses' understanding of IP. That program will include guides and toolkits for collaborating with academic researchers. The IP strategy also includes the creation of an IP marketplace, which will be a one-stop shop for firms to locate, access, and acquire public-sector IP and know-how with toolkits and templates to help collaborate, license, and share knowledge. Such a marketplace will help improve access to patents owned by Canadian governments and universities that can be bought or licensed. Furthermore, the IP strategy includes support for IP legal clinics at university law schools that enable law students to learn more about IP, help businesses, and facilitate access to the profession. Those clinics provide individuals and small businesses with free basic IP advice, and are able to assist them with prior art searches. Finally, the IP strategy will create a dedicated team of IP advisors to ensure that the government program officers have the knowledge and capacity to address IP issues. That team of IP experts will provide advice to the Federal Government program officers working with businesses, creators, and other government officials to boost engagement with IP.

### *Chile*

6. From the viewpoint that the patent system is a repository for accumulated knowledge, and that such accumulated information needs to be conveyed to the rest of society for its use, there are a number of law provisions which encouraged transfer of technology in Chile. They include, for example, the publication of an extract from a patent application, once it has gone through the official examination of the admissibility. The presentation of a descriptive coverage

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<sup>1</sup> During the twenty-third session of the SCP, held in Geneva in November 2015, the Committee discussed the topic of transfer of technology vis-à-vis sufficiency of disclosure. Delegations of Luxemburg, speaking on behalf of the European Union, China, India, Romania and South Africa noted, in a general manner, the role of the contents of patent specifications and the disclosure requirement in transfer of technology. See the Report of the twenty-third session of the SCP (document SCP/23/6).

<sup>2</sup> Moreover, as to practical examples of patent-related transfer of technology, reference is made to documents SCP/18/8 (Patents and Transfer of Technology: Examples and Experiences), SCP/20/10 (Patents and Transfer of Technology: Further Practical Examples and Experiences) and SCP/21/10 (Patents and Transfer of Technology: Further Practical Examples and Experiences).

of the patented invention and drawings (if necessary), which includes a description of the embodiments that are the examples of the claimed invention, should allow a person skilled in the art to carry out the claimed invention without having a need to have any other essential technical information. The example of a description consists of a detailed explanation of at least one way of implementing the claimed invention, and it needs to be illustrated or supported by the use of drawings, if applicable. The patent application should be accompanied by an abstract, which contains a summary of the invention, an indication of the technical sector and the industrial areas of application. It should be presented in a format provided by the patent office as a template. The abstract essentially covers the technical problem, its solution and its application, and can also include a representative figure of the invention. Drawings, if necessary, should be submitted separately in sufficient details for the inventions to be reproducible. Furthermore, a patent application should also include some bibliographic facts, which allow for searching patents using key words from the title, inventor or patent holder.

7. INAPI has the duty of dissemination of industrial property information it has generated. As stated in the law creating INAPI. Consequently, INAPI has developed a series of initiatives which are directly linked to the effective transfer of technology, such as (i) distance learning courses on industrial property; (ii) periodic publication of bulletins with technologies that are in the public domain; (iii) opening of two regional offices located in important industrial centers in the country in order to meet the needs of its users more directly; and (iv) electronic platforms. As regard the electronic platform, the *INAPI Proyecta* deals with transfer of technology and dissemination of information, providing opportunities to innovate and create through the use and management of industrial property. On another platform, national institutions and innovators could find information about industrial property, and be connected with people who are interested in using inventions commercially. Those tools are considered as promoting technology transfer, because they raise not only the visibility of the patent registry but also the usefulness of those patented inventions.

### *China*

8. The Chinese government attaches great importance to the use of technologies and to the supportive role played by the patent system to that end. China has enacted the Law on Promotion of Transformation of Science and Technology Achievements, which includes provisions regarding use and management of technology and IP by state-owned research institutions and universities. China's IP law also contains provisions regarding transfer of technology and licenses. The forth revision of the China's patent law includes some new recommendations in this respect. One of them relates to "open licenses", the basic framework of which is as follows: firstly, if a right holder wants others to use his/her patented technology, the right holder can use a platform, declaring that he/she is willing to license his/her patent under the declared royalty fee. If the person who is interested in that patented technology accepts the requested licensing fee and other conditions, that person should notify the right holder in written form. It is expected that, in such a manner, the cost of licensing could be reduced and the linkage between the patented technology and the use of it could be promoted, so that the patent system could play a positive role in transfer of technology.

### *Colombia*

9. The law No. 1838 of 2017, which is called spin-off law, aims at promoting research in public universities, and to develop technologies with a commercial use from basic or applied scientific research results in the academic environment. According to that law, spin-off companies which come about from higher education institutions can own intellectual property

rights to ensure that their developments can be protected through, for example, patents or trade secrets. Professors or researchers from those higher education institutions can be part of such a company, without having any conflict of interest in receiving remunerations from the company, which was not possible in Colombia under the previous law.

### *Czech Republic*

10. Besides non-commercial transfer of technology, such as publication of research results, there are other ways of transferring technology through commercialization of IP-protected research results, such as licensing or creating spin-offs. The Czech Patent Law regulates the exploitation of an invention protected by a patent based on a license agreement between a patent holder and a licensee. The license agreement must be in a written form and becomes effective against third parties by entering it in the patent register. According to the Czech Patent Law, an applicant or a patent holder can offer a license, i.e., the rights to exploit the invention, to any person. If such an offer is declared, the Office will enter the license offer in the patent register. While such declaration is irrevocable, the patent holder could benefit from reduction of renewal fees by half, in case it maintains the patent.

11. Another provision considered important for the transfer of technology is disclosure of invention. According to the Czech Patent Law, the invention must be disclosed in the patent application in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Where the invention concerns a microorganism, it must be deposited with a public collection prior to the date on which the applicant's priority right begins.

12. In the Czech Republic, in order to support researchers of universities and research centers, majority of universities and research centers established its own technology transfer team. 18 technology transfer offices are associated in a unified functional platform called *Transfera*, protecting the interest of the Czech technology transfer community. The objective of *Transfera*, established in November 2014, is to advance and strengthen the technology and knowledge transfer. *Transfera* has published the overview of technology transfer offices in the Czech Republic, describing their performance in the patents, utility models, and licenses concluded: in total, 74 licenses were concluded in 2016.

### *France*

13. An electronic platform, "*bourse brevets*", established in 2017 by the French national patent office, helps to put into contact potential licensors and licensees. If a holder of a patent wants to exploit the patent through a technology transfer licensing, the *bourse brevets* could assist them in finding potential licensees. Similarly, if there is innovative technology which is sought, the tool could help to find these technologies that have been available for licensing. It also has a teaching component about granting licenses and a confidentiality agreement model, among others. The aim of such a system is to provide further impetus to small and medium sized businesses.

### *Uganda*

14. The Industrial Property Act of 2014 of Uganda provides for publication of the granted patents so that the knowledge would be conveyed to the rest of society for its use. It is viewed that the most practical way of improving and upgrading technological capacities of countries at another stage of technological development, such as Uganda, is by extracting technical information from patent applications. The Industrial Property Act of 2014 requires the disclosure of the invention in all practicable modes, including specification of the best mode of carrying out the invention known to the inventor at the filing date (or priority date) in full, clear, concise and exact terms as to enable a person with ordinary skills in the art to make use of and to evaluate

the claimed invention. Those provisions are regarded as having facilitated Cipla, an Indian pharmaceutical company, having a joint venture with a local manufacturer, Quality Chemicals, Limited, which locally produce retroviral, anti-malaria and hepatitis medicines. It is believed that pharmacists, engineers and technicians have acquired the skills used in the production of those medicines, and in addition, access to the essential lifesaving medicines in Uganda has been increased. Furthermore, the Uganda government is trying to create an efficient linkage between its intellectual property administration and scientific and technology institutions in its country.

### *United Kingdom*

15. The provision regarding sufficiency of disclosure in patent applications under the 1977 Patents Act helps to ensure the transfer of technology by making valuable information about new developments widely available.<sup>3</sup> The examiners in the United Kingdom use sufficiency as a tool to ensure the scope of protection of granted patents corresponded to the patentees' contribution to the art. The examination guidance was provided in the Manual of Patent Practice and other guidelines. The United Kingdom third party observation service has also been expanded to cover the question of sufficiency, providing third parties in the United Kingdom with a low cost route to challenging a patent, if they believed that a patent did not explain an invention clearly and completely enough.

16. Another mechanism for encouraging the sharing and exploitation of patented technology is through licensing of patents.<sup>4</sup> The license of rights scheme in the United Kingdom, provided for in the United Kingdom Patents Act, Section 46, is an important way of supporting that aim. The license of rights encourages voluntarily licensing of technology and knowledge exchange, as the patent owners are offered a significant reduction of renewal fees. Third parties are able to search information on patents with such voluntary licensing offers on the UKIPO website. Since the introduction of that database, the increase in the license of right requests filed has been observed. Around 2% of in force patents in the United Kingdom are currently available for license of rights. The information on over 8,200 patents is currently being shared in that way.

17. From the understanding that an effective IP system is essential to knowledge exchange between businesses and universities, and patents could help universities to secure business partners and funding, the UKIPO provides a wide range of tools for universities and businesses, wanting to make the most of their IP and to commercialize their inventions. For example, the Lambert Toolkit, which was developed with a number of bilateral partner countries, provides guidance and model agreements for IP generated in collaborative exchanges.

### *United States of America*

18. In the United States of America, the federal government spend billions of dollars every year for funding research and development conducted by universities, government research institutions, private businesses and individuals. About 50% of the academic research is funded by the federal government, as university research is very important for advancing science, for expanding the knowledge pool and for the US economy. Voluntary technology transfer from universities and other research institutions to industry on mutually agreed terms, and ultimately to the public, is considered vital for maximizing the benefits of research. Since university research is usually carried out in the early stages of development of the technology, without transferring such research from public research institutions and forming partnerships with private companies for further development and commercialization, the public might not be able

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<sup>3</sup> The details of the UK law and practice relating to the disclosure requirement are summarized in document SCP/22/4.

<sup>4</sup> A general explanation about a license of rights is found in document SCP/14/4, paragraphs 115 to 117.

to benefit from the research. Therefore, it is considered that technology transfer is good for the economy of the United States of America, helping to create new jobs, new products and new companies: promoting local and state economic development; encouraging maximum participation of small businesses and non-profits in federally funded R&D efforts; encouraging innovation and helping the United States of America maintain its competitive edge. In the United States of America, hundreds of new products and technologies, including life-saving medicines originated from public research, have been developed and placed on the market through public and private partnerships.

19. Such technology transfer is considered to have been made possible in large part by the legislation, commonly called the Bayh-Dole Act, which was codified in the US Code Title 35. It was passed in 1980 and became effective on July 1, 1981. It represents a fundamental change in the US government innovation policy, giving the power to the universities and the small companies to own inventions that they developed with federal funding, and to grant exclusive licenses on those inventions, so that universities are encouraged to collaborate with industry to translate their research results into products that would benefit the public. Universities often obtain licensing income from the inventions, which is typically invested in more research, in rewarding university scientists, and in supporting the cycle of innovation. Because the funding is derived from the US taxpayers, the government policy is to give preference to small businesses. The Act includes a number of safeguards designed to protect the public interest, including the obligation to disclose each new invention to the federal funding agency and to file an initial patent application within a certain time period. Furthermore, the government retains, under very narrow circumstances, an option to require the patent holder to grant a license to a third party, or the government might take title and grant licenses itself, which is called the march-in right. No US federal agency, however, has ever exercised such march-in right. Customized research coupled with enabling legal environment created by the Bayh-Dole Act has helped to create entirely new industries, such as biotechnology.

20. Prior to the passage of the Bayh-Dole Act, the federal government had generally held and retained title to inventions created with federal funding, and licenses granted to private companies had usually been non-exclusive, as the federal government itself had not commercialized the inventions. At the time the law passed in 1980, the US federal government held title to approximately 28,000 patents, of which fewer than 5% were licensed to industry for development of commercial products. That could mean that American taxpayers had not been getting the full benefit from the investment in research. In the past 25 years, more than 11,000 start-ups have been formed, based on the results of the university research. A majority of those have been located in close physical proximity to the university, contributing to the local and state economy and development. In 2016 alone, 1,024 start-ups were formed, and 800 new products originated from university research were introduced into the marketplace by companies in the private sector. Furthermore, over 200 medicines and vaccines have been developed through public-private cooperation since the Bayh-Dole enactment. The successful example of the United States of America is regarded as the demonstration of the importance of having an efficient patent system and clear IP laws that are conducive to technology transfer and technology commercialization.

21. In addition to the Bayh-Dole Act provisions, the US patent law and patent regulations provide for patent fee reductions for universities and small or micro entities, which encourage licensing by those entities.

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