

WIPO



SCP/13/5.

ORIGINAL: English

DATE: February 18, 2009

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WORLD INTELLECTUAL PROPERTY ORGANIZATION
GENEVA

STANDING COMMITTEE ON THE LAW OF PATENTS

Thirteenth Session
Geneva, March 23 to 27, 2009

DISSEMINATION OF PATENT INFORMATION*

Document prepared by the Secretariat

* Comments made by Members and Observers of the SCP on this document are available at:
http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=153898

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EXECUTIVE SUMMARY

1. Pursuant to the decision of the Standing Committee on the Law of Patents (SCP) at its twelfth session held from June 23 to 27, 2008, in Geneva, the present document prepared by the Secretariat is submitted as a preliminary study on the issue of dissemination of patent information. The document describes the features and characteristics of patent information and potential utility of such information by different types of users for different purposes. It then goes on to address the legal framework and contents of patent information, gives some examples of the relevant technical infrastructure and tools, such as databases, and touches upon aspects that relate to the public domain.
2. The patent system intends to promote social and technical advancement and increase public welfare. To achieve this goal, one important element is to encourage disclosure of inventions to the public for the benefit of the public at large. Published patents (and patent applications in many countries) are an important source of valuable technical information. Patent information, however, is not just technical information. It is also legal information about the applicable territory, the term and the scope of protection and the ownership of rights. The dual nature of patent information plays a fundamental role in the checks-and-balance mechanism of the patent system.
3. Patent information serves various functions, and therefore, it serves various user groups. They include: patent offices (patent examiners), researchers, scientists, business managers, economists, policy makers and patent agents. In the business circles, patent information is widely used in formulating a firm's IP strategy, as an input into research and development processes, to facilitate licensing and technology transactions, for technology transfer and for analysis of markets and competitors in order to support important business decisions. Further, the availability of information concerning ownership and rights and obligations associated with a patent (for example, licensing agreements or security interest), which may be found in national patent registries, may support the transparency of the market and the legal certainty of transactions of so-called "intangible assets".
4. The economic analysis of patent data as well as patent landscaping may provide useful input to policy makers. At the national level, patent information can be used to formulate an industrial policy and other policy areas in several ways. For example, it can be used to monitor national technology performances, as an input into R&D policy, to encourage a more efficient dissemination of technology and to facilitate public-private partnerships (PPP). The role of patent information for development is reflected in several recommendations of the WIPO Development Agenda.
5. The contents of patent applications as well as the formats of published patent applications are largely standardized at the international level. In general, they contain bibliographic data, claims, a description, drawings (if necessary) and an abstract. In some countries, all applications are published in their entirety. In some other countries, only some information (for example, bibliographic data, titles of inventions and abstracts) is published in the official gazette, and the full text of claims, description and drawings are laid open for public inspection in the patent offices. More and more patent offices have started to publish patent information in electronic form. The electronic publication increases accessibility to the information, facilitates retrieval and analysis of information and solves problems associated with the handling and storage of paper. On the other hand, the electronic publication raises new questions, such as copyright protection of those publications.

6. During the patent procedure before the office, a number of communications may be exchanged between the office and applicants, as well as between the office and third parties. These communications are a great source of information that provides an up-to-date legal status of the application or patent concerned, for example, whether a patent was granted, whether an opposition was filed, whether a maintenance fee was paid, whether an application or patent was withdrawn or abandoned, or expired, or whether any amendment or correction was made to an application or patent. In general, such communications are kept by each patent office, and are laid open to the public in accordance with the applicable law (often after the relevant patent application/patent is published). In other words, the legal status information is available to the public, but in practice, is not disseminated in an accessible manner at the global level for wider use.

7. A thorough understanding of the applicable patent law, however, is required when analyzing the legal effect of a patent. Moreover, the fact that a certain patent is not valid (and therefore, third parties may exploit the patented invention without infringing the patent) should not be confused with the freedom to exploit the invention, since there is the possibility that the invention cannot be exploited without infringing other valid patents.

8. Changes in the person of the applicant or patent owner are recorded in the national patent registry, and are available to the public, once the application or patent is made available to the public. The accurate and up-to-date information about applicants and owners increases transparency with respect to the actual ownership of patents, and makes it easier for third parties to contact right holders, if they wish to, for example, obtain licenses. In addition, in some countries, information concerning a voluntary licensing agreement and a security interest, a compulsory license or a license of rights are also recorded or registered in the patent registry, although the legal effect of the patent registry may not be identical in all countries.

9. Since the administrative decisions made by patent offices are subject to judicial review, the analysis of the legal status of a particular patent cannot be concluded without checking court decisions relating to that patent. Availability of, and accessibility to, such court decisions may increase transparency and legal certainty.

10. In providing patent information, every patent office follows a patent information dissemination policy which differs from country to country. The policy normally takes into consideration the role of the public sector, principally the patent offices which are subsidized by patent fees, and the private sector, which takes the raw information from the patent offices and develops it into value-added services and products.

11. Although all information that is needed to analyze the technical contents of patents as well as the status of such patents (and patent applications) are held by patent offices, in practical terms, it can be difficult to access such information, particularly from abroad. Digitization of national collections facilitates the access to patent information as well as the statistical/analytical use of such information. Patent information is increasingly accessible via easily-accessible services that are delivered over the Internet. WIPO's PATENTSCOPE[®] Search Service provides free access to PCT international applications and is an entry point for all of WIPO's patent information services. In the context of the WIPO Development Agenda, a study regarding specialized databases is being prepared. Non-patent databases are not always available free of charge and are often only available via subscription. WIPO is currently working on the establishment of a web-based service which will allow search and access to scientific and technical journals, which will correspond to similar services offered by certain

UN agencies in their areas of competence. Further, classification systems, such as the International Classification System (IPC), are one of the key elements for the success of searchable patent databases. The increase in the diversity of languages used in patent information due to the internationalization of patenting activities is one of the challenges today. WIPO is currently developing a cross-language tool which will assist users in understanding complete documents in different languages. The WIPO Patent Information Services (WPIS) and the International Cooperation for Search and Examination of Inventions (ICSEI) program have been assisting applicants from developing countries as well as patent offices of developing countries. WIPO is currently implementing a pilot project establishing Technology Information Centers (TICs), which will provide not only patent information services, but also innovation support services.

12. With a view to processing patent applications in a timely manner and ensuring the quality and validity of granted patents, many national laws require applicants to submit, with their application or at a later stage, additional information, such as search and examination reports established by foreign offices on parallel applications filed and/or patents granted abroad. In the recent past, in the context of facilitating the utilization of search and examination work conducted in other offices, there is a growing interest in establishing a one-stop portal where search and examination reports prepared by different patent offices on patent family applications can be easily accessed by examiners of patent offices. With respect to international applications under the PCT, search and examination reports prepared during the international phase are already available through the PATENTSCOPE[®] Search Service. By enhancing national phase entry data, search and examination reports prepared during the national phase with respect to PCT international applications may be fed into the PATENTSCOPE[®] Search Service. As regards national/regional applications, although a small number of offices provide on-line access to their dossiers (including search and examination reports), there is no one-stop portal to access dossier information on-line at the international level. Since search and examination reports provide information regarding the patentability of inventions, they will be useful not only for patent examiners, but also for third parties who wish to evaluate the patentability of a particular invention. The WIPO Digital Access Service could be a point of reference when considering a possible mechanism at the international level, but further legal and technical consideration on a search and examination reports' database will depend on the objective and purpose of such a database.

13. Patent information is a public good available for everybody's use. It is considered one of the richest technological information sources worldwide. In addition, patent information is an outstanding tool to establish whether specific subject matter is in the public domain. The patent system has a number of "gates" through which an invention eventually falls outside of the scope of patent protection. Third parties can monitor those gates using patent information. Therefore, accessibility to patent information is an important element for a rich and accessible public domain.

I. INTRODUCTION

14. At its twelfth session, held from June 23 to 27, 2008, in Geneva, the Standing Committee on the Law of Patents (SCP) asked the WIPO Secretariat to establish, for its next session, preliminary studies on four issues. These four issues are:

- Dissemination of patent information (*inter alia* the issue of a database on search and examination reports);
- Exceptions from patentable subject matter and limitations to the rights, *inter alia* research exemption and compulsory licenses;
- Patents and standards;
- Client-attorney privilege.

15. These four issues are not to be considered prioritized over other issues contained in the list which was established during the twelfth session of the SCP and which is contained in the Annex to document SCP/12/4 Rev. (see paragraph 8(c) of document SCP/12/4 Rev.).

16. Accordingly, this document prepared by the Secretariat is a preliminary study on the issue of dissemination of patent information for the thirteenth session of the SCP, to be held from March 23 to 27, 2009.

17. At the twelfth session of the SCP, it was made clear that the *modus operandi* of the Committee, namely, to move forward along a number of tracks, including the preparation of preliminary studies, was agreed upon for the purpose of developing a work program for the SCP (see paragraph 123 of document SCP/12/5 Prov.). Against this backdrop, the preliminary study aims to contextualize a wide range of issues relating to the dissemination of patent information, including policy considerations, the legal framework and the technical infrastructure, and to contain no conclusions.

II. SETTING THE SCENE - WHAT IS PATENT INFORMATION?

(a) Dual nature of patent information

18. The patent system intends to promote social and technical advancement and to increase public welfare. To achieve this goal, one important element is to encourage disclosure of inventions to the public for the benefit of the public at large. More specifically, patents (and often also patent applications after a certain period of time) that must describe the invention in a full and clear manner are published for public inspections. The collection of patent applications and patents, therefore, is an important source of valuable technical information.

19. The patent system, however, is not simply a technology disclosure system. To achieve the objective of the patent system, useful inventions must exist in the first place. Therefore, another important element, if not a precondition, is to support investment and innovation which would ultimately benefit the whole society and enrich the life of human beings. A concrete measure embedded in the patent system for that purpose is the limited exclusive right. In general, a patent confers an exclusive right that enables the patent holder to prevent others from commercially using, making, selling etc. the claimed invention. This right, however, is limited in its geographical applicability, term and scope. Patents are granted within the framework of the applicable patent law of a given country and have legal effect only in the State or the region for which these patents were granted. A patent expires after a

defined period of time, in general 20 years from the filing date, and it is possible for a patentee to abandon his patent. The scope of patent protection is defined by the claims. Therefore, patent information is not just technical information, but is also legal information about the applicable territory, the term of protection, the scope of protection and the ownership of rights. In some countries, information about other rights that relate to a patent, such as licensing agreements concluded and security interests established with respect to a patent, is also available in the national patent registry.

20. The dual nature of patent information (i.e., its technical and legal components) plays a fundamental role in the checks-and-balance mechanism of the patent system. First, it informs the public of the owner, extent and technical scope of existing rights. Such information is essential for third parties to avoid infringing the patent rights of others, and to contact the owner to negotiate a license or a transfer of the rights.

21. Second, somewhat as a mirror of the first, patent information indicates the extent to which third parties may exploit the technical knowledge contained in the patent document without infringing the patent. After the expiration or abandonment of the patent in a given country, or in any other country in which the patent has no legal effect, third parties are not required to obtain the consent of the patent holder for the exploitation of the patented invention. Further, if the applicable national patent law provides exceptions and limitations to the rights,¹ third parties who are using or making a patented invention that falls under an exception or limitation would not be regarded as infringing the patent right concerned.

22. Third, patent information is essential for ensuring the quality of granted patents. By searching the state of the art in patent information databases prior to drafting and filing a patent application, applicants can obtain a better indication of the prior art and increase the likelihood of obtaining valid patents for their inventions, and at the same time, assist the patent office's examination procedure. Moreover, applicants may save the costs of filing patent applications with no prospect of obtaining patent protection. During the examination stage, patent examiners use patent information to search prior art and to examine the patentability of inventions. Further, based on the information obtained from published patents, third parties may initiate opposition or revocation procedures if they believe that a granted patent does not meet the patentability requirements under the applicable law. Similarly, in some countries, third parties can make contributions to the examination procedure by submitting relevant prior art information. Of course, such contributions are possible only where the public has access to the information contained in patent applications.

23. The dual nature of patent information coupled with the increasing capacity to digitally process this information offers exceptional ways for the use of patent information.

(b) Patent information in the innovation system

24. Today, patent information is not simply a collection of technical knowledge or a legal registry, but is rather a valuable source for technical as well as economic analysis at the business and policy levels. Patent information plays an important role in the process of innovation, such as: stimulating new ideas and inventions through disseminating known technology; assisting the development of the invention and product by finding potential development partners; commercializing the product by finding potential partners for

¹ See document SCP/13/3.

licensing; obtaining technology through mergers or acquisitions; and conducting freedom to operate analysis.

25. The utility of patent information has been expanded considerably due to the development of digital technology and the Internet. Digitization of patent information makes it possible to search, sort, compile and process raw data of millions of patent documents. Special software tools assist the legibility of processed information by graphic presentations. Such technical possibilities respond to specific needs of different users for different purposes.

26. Clearly, patent information can only be one factor in contributing to innovation, with other prerequisite factors, such as a sufficiently effective technological base with an adequate transfer of skills and sharing of know-how playing an important role in the innovation process. Nevertheless, disseminating and exploiting patent information more effectively may also stimulate the engagement and development of the other necessary elements just mentioned which are also closely associated.

(c) Patent information: advantages and limits

27. Due to its unique nature, compared with other technical publications, such as technology journals and academic publications, patent information offers a number of advantages as a source of technical information. From the time all patent information was published in paper form, patent documents have been systematically numbered and classified. The formats of those documents are highly standardized at the international level. WIPO Standards, Recommendations and Guidelines² have contributed to a fairly uniform structure of patent documents, which serves the transmission, exchange, sharing and dissemination of patent information between patent offices and facilitates easy access to, and retrieval of, information. Other characteristics of patent information include:

- when it is published by the patent office, it is already classified according to systematically sub-divided technical fields. The International Patent Classification System (IPC) is widely used by many patent offices;
- it often describes the background and existing state of the art relevant to the invention. Also, it discloses not only technical concepts, but also the practical applicability;
- it covers, in principle, all technologies, including technologies used for daily goods;
- it is published in the language(s) accepted by the relevant patent office. Where patent applications containing the same invention are filed in a number of countries, those patent applications may be published in a number of different languages.

28. On the other hand, patent information is designed for the specific legal and technical purposes of the patent system. Therefore, it cannot simply replace other sources of information. While an invention must be described in the patent in such a manner that a person skilled in the art can carry out the invention without undue experiments or trials, in order to produce the invention to an economically profitable extent, the technical information contained in the patent often needs to be supplemented by further information. For example,

² <http://www.wipo.int/scit/en/standards/>

depending on the complexity, sophistication and maturity of the technology, technical know-how as well as commercial and market information may be equally important. But even where the invention is described in a sufficiently clear and complete manner, in practice, it may prove more beneficial and efficient to obtain know-how and other business-related cooperation from the inventor, rather than to attempt to find such information on one's own.

29. For those who are not familiar with patent documents, their drafting style may look strange. The structure and drafting style of patent documents, however, reflect the dual nature of patent documents. On the one hand, they must disclose the invention in a clear and complete manner, and on the other hand, they are legal documents that have to comprehensively delineate the scope of complicated technology.

30. Further, the total number of patent applications filed across the world is estimated to be 1.76 million in 2006 alone.³ Although the classification system and digital technology facilitate the retrieval of information, it is a staggering figure. Unlike academic papers, published patent applications have, in most cases, not gone through a peer review process, and it is up to the reader to find the relevant information among the millions of documents.

III. USE OF PATENT INFORMATION IN BUSINESS

(a) Access to technological and business information

31. Patent information serves various functions, and therefore, also serves various user groups. They include: patent offices (patent examiners), researchers, scientists, business managers, economists, policy makers and patent agents. In business circles, patent information is widely used in formulating a firm's IP strategy, as an input into research and development processes, to facilitate licensing and technology transactions, for technology transfer and for analysis of markets and competitors. In all these cases, the accessibility of patent information is a stimulus for further innovation.

32. For business managers, patent information is a source for a sound analysis before making important business decisions, such as in which technical area should we invest? What is our R&D strategy and direction? Should we seek R&D cooperation with another company? Should we seek a joint venture, or take a step to mergers and acquisitions (M&A). In order to answer these questions, the analysis and monitoring of markets and competitors are indispensable. The fact that patent owners and inventors are disclosed in patent documents means that the information can be used to analyze firms and industries, especially when combined with other sources of information. A company's patenting behavior can reveal its activity in certain technological fields and the level of development achieved. Similarly, the future direction of a company's technology can be derived from its present patenting activity. Consequently, patent information reveals the historical development of technology and can be used to identify technology trends and to prepare a technology forecasting. In sum, patent information is a useful tool to monitor the market and analyze the strengths and weaknesses of a company, as well as the opportunities for and threats to that company. Therefore, patent information is indispensable for formulating an IP policy which is in line with the company's business strategies.

³ WIPO Patent Report 2008

33. Based on the IP policy, a company must decide what to patent, how to draft patent applications to protect the invention effectively, the extent of geographical coverage for patent applications, how long a patent should be maintained in force in each jurisdiction, and must monitor potential infringement or freedom-to-operate issues. Again, answering these questions requires analysis on the coverage and scope of one's own patents as well as of those of competitors.

34. For the commercial transfer of technology, patent information can be used to identify companies which are active in a particular field of technology and identify potential research partners. It can also be used to analyze different technical solutions which may be either in the public domain or under patent protection. In the latter case, it is possible to analyze the patent information and examine the validity of the patent in question. If the patent appears to be valid, the patent owner can be identified, and licensing opportunities or other options to transfer the rights can be considered.

35. Further, the technological information contained in patent information is useful for research and development. Researchers and engineers may find technical solutions in patent information, and can thus start research from a higher level of knowledge. They may thus get inspired from old solutions to solve a new problem. Moreover, they may avoid spending money and efforts on duplicating research work.

36. Specifically designed patent analysis tools, such as topographical maps which show areas of higher or intense patent activity in specific technology areas, have been developed in recent years to make patent analysis possible in a fraction of the time used only some years ago. These graphical analysis tools immediately highlight important trends using the reference information available in patents, whether it is chronological, geographical, technical, or citation based. Landscaping of patent information supports decision-making as it provides a snapshot of the patent situation in a specific field of interest at a given point in time.

(b) IP financing

37. By creating a legally enforceable property right, the patent system also makes the invention an intangible asset which can be traded. Consequently, the invention becomes part of the economic process itself, creating new "goods" and value in the economic process. For the transparency of the market and the legal certainty of the transaction of such goods, information concerning ownership, subject matter and rights and obligations associated with the goods are indispensable. Such information can be obtained from national patent registries. For example, the owner of a patent is registered in the national patent registry. In some countries, information concerning patent licenses is registered or recorded in the patent registry. Moreover, in countries where it is possible to establish security interests in patents, some information relating to security interests agreements is also registered or recorded in the patent registry. In sum, patent information provides indispensable information to buyers and sellers of intangible assets and contributes to the transparency and efficiency of technology-based markets.

IV. ROLE OF PATENT INFORMATION IN POLICYMAKING

38. A statistical analysis of patent information helps policy makers formulate national and international strategies and policies in the technology and other public policy areas. Because

patenting activities may be used as one of the indicators of innovation, a statistical analysis of patent data allows trends in specific technical areas as well as in the markets to be monitored and analyzed. This contributes to determining national or international strategies and policies in various areas and implementing an appropriate course of action so as to achieve the planned policy goals.

39. Economic analysis of patent data as well as patent landscaping may provide useful input to policy makers. At the national level, patent information can be used to formulate industrial policy in several ways. It can be used to monitor national technology performance, as an input into R&D policy and to encourage more efficient dissemination of technology. Moreover, detailed empirical information can be used to validate theoretical models in various fields including companies' strategic behavior, competition policy, etc. With respect to public research, patent information also supports public-private-partnerships (PPP). In order to achieve the development and delivery of products to the market, it facilitates identifying actors capable of providing the technology, knowledge and capital required.

WIPO Development Agenda

40. The role of patent information in economic development is especially important for developing and emerging economies, which benefit not only from the available knowledge derived from prior art, but can identify potential licensing and technology transfer partners. The role of patent information in development is reflected in the WIPO Development Agenda. Patent information is prominent in the recommendations of the WIPO Development Agenda which reflects its important contribution to the dissemination of scientific and technical information to developing countries. At least six of the 45 Recommendations refer to patent information services (emphasis has been added in *italics*):

“8. Request WIPO to develop agreements with research institutions and with private enterprises with a view to facilitating the national offices of developing countries, especially LDCs, as well as their regional and sub-regional IP organizations to *access specialized databases for the purposes of patent searches*.

“19. To initiate discussions on how, within WIPO's mandate, to further *facilitate access to knowledge and technology for developing countries and LDCs to foster creativity and innovation* and to strengthen such existing activities within WIPO.

“25. To explore IP-related policies and initiatives necessary to *promote the transfer and dissemination of technology*, to the benefit of developing countries and to take appropriate measures to enable developing countries to fully understand and benefit from different provisions, pertaining to flexibilities provided for in international agreements, as appropriate.

“28. To explore supportive IP-related policies and measures Member States, especially developed countries, could adopt for *promoting transfer and dissemination of technology* to developing countries.

“30. WIPO should cooperate with other intergovernmental organizations to provide to developing countries, including LDCs, upon request, advice on how *to gain access to and make use of IP-related information on technology, particularly in areas of special interest to the requesting parties*.

“31. To undertake initiatives agreed by Member States, which contribute *to transfer of technology to developing countries*, such as requesting WIPO to facilitate better access to publicly available patent information.”

41. These recommendations highlight specific areas where implementation would contribute to an effective reduction in the knowledge gap and digital divide found between developed and developing countries.

42. Initial steps have been taken to start implementing these recommendations, including an analysis of developing countries' needs with respect to specialized technology patent databases, as well as comparing the cost-benefit for commercial and free-of-charge patent and non-patent databases. Practical implementation has also included the setting up of a non-patent literature, i.e., scientific and technical literature, search and access web-service for certain eligible developing countries and the establishing of local Technology Information Centers to disseminate technological information more effectively (see further details below). Patent information is currently under-used in developing countries and in SMEs around the world. Effective use of patent information could be further encouraged by patent offices by providing information materials, training and online services.

V. LEGAL FRAMEWORK AND CONTENTS OF PATENT INFORMATION

(a) Patent applications

43. National/regional patent applications have fairly uniform contents, which are similar to the contents of international patent applications under the Patent Cooperation Treaty (PCT). As regards the form and contents of national/regional patent applications, the Patent Law Treaty (PLT) provides a maximum set of requirements which are, in principle, in line with the requirements under the PCT. PLT Article 6(1) provides that, except where otherwise provided for by the PLT, no Contracting Party shall require compliance with any requirement relating to the form or contents of an application different from or additional to:

(i) requirements relating to form or contents of PCT international applications;
(ii) requirements relating to form or contents compliance with which may be required by designated offices in the national phase of the PCT procedure; and (iii) requirements under PLT Rule 3.

44. In general, a patent application contains a request, a description, one or more claims, one or more drawings (where necessary) and an abstract. The request indicates that the applicant seeks patent protection, the name(s) and address(es) of the applicant(s) and the representative(s) and the title of the invention. With respect to regional patent applications, the designation of the countries in which patent protection is sought may be made in the request. Further, other information relating to the application, for example, a priority claim, a power of attorney, a non-prejudicial disclosure statement, a declaration of inventorship or a document relating to the applicant's entitlement, may be contained in the request or submitted separately, depending on the applicable law.

45. The claims define the scope of patent protection. PCT Article 6 states that claims shall be clear and concise, and shall be fully supported by the description.

46. According to PCT Article 5 and Article 29.1 of the TRIPS Agreement, the description shall disclose the invention in a manner sufficiently clear and complete for the invention to be

carried out by a person skilled in the art.⁴ The description therefore provides detailed technical information concerning the invention. The sufficiently detailed description plays a fundamental role in disseminating technical information to the public. It typically outlines the technical field in which the invention lies, elaborates on the background art of the invention and sets out in detail the features of the invention. As one way of disclosing the invention, it may be described in such terms that the technical problem and its solution can be understood, and the description may state the advantageous effect of the claimed invention with reference to the background art. Some countries require the applicant to indicate the best mode for carrying out the invention known to the inventor at the filing date (or priority date).⁵ Further, some countries require that, where it is not obvious, the way in which the invention is capable of exploitation in industry and the way in which it can be made and used (or if it can only be used, the way in which it can be used) be described in the description. Where any drawing is filed, the description usually also contains a brief description of the drawings.

47. With respect to inventions relating to biological material, where an application refers to biological material which is not available to the public, the applicant may not be able to describe the material in the application in such a way as to enable a person skilled in the art to carry out the claimed invention without having access to such material. In such a case, to the extent that the material cannot be described otherwise, many countries allow applicants to comply with the disclosure requirement by depositing the material with a depositary institution in accordance with the applicable law. The deposited material will be made available to third parties under the conditions and terms specified in the applicable law. The description also contains a reference to such deposited biological material.

48. Drawings are not always necessary to disclose the claimed invention sufficiently and completely. However, depending on the nature of the invention, they are useful to illustrate, for example, a map of the invented object, an electronic circuit or a chemical formula.

49. The abstract provides a concise summary of the disclosure as contained in the description, the claims, and any drawings. Such a summary serves as a source of information that enables the reader to understand the general gist of the invention in a quick manner. In general, the abstract merely serves information purposes, and is not taken into account for the purpose of interpreting the claims, determining the sufficiency of the disclosure or the patentability of the claimed invention.

50. There are also other documents that may be required to be submitted to the office. For example, some countries require an applicant to submit prior art information known to the applicant. Further, some countries require an applicant to provide information concerning the applicant's corresponding foreign applications and grants.⁶ Such information includes, for example, search and examination reports prepared by other offices which processed patent family applications in parallel.

51. Where the application contains nucleotide and/or amino acid sequences, patent offices sometimes require that a sequence listing, often in electronic form, be submitted in order to

⁴ Provisions under the national and regional laws in this respect can be found in document SCP/12/3 Rev.2, Annex II.

⁵ See also Article 29.1 of the TRIPS Agreement.

⁶ See also Article 29.2 of the TRIPS Agreement

facilitate substantive examination. The presentation of sequence listings is widely standardized.⁷

52. In some countries, where an invention concerns or makes use of biological material or traditional knowledge, the patent application shall include information on the source or geographical origin of such material or knowledge used in the invention. Some countries also require the submission of evidence of prior informed consent from the authorities and of fair and equitable benefit sharing under the relevant national regime.

(b) Publication of applications and patents

53. As stated earlier, publication of patents is one of the fundamental elements of the patent system, and the importance of such publication is also recognized in the Paris Convention. Article 12 of that Convention states that each country of the Paris Union undertakes to establish a special industrial property service and a central office for the communication to the public of patents and other industrial property rights. This service shall publish an official periodical journal, and it shall publish regularly the names of the proprietors of patents granted, with a brief designation of the inventions patented. Apart from such mandatory regular publication of essential data concerning granted patents, the Paris Convention does not specify how patents should be “communicated to the public”.

54. In view of the prominent role that the publication of patents plays in disseminating technical information, making available the scope of patent protection and facilitating technology transfer, national administrations usually publish even more data. Many national offices publish, in their official publication, bibliographic data, including name(s) and address(es) of applicant(s) and inventor(s), date and number of application(s), date and number of publication, patent classification, the title of the invention and the full text of the claims, description and abstract. In general, other information relating to patents, for example, various statements and documents submitted by the applicant during the procedure before the office, is also laid open to the public for inspection. In some countries, only limited information, such as the date of the grants, the date of filing, the names of the applicants and the title of the inventions, is published in the official publication. Other information, such as the full text of the claims and the description is laid open for public inspection in the patent offices. Copies are generally available upon request.

55. In the past, patents were published in an official gazette on paper or laid open to the public in the patent offices. However, more and more patent offices have started to publish patents in electronic form, in particular, on the Internet. This electronic publication solves problems associated with the handling and storage of the huge volume of paper publication and lowers publication costs. For the users of the patent system, it increases the accessibility to patent information and makes it easier to retrieve information by, for example, using full-text search facilities and to conduct statistical analysis. On the other hand, the electronic publication of patents may raise new questions, for example, copyright protection relating to such publication.

⁷ WIPO Standard ST. 25 (http://www.wipo.int/standards/en/part_03_standards.html), which refers to the “Standard for the Presentation of Nucleotide and Amino Acid Sequence Listings in International Patent Applications under the PCT”, contained in Annex C to the Administrative Instructions under the PCT (http://www.wipo.int/pct/en/texts/ai_archives.htm)

56. In some countries and regional systems, patent applications are published after 18 months from the filing date (or priority date), or even earlier. The publication of patent applications ensures an earlier disclosure of their technical contents and of potential claims in respect of the patent rights. Particularly in those countries where offices conduct substantive examination, the grant of a patent may take several years. Since the claimed invention is not subject to patent protection before the grant of the patent, during the period between the publication of the patent application and the grant, there is a risk that a third party who learned about the invention from such publication may exploit the invention without the consent of the applicant. In order to adequately protect applicants from such exploitation by third parties, national laws generally provide a safeguard for the applicant, such as the right to claim monetary compensation.

57. Before the expiration of the statutory period (for example, before the expiry of 18 months from the filing date (or priority date)), applications are kept confidential. In exceptional and limited circumstances, however, a patent application may be laid open before the expiration of that period in some countries. These circumstances include, for example, the following: (i) the applicant explicitly requested earlier publication of his application; (ii) a third party wishes to inspect the application because he/she received a warning from the applicant that, once a patent is granted, the applicant will sue him/her for infringement.

58. Further, in some countries, there are also exceptional cases where the whole, or certain parts, of the application is withheld from publication. One such case is where the application contains an invention prejudicial to national security. Another typical case is where the application contains an expression against morality or *ordre public*, the patent office may decide *ex officio* not to publish such an expression. In some countries, the inventor is not named in the publication if he/she made an explicit request.

59. The formats of published applications and patents are largely standardized at the international level. Many bibliographic data widely used on the first page of patent documents or in official gazettes are identified through code numbers (the so-called “INID Codes”) under WIPO Standard ST.9.⁸ Such codes facilitate the identification of information without need for the knowledge of the language used and the industrial property laws, conventions or treaties applied.

(c) Information relating to procedures before the office

60. During the patent procedure before the office, there may be a number of communications exchanged between the office and the applicants, as well as between the office and third parties. The patent office may notify the applicant that the application does not comply with some formality requirements. It may send the applicant a search and examination report and its decision to grant the patent or refuse the application. The applicant may send the office an amendment of the application or a correction of the granted patent, may request a divisional application, or may pay required fees. In some countries, an opposition can be filed by a third party before or after the grant of the patent. Following such request, a series of communications will be exchanged between the office and the parties involved. If an administrative appeal procedure is available under the applicable law, there

⁸ WIPO Standard ST.9 “Recommendation Concerning Bibliographic Data on, and Relating to, Patents and SPCs” [<http://www.wipo.int/export/sites/www/standards/en/pdf/03-09-01.pdf>]

will be a number of communications filed with the competent appeal body and sent from such a body.

61. These communications are a great source of information that provide the up-to-date legal status of the application or patent concerned, for example, whether a patent was granted, whether an opposition was filed, whether a maintenance fee was paid, whether an application or patent was withdrawn, abandoned or expired or whether any amendment or correction was made in an application or patent. In general, such communications are kept by patent offices, and are laid open to the public in accordance with the applicable law (often after the relevant patent application/patent is published). In other words, legal status information is available to the public, but in practice, is not disseminated in an accessible manner at the global level for its wider use. The difficulties in accessing such information increase legal uncertainty and hinder an efficient decision making by companies and policy makers, since the validity of patents has consequences with regard to negotiations and decisions on the possibility of concluding voluntary licensing agreements, granting a compulsory license or manufacturing or importing off-patent products. Information concerning a change in ownership, name or address, the status of licenses and other legal rights and obligations associated with the patent under question, and court decisions relating to that patent, if any, are also an integral part of the legal information, as further described below.

62. A thorough understanding of the applicable patent law, however, is required when analyzing the legal effect of the patent in question. For example, according to Article *5bis* of the Paris Convention, a period of not less than six months shall be allowed for the payment of maintenance fees, subject to the payment of a surcharge if the national legislation so provides. Further, in some countries, where a failure to comply with a time limit for an action before the office has the direct consequence of causing a loss of rights with respect to an application or patent, reinstatement of rights is available under certain circumstances during a certain period, which may be different from one country to the other.⁹ Time limits to request judicial review are also different from one country to the other. Moreover, the fact that no valid patent exists in respect of a particular invention should not be mistaken with the freedom to exploit such invention, since there is the possibility that the invention cannot be exploited without infringing other valid patents.

(d) Change in ownership, name and address

63. A change in the person of the applicant or patent owner is recorded in the national patent registry, and the up-to-date information about the applicant or owner is available to the public, once the application or patent is made available to the public. Such a change may occur because of, for example, a contract assigning the ownership of the application or patent concerned, a merger, the reorganization or division of a legal entity, an operation of law or a court decision transferring the ownership of an application or patent. Similarly, where there is a change in the name or address of an applicant or owner, such change is recorded in the patent registry. The accurate information about applicants and owners increases transparency with respect to actual ownership of patents, and facilitates third parties to contact right holders if they wish to, for example, obtain licenses.

64. It should be noted, however, that the legal effect of national patent registries may be different from one country to the other. With respect to the formality requirements regarding

⁹ See also Articles 12 and 13 of the PLT.

a request for recordation of a change in ownership, name or address, PLT Rules 15 and 16 provide maximum requirements that the Contracting Parties may require under the applicable national laws.

(e) Licenses and security interests

65. In some countries, a license in respect of an application or patent may be recorded, or registered, in national patent registries. Although the legal effect of such recordation/registration may be different from one country to the other, it provides legal certainty and informs third parties about the licensing situation. Similarly, in some countries, information concerning the establishment of security interests in respect of an application or patent may be also recorded/registered in the national patent registry. Since licensing agreements and security interests often contain commercially sensitive matters for both parties concerned, the applicable national law may limit the public disclosure to certain information recorded/registered in the patent registry. With respect to formality requirements regarding a request for recordation of a license or a security interest, PLT Rule 17 provides maximum requirements that the Contracting Parties may require under the applicable laws.

66. In addition, information concerning compulsory licenses and licenses of rights, which may also be valuable for third parties, is often recorded in the registry and is published in accordance with the applicable law.

(f) Court decisions relating to applications and patents

67. The administrative decisions made by patent offices are subject to judicial reviews in accordance with the applicable law. Therefore, for example, even if a patent was granted by the office, it may be later invalidated by the competent court. Or, even if an application was refused by the patent office, it may be still pending in the court. Consequently, information concerning whether a patent or an application is pending at the court or not, and what is an outcome of the court procedure is also important for understanding the actual legal status of relevant application/patent. There are two issues to be considered. The first issue is whether such information is publicly available. The second issue relates to where to find the information (for example, in the patent registry or a separate record) and to what extent that information is accessible by the general public.

VI. PATENT INFORMATION DISSEMINATION POLICY

68. In providing patent information, every patent office follows a patent information dissemination policy which can differ from country to country. The policy normally takes into consideration the role of the public sector, principally the patent offices which are subsidized by patent fees, and the private sector, which takes the raw information from the patent offices and develops it into value-added services and products.

69. In some countries, a strong private patent information industry is encouraged, sometimes by direct funding of public or semi-public enterprises, or by contracts with patent information providers that guarantee a certain level of patent information dissemination within the country. In these cases, the patent office itself typically provides minimal services directly. In other countries, the patent offices support free and wide distribution of patent data and this can spawn a very active private sector with very sophisticated uses of patent information, although the office itself may not actively participate in creating the private

sector except by making data easy to access. While other offices in some countries only provide basic information in paper-form in gazettes with no electronic documents, in which case wider dissemination of patent information is more difficult.

70. In any case, the primary role of the public sector, i.e., of patent offices, is to ensure that reliable information is available in a timely manner in a usable format. In general, the public sector encourage dissemination and effective use of patent information, either by providing such services itself, or by encouraging the private sector to do so.

71. The wider national and international dissemination of patent information can result in a loss of control over the information by the authority that created it. Therefore, patent information dissemination policies should take into account the right of patent offices to maintain rights on the use and re-distribution of their data, in particular the right to receive income from the commercial use of the information.

VII. TECHNICAL INFRASTRUCTURE AND TOOLS

(a) Digitalization of patents

72. In most countries, patent documents as well as legal status information are made available to the public through publication on paper or through public inspections at the patent offices. However, such “availability” of information does not always mean it is “accessible” in practical term. Among 184 Member States of WIPO, patent data is only available in electronic format for around 80 patent authorities. Much of that electronic data is simple bibliographic data records, often without a title or an abstract for search and retrieval purposes. Full text of patent documents in electronic form is only available for a minority of patent authorities. Similarly, detailed status information, regarding the ownership and legal status of patents, is only available in electronic format for a small number of patent authorities. This means that, although all information that need to analyze technical contents of patents as well as legal status of such patents are available from the patent offices, in practice, it can be very difficult to obtain reliable information about the geographical coverage and legal status of patents in different parts of the world, particularly in developing countries. Digitization of national collections is, therefore, a necessary, first step in completing databases not just for technical information, but also for legal information as well as statistical/analytical use of patent information.

73. In order to improve the accessibility of information nationally and internationally, WIPO is actively increasing its technical assistance programs which cover scanning, data formatting, OCR and dissemination of patent data, focusing primarily on patent offices in developing countries where coverage of patent information has been incomplete or non-existent in the past. This technological information, together with other internationally accessible technological information, can then be not only accessed and evaluated locally so as to encourage a local technological base, but to be also disseminated more widely at the international level.

(b) Patent databases

74. Patent information is increasingly accessible via easily-accessible services that are delivered over the Internet. There are two main categories of database service available: free

services, typically provided by patent offices and other public sector institutions, and fee-based services provided by the private sector.

75. The availability of a wide selection of free databases provides for the basic needs of patent searches carried out by non-professionals, particularly individual inventors, students and small and medium enterprises (SMEs). Such services are provided mostly by national and regional patent offices, by WIPO and by academic institutions.¹⁰ Even if these free-of-charge databases were initially intended only to provide very basic functionality, the decreasing cost of information technologies has enabled the free public sector database services to develop rapidly and to provide more powerful search functionalities for users.

76. Commercial patent information providers tend to provide more sophisticated and value-added services. Such services may be tailored to specialist user groups, and they often match patent data with other technological and commercial information, as well as providing more sophisticated analysis, monitoring and reporting tools.

(i) WIPO's PATENTSCOPE[®] Search Service

77. The PATENTSCOPE[®] search service provides free access to technology contained in over 1.5 million published international patent applications under the PCT and provides an entry point for all of WIPO's patent information services. It includes the following main features:

- full-text search facilities, permitting the contents of the whole document, not just bibliographic data or abstracts, to be searched;
- status information and file contents (search and examination reports, written opinions of the searching authority, applicant's informal comments on the written opinion, priority documents, etc.);
- searchable data on the PCT national phase entry data for over 30 countries;
- downloadable weekly collections of published applications through subscription services;
- graphical analysis of search results;
- RSS feeds to help track technology developments in specific areas;
- English, French and Spanish search interfaces and web pages;
- searches in English, French, German, Spanish, Russian and Japanese languages and corresponding characters;
- a Technology Focus area which provides reports, as well as pre-defined searches, of the latest published PCT international patent applications which reflect developments in selected technologies.

¹⁰ WIPO provides the PATENTSCOPE[®] Search Service at: <http://www.wipo.int/patentscope>. The URLs of other databases are available at: <http://www.wipo.int/ipdl/en/resources/links.jsp>.

78. A full text search can be carried out in either the title, abstract, description, claims or in all of them simultaneously. An unlimited number of keywords, as well as a wide variety of bibliographic data (including classification, applicant, inventor, dates, addresses, nationalities, designated states, etc.), International Patent Classification (IPC) symbols, can all be searched individually or combined using Boolean operators. Search tools such as truncation and range searches are also available.

79. Related documents within the filing procedure are also accessible and include the original filed application as well as related patent documents and notifications from patent offices. These documents constitute important information regarding the status of the international patent application procedure.

80. Regional and international patent application files may contain “national phase entry” data, which shows the countries where the applicant is seeking patent protection and gives the patent reference number from which it is possible to investigate whether the patent has been granted. Certain patent offices also offer a hyperlink to their websites, where further information regarding the national patent is available. The overall status is also given when available.

81. Sets of results can also be displayed graphically to visualize trends for a specific search illustrating the number of international applications by publication year, the international applications by country of origin, by applicant/assignee name and by IPC subclass (see Figure 1 below).

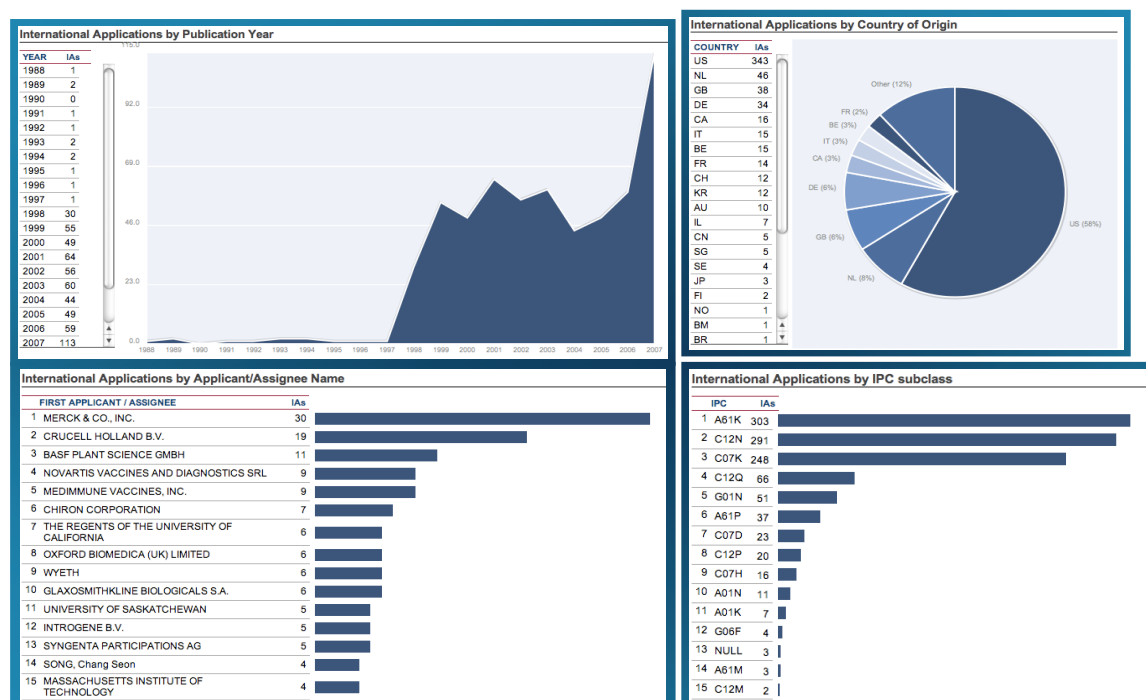


Figure 1

82. An important addition to the PATENTSCOPE[®] service this year will be the addition of fully searchable national patent collections from the offices of several WIPO member states. Some of these collections will be from offices where coverage of patent information has been incomplete or non-existent in the past. This is the result of an ongoing technical assistance

program that covers scanning, data formatting, OCR and dissemination of patent data, especially for patent offices in developing countries.

(ii) Specialized databases

83. A specific recommendation within the WIPO Development Agenda (Recommendation 8) is the access to specialized databases for the purpose of patent searches. One of the major concerns raised was accessibility to commercial (fee-based) databases. A study paper covering the issues such as needs analysis for each country, review of specialized patent databases, review of specialized non-patent literature (NPL) databases, comparison analysis between the added value of commercial databases with respect to free databases, possible issues and recommendations for implementation and necessary human and financial resources, is under preparation. Discussions are under way with commercial providers as to how best provide access to such databases to developing countries.

84. Collections of legal status information as well as the accessibility to such information are also areas which are important to many. For example, the Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property,¹¹ adopted by the sixty-first World Health Assembly in May 2008, states in Action 5.1(c) as follows:

“(c) facilitate widespread access to, and promote further development of, including, if necessary, compiling, maintaining and updating, user-friendly global databases which contain public information on the administrative status of health-related patents, including supporting the existing efforts for determining the patent status of health products, in order to strengthen national capacities for analysis of the information contained in those databases, and improve the quality of patents.”

(iii) Non-patent databases

85. The accessibility and retrieval of non-patent literature is rapidly developing, expanding and complementing the existing search possibilities of technical information in general, which until recently could only be searched using classified patent databases. Moreover, in certain technical fields, such as biotechnology, medical technology and computing, NPL provides the most important contribution within the available prior art. However, unlike basic patent documentation, which is made available free of charge by patent offices around the world, access to NPL is not always available free of charge and is often only available via subscription.

86. WIPO is currently working to establish a web-based service, which will allow search and access to scientific and technical journals. The service will correspond to similar services currently offered by certain UN agencies in their area of competence: The World Health Organization provides access to biomedical and health journals through its Health InterNetwork Access to Research Initiative (HINARI) program; the Food and Agricultural Organization provides access to agricultural journals through its Access to Global Online Research in Agriculture (AGORA) program; while the United Nations Environment Programme offers access to journals regarding the environment through its Online Access to Research in the Environment (OARE) program. All these services offer access to their respect journals to 108 developing countries.

¹¹ http://www.who.int/gb/ebwha/pdf_files/A61/A61_R21-en.pdf

87. The WIPO service should be launched in mid 2009 and initially allow searching of journals defined as PCT non-patent literature minimum documentation in PCT Rule 34.1(b)(iii).¹² Access to the complete journals will only be possible, just as in the case of the other UN agencies, for certain users in eligible developing countries and LDCs.

(iv) Patent classification systems

88. The success of searchable patent databases to identify relevant technical knowledge has been greatly assisted by the fact that all patents are classified according to specific patent classification systems, such as the International Patent Classification (IPC), allowing a far more effective retrieval of such documents. Many technical and scientific papers, articles and documentation, the so-called NPL, is now also being systematically classified according to technology-specific classification and, in some cases, patent classification as well.

89. The IPC has been subject to extensive reform and revision in recent years and a continuous review of its functionality. This process is coordinated by WIPO. WIPO also advocates and supports further harmonization of the various patent classification systems in the world, particularly those used by the world's largest patent offices. As the majority of these systems are already based on the IPC, the harmonized fields should be integrated into the IPC, i.e., this harmonization be part of or contribute to the IPC revision. Such a harmonization not only serves for a more efficient global patent system in terms of patent office search and examination, but also in simplifying search tools and strategy for all users.

(v) Extending access to documentation in different languages

90. The dramatic growth of new users of the patent system, particularly from Asia, means that there is now a very large volume of technical information which is only available in Asian languages, especially Japanese, Chinese and Korean. Indeed, the expansion of industrial activity around the world can be expected to add more languages to this base in the future. This increasing diversity of languages in turn makes it more difficult for users of patent information to access and understand the full range of available information. Several solutions are currently being implemented to solve this problem, from manual human translation to machine translation and cross-language tools.

91. WIPO is currently developing a cross-language tool which will be able, with the aid of specialized dictionaries, to provide the translation into different languages, as well as provide synonyms, for any keyword which has been input as a search criterion. Because a search engine only searches the word as written in a specific language, only documents in that language are retrieved since only they have that word in that language. It is worth recalling that only 65% of PCT international patent applications are published in English, although all PCT applications are published with a title and abstract translated into English and French. This means, that when searching using English keywords, only 65% of the description and claims text of the underlying documentation is being searched, with the remaining 35% non-English documentation not being searched. Therefore, a cross-language tool which can translate keywords and provide synonyms would search 100% of the available documentation. Thereafter, when a list of results from a specific search is obtained, those

¹² See <http://www.wipo.int/standards/en/pdf/04-02-01.pdf>

documents listed can be machine translated so as to assist the user in understanding the complete document.

(c) WIPO specialized search services for developing countries

92. The WIPO Patent Information Services (WPIS) provide prior art search reports for applicants from developing countries, while the International Cooperation for the Search and Examination of Inventions (ICSEI) program assists patent offices of developing countries in assessing novelty and inventive step of patent applications filed with them. The ICSEI program is provided in cooperation with “donor” patent offices which offer their search and documentation services to provide the requested information free of charge for developing countries.¹³

93. WPIS is likely to be reviewed to reflect the need to provide greater assistance in searching patents and non-patent literature in the interim to countries developing their own search services.

(d) Establishing Technology Information Centers

94. WIPO is currently implementing a pilot project establishing Technology Information Centers (TIC), which it plans to extend to all interested Member States next year. The main objectives of a local TIC are:

- to allow users to benefit effectively from increased accessibility offered by internet searches, including search tools such as keyword, truncation,
- classification, etc. through direct personal (face-to-face) assistance;
- to strengthen the local technological base by building up local know-how;
- to increase technology transfer, e.g., by investigating the possibilities of licensing, joint ventures, etc.;
- to assist local users to create, protect, own and manage their intellectual property rights;
- to support local IP training and awareness raising activities.

95. The role of TICs, therefore, would not necessarily be limited to providing only patent information services, but also a wide range of innovation support services, including the coordination of a transfer of skills as well as sharing of know-how between users of the TIC and inventors/companies, particularly in developing countries.

¹³ Further information regarding WPIS and ICSEI is available at:
http://www.wipo.int/patentscope/en/data/developing_countries.html

VIII. DATABASE ON SEARCH AND EXAMINATION REPORTS

(a) Access to search and examination reports prepared by other Offices

96. The international patent system today faces a number of challenges, among which are the following: on the one hand, a number of patent offices have difficulties in handling the increasing number of patent applications in a timely manner and, on the other, the quality and validity of granted patents is increasingly subject to criticism. These problems affect not only offices of industrialized countries, but also those of developing countries, and not merely big offices, but equally small offices which have limited human and financial resources.

97. One measure applied by a number of patent offices in order to address the above issues is to request applicants to submit, with their application or at a later stage, additional information, such as search and examination reports established by foreign offices on parallel applications filed and/or patents granted abroad. Such information contribute to improve the quality, efficiency and timeliness of the examination process.

98. However, for applicants, this way of proceeding is often burdensome and inefficient, since they have to transmit various documents (which may be different from one office to another) to the requesting offices. In some cases, translations may need to be prepared by the applicants. For offices, it means that they have to receive and store those documents. Each time the applicant has not submitted the documents or where such submission is not mandatory under the applicable law, the offices need to request those documents from the applicant. Further, information concerning corresponding foreign applications are also of considerable value for third parties. However, it is not easy to access that information, in particular, where it needs to be obtained from foreign countries.

99. In the recent past, in the context of facilitating the utilization of search and examination work conducted in other offices, there is a growing interest in establishing a one-stop portal where search and examination reports prepared by different patent offices on patent family applications can be easily accessed by examiners of patent offices. For example, in October 2008, the heads of five intellectual property offices (IP5), namely, the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO) and the United States Patent and Trademark Office (USPTO), laid out a blueprint for work sharing among the IP5. They agreed on ten Foundation Projects, one of which is entitled "Common Access to Search and Examination Results".¹⁴ One of the aims of that project is to enable examiners to find one-stop references in the dossier information of other offices, such as search and examination results. With a view to be supportive of the IP5 cooperation, the Trilateral Offices (EPO, JPO and USPTO) agreed that they would move forward with, among others, the common access to search and examination results project.¹⁵

¹⁴ <http://www.epo.org/about-us/press/releases/archive/2008/20081031.html>

¹⁵ http://www.trilateral.net/conf_sum/2008.pdf

(b) Currently available databases

(i) PCT international applications

100. In addition to the published PCT international applications, the PATENTSCOPE[®] Search Service¹⁶ provides access to documents contained in the files of PCT international applications, such as the Written Opinion of the International Search Authority (WO-ISA), the applicant's informal comments on the Written Opinion of the International Search Authority, the International Preliminary Report on Patentability: Chapter I (IPRP Chapter I) and the International Preliminary Report on Patentability: Chapter II (IPRP Chapter II). It also provides PCT national phase information with respect to more than 30 countries, such as the national phase entry dates, the national phase reference numbers and the status of the relevant international application at the national stage.¹⁷ Above information is available to the public, free of charge.

(ii) National/regional applications

101. A number of countries and regional organizations require applicants to submit, either on a mandatory basis or on request by the office, information regarding corresponding foreign applications during the procedure before the office. While the kind of information required by the offices varies, the countries and organizations having this type of requirement include Algeria, Argentina, Australia, Barbados, Belize, Bolivia, Brazil, Chile, China, Colombia, Cuba, Ecuador, Egypt, Ghana, India, Kenya, Malaysia, Mauritius, Mexico, Mongolia, Mozambique, Paraguay, Peru, the Philippines, Thailand, Tunisia, the United States of America and ARIPO.

102. As regards the availability and accessibility of search and examination reports as well as other documents relating to patent applications and patents, in general, third parties may request file inspection of patents and published applications (including search and examination reports) once the file is laid open to the public in accordance with the applicable law, subject to the payment of a fee in many offices. Australia, for example, provides search and examination reports for free upon request by phone or e-mail, while an inspection of other documents requires a fee and more complex procedures.

103. Some offices provide on-line access to dossiers via the Internet, free of charge, on their web site. In other words, anyone may freely access search and examination reports and other information contained in file wrappers. The following describes the services provided by some national offices:

- The EPO offers a service called "Register Plus" on the *epoline*[®] web site.¹⁸ It provides a single point of access to data contained in the patent register and dossiers, patent family information (including direct links to family patent applications), cited documents (including direct links to those documents cited by the EPO and by the applicant) and *esp@cenet*. That information can be retrieved through simple as well as advanced search facilities.

¹⁶ <http://www.wipo.int/pctdb/en/>

¹⁷ <http://www.wipo.int/pctdb/en/nationalphase.jsp>

¹⁸ <http://www.epoline.org/portal/public>

- The USPTO provides the “Patent Information Image Retrieval (PAIR)” service on its web site.¹⁹ To the public, it provides issued or published patent application status, and an access to public application image file wrapper, including: patents, published application documents and applications to which a patented or published application claims domestic priority.
- In Japan, the Industrial Property Digital Library (IPDL) service is provided by INPIT. A project to move towards a full, free and public access to electronic dossiers is underway. To other IP offices, however, the JPO offers a machine translation service upon bilateral agreements. Examiners of those other IP offices may access to search and examination reports and related information (cited document, status, patented claims, etc.), translated from Japanese by a machine translation facility (Advance Industrial Property Network (AIPN)).

(c) Some issues to be considered

104. Although a small number of offices provide free search and examination information via the Internet, there is no global one-stop-shop mechanism to access search and examination reports and other dossier information on-line at the international level, as far as national/regional patent applications are concerned. As regards the PCT international applications, search and examination reports prepared during the international phase are already available on-line. Through further development of the national phase entry data under the PATENTSCOPE[®], information concerning national search and examination reports prepared during the national phase by the designated/elected offices could be covered by the PATENTSCOPE[®]. Enhancing the contents of the PATENTSCOPE[®] will contribute to the establishment of a portal where users can find complete information on PCT international applications from its filing up to grants (or even after the granting procedure) in various countries. Increasing the accessibility to search and examination reports prepared during the national phase would facilitate the work of national/regional offices with which a majority of patent applications by non-resident is filed through the PCT route.

105. With respect to the national/regional offices with which a substantive number of applications are filed via the direct national/regional filing route (often claiming priority under the Paris Convention), improving access to search and examination reports and other dossier information of corresponding parallel national/regional applications filed abroad will facilitate patent examination by those national/regional offices.

106. Since the search and examination reports provide information regarding the patentability of inventions, they will be useful not only for the examiners of the patent offices but also for third parties who may wish to evaluate the patentability of a particular invention. However, there needs to be a mechanism to prevent third parties from accessing those reports as long as the applicable law does not allow public access to such information.

107. From the point of view of practical utility of the database, it would be useful to have a direct access to the prior art documents which are cited in search and examination reports so that the contents of those documents could be easily consulted. While the search and examination reports may cite non-patent literature under copyright protection, access to those documents may require some legal consideration. Moreover, since, in general,

¹⁹ <http://portal.uspto.gov/external/portal/pair>

communications between applicants and the office are made in a language accepted by the office, the diversity of the languages of those communications may be another issue to consider for a wide usage of search and examination reports at the global level.

108. Further, national/regional search and examination reports are just one of many communications between applicants and the office. In general, all communications relating to a particular application are put together in a corresponding “dossier”. Therefore, as indicated earlier, some national patent offices make not only search and examination reports but also other communications available to the public on-line (dossier access). Many of those communications are also useful for third parties to analyze patentability of the relevant inventions as well as legal status of the application/patent concerned.

109. At the international level, the WIPO Digital Access Service (DAS) has been developed to facilitate the exchange of priority documents between offices in electronic or paper form. It allows offices either to send a copy of the document to the International Bureau or to make the document available via a reference to their own digital library. A similar mechanism may be envisaged for the access to and exchange of search and examination reports. Further legal and technical consideration on a search and examination reports’ database, however, will depend on the objective and the purpose of such a database.

IX. PUBLIC DOMAIN

110. There are various definitions of the term public domain when used in the context of intellectual property rights. In general, the public domain in relation to patent law consists of knowledge, ideas and innovations over which no person or organization has any proprietary rights. Such works and inventions are considered public property, and anyone can use and build upon them without restriction.

111. At the outset, it should be recalled that the patent policy rationale is influenced by concepts such as the public domain and the public good.²⁰ The patent system provides a monopoly to the inventor over his invention for a limited period of time in exchange for the disclosure of the subject matter of the patent to the public. The disclosure provides others the opportunity to improve on it and create alternative technologies. In this way, the patent system encourages creativity and innovation and the dissemination of knowledge for the benefit and use of the public. The primary result of the patent system is the expansion of private goods,²¹ which after the expiration of protection ultimately become public goods and part of the public domain.

²⁰ A public good, in economic terms is defined as a good that is non-rival and non-excludable. This means, that consumption of the good by one individual does not reduce the availability of the good for consumption by others; and that no one can be effectively excluded from using the good.

²¹ Private goods are excludable and rival. This means, that consumption of the good by one individual prevents others, e.g., those who have not paid for it, from consuming the good. Consumption by one consumer prevents the simultaneous consumption by others.

(a) The ways inventions get into the public domain

112. In general, a work is considered to be in the public domain if there is no legal restriction for its use by the public. With respect to the public domain and patent protection, it may be too simplistic to claim that where an invention is not covered by patent protection, that invention is in the public domain in the sense that anyone can use and build upon it “without restriction”. One example is the case where an off-patent invention cannot be used without infringing another valid patent that claims a broader scope of technology covering the invention in question. In such a case, the consent by the patent holder of the broader patent is required in order to exploit the off-patent invention. Moreover, a marketed product may be protected by several forms of intellectual property protection, such as patents, industrial designs, trademark or copyright. The expiration of one form of protection, for instance, patents, does not guarantee that the product is free from any intellectual property protection.

113. The above examples illustrate that third parties need to observe due diligence and conduct a freedom to operate analysis, even if the technology is not covered by a patent. Nevertheless, the patent system provides some mechanisms that filter out a number of inventions from protection, and with the above precaution in mind, these inventions can be considered to be in the public domain. The following paragraphs describe some of those mechanisms.

Absence of legal restrictions on use

114. A work may be in the public domain if there is no legislation establishing proprietary rights over the work or if the work is ineligible for protection and specifically excluded from protection under existing laws.²² The differences in legislations among countries suggests that a certain creation may be considered in the public domain in one jurisdiction but not in another.

115. Not all inventions may obtain patent protection, even if they are not subject matter excluded from patent protection. Only those which comply with the patentability requirements may obtain patents in a country in which patent protection is sought. In addition, the way in which the patentability requirements, in particular, inventive step, are applied also influence the grant of rights, and thus indirectly the scope of the public domain. Further, patent protection is limited geographically. Patent rights over a certain technology are normally not obtained in all the countries providing patent protection for that technology. Once an application is published anywhere in the world, the technology that is described in that application is considered prior art in many countries. Therefore, in those countries, no one can obtain patent protection on such technology by filing a patent application after the publication date.

Expiration of Patent Protection

116. Patent protection is limited in time. In most countries, the term for patents is 20 years counted from the filing date, after which the invention is no longer under patent protection.

²² For example, under most patent laws, natural phenomena, laws of nature and abstract ideas are ineligible for patent protection and thus remain in the public domain. See documents SCP/12/3 Rev.2, Annex II and SCP/13/3.

Non renewal

117. To maintain a granted patent in force, most of the countries request maintenance or renewal fees to be paid by the patent holder to the patent office.²³ The failure to pay maintenance fees to the patent office results in the forfeiture of the patent concerned. As a result of the emergence of more competitive technologies on the market, many patents are abandoned, not renewed, during their patent life. Data proves that only a minority of patents are maintained for the full term of 20 years.²⁴

Revocation or Invalidation

118. Most of the patent laws provide certain procedures for the revocation or invalidation of a patent during its life time, where a patent has failed to meet the statutory requirements for patentability. There is a direct relationship between the quality of patents granted and the public domain. In recent years, some patent offices have been criticized for issuing patents that are overbroad compared to the actual innovation disclosed in the patent application.²⁵ The failure of patent offices to determine the scope of information that is already in the public domain and thus part of the prior art, when examining patent applications, may have a narrowing effect on the public domain by removing products and methods from its scope. On the other hand, a more strict application of the patentability requirements may lead to a potential expansion of the public domain.

(b) Public domain and patent information

119. Patent information is a public good available for everybody's use. It is considered one of the richest technological information sources worldwide. In addition, patent information is an outstanding tool to establish whether specific subject matter is in the public domain. The patent system has a number of "gates" through which an invention eventually falls outside of the scope of patent protection. Third parties can monitor those gates using patent information. Therefore, accessibility to patent information is an important factor for ensuring a rich and accessible public domain.

[End of document]

²³ Some patent laws require the payment of maintenance fees for pending patent applications.

²⁴ In the United Kingdom, of the nearly two million patents published, barely one-tenth are still in force. Michael Blackman, The Patent Office, UK, doc.: WIPO/GRTKF/IC/6/INF/4; See also: World Patent Report, a Statistical Review, 2008, WIPO, p.24

²⁵ Jay P. Kesan, *A Comparative Appraisal of Patent Invalidation Processes in Japan*, IIP Bulletin 2004; Raeanne Young, *Patents and the Public Domain: Improving Patent Quality upon Reexamination*, Electronic Frontier Foundation, June 2008.