

THE PATENT COOPERATION TREATY: AT THE CENTER OF THE INTERNATIONAL PATENT SYSTEM

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I. INTRODUCTION

The Patent Cooperation Treaty (PCT),¹ a uniquely successful multilateral treaty administered by the World Intellectual Property Organization (WIPO), facilitates the filing of patent applications worldwide. The treaty was concluded in Washington on June 19, 1970, at a diplomatic conference attended by seventy-eight countries.² It entered into force on January 24, 1978, with thirteen

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1. Patent Cooperation Treaty, June 19, 1970, 28 U.S.T. 7645, 1160 U.N.T.S. 231, available at <http://www.wipo.int/pct/en/texts/pdf/pct.pdf>.

2. Eleven intergovernmental organizations and eleven non-governmental organizations also attended the conference. See WIPO, RECORDS OF THE WASHINGTON DIPLOMATIC CONFERENCE ON THE PATENT COOPERATION TREATY 832-33

Contracting States,³ and opened its doors to the receipt of international applications on June 1, 1978, by which time the number of Contracting States had climbed to eighteen.⁴ By the end of 2005, the number of Contracting States had increased more than seven-fold to 128,⁵ with several additional countries announcing their intention to join by the end of 2006.⁶

Applicants did not immediately rush to use the PCT. While the first few PCT applications were filed on the PCT's first day of operations, applicants filed fewer than 650 applications in 1978, and in 1979—the first full year of operations—the number was only about 2600.⁷ The technological revolution, growth of the global economy and increasing focus on intellectual property enforcement starting in the mid-1980s gave the PCT the boost it needed. Between 1995 and 2001, the filing of PCT applications increased by approximately 18% per year.⁸ The year 2001 saw the number of applications surpass 100,000, and by 2005, the figure jumped to more than 130,000.⁹ All told, more than one million PCT applications have been filed.¹⁰

The achievements of the PCT are not limited to numbers alone, however. Not only has the PCT come to symbolize the international patent system, it has served to raise awareness about the importance of intellectual property protection, it represents a

(1972), available at <http://www.wipo.int/pct/en/texts/pdf/washington.pdf> (containing index of attending organizations and the full text of all documents relating to the conference).

3. See Patent Cooperation Treaty, PCT Contracting States, June 19, 1970, 28 U.S.T. 7645, 1160 U.N.T.S. 231, available at <http://www.wipo.int/treaties/en/documents/pdf/m-pct.pdf>. These thirteen Contracting States were Cameroon, the Central African Republic, Chad, Congo, Gabon, the former Federal Republic of Germany, Madagascar, Malawi, Senegal, Switzerland, Togo, the United Kingdom, and the United States of America. *Id.*

4. *Id.* The additional five Contracting States were Brazil, France, Luxembourg, the Soviet Union, and Sweden. *Id.*

5. *See id.*

6. The most notable potential addition is Thailand. *See Government IP Authorities Deserve Applause*, BANGKOK POST, Sept. 23, 2005.

7. WIPO, PCT STATISTICAL INDICATORS REPORT: ANNUAL STATISTICS 1978-2004 3 (2005) available at http://www.wipo.int/ipstats/en/statistics/patents/pdf/yearly_report_2004.pdf.

8. *Id.* The filings increased from the preceding year by 20.5% in 1996, by 18.3% in 1997, by 17.5% in 1998, by 13.9% in 1999, by 22.1% in 2000 and by 16.1% in 2001. *Id.*

9. WIPO, FILING OF PCT INTERNATIONAL APPLICATIONS: PCT FILING TRENDS: OCTOBER 2005 3 (2005), available at http://www.wipo.int/ipstats/en/statistics/patents/pdf/pct_monthly_report.pdf.

10. WIPO, *supra* note 7, at 3.

model of international cooperation among countries and intergovernmental organizations, and its collection of patent literature embodies a wealth of scientific and technical information. In its success, the PCT has surpassed the expectations of even its most ambitious founders.¹¹

This brief introduction will provide an overview of the PCT system, with a particular focus on the system's legislative framework, the procedures that make it work, and the reasons for its success.

II. LEGISLATIVE FRAMEWORK

The PCT is only the second treaty ever concluded in the field of patents. It followed, by almost 100 years, the first treaty to create a framework for international patent protection, the Paris Convention for the Protection of Industrial Property of 1883.¹² The framers of the Paris Convention, recognizing that a need might arise for more specialized treaties, expressly introduced the right of the member countries to enter into special agreements amongst themselves.¹³ The PCT constitutes such a special agreement. Eight multilateral treaties involving patents have been concluded subsequent to the PCT, many of which include express reference to the PCT and even require PCT membership as a prerequisite for joining the treaty.¹⁴

The PCT system has a fairly dense legislative framework. In descending hierarchical order, the system is governed by the Treaty

11. WIPO, *THE FIRST TWENTY-FIVE YEARS OF THE PATENT COOPERATION TREATY (PCT) 1970-1995* (1995). See in particular the Preface and the Summary History by Arpad Bogisch, Director General of WIPO (1973 to 1997).

12. Paris Convention for the Protection of Industrial Property of 1883, Mar. 20, 1883, 21 U.S.T. 1583, 828 U.N.T.S. 303 [hereinafter Paris Convention], available at http://www.wipo.int/treaties/en/ip/paris/pdf/trtdocs_wo020.pdf.

13. *Id.* art. 19 (Special Agreements).

14. These eight treaties are the Patent Law Treaty (PLT), Protocol on Patents and Industrial Designs within the framework of the African Regional Industrial Property Organization (ARIPO Harare Protocol), Agreement establishing the African Intellectual Property Organization (OAPI Bangui Agreement), European Patent Convention (EPC), Eurasian Patent Convention (EAPC), Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure, Strasbourg Arrangement Concerning the International Patent Classification, and—without any reference to the PCT—the Agreement on Trade Related Aspects of Intellectual Property (TRIPS) insofar as it provides that World Trade Organization members must recognize the principles set forth in Articles 12 to 19 of the Paris Convention.

(Patent Cooperation Treaty), a set of comprehensive regulations,¹⁵ and Administrative Instructions¹⁶ that deal mainly with the interactions among offices,¹⁷ authorities, and WIPO required for the processing of international applications. In addition, twelve bilateral agreements¹⁸ regulate relations between WIPO and the industrial property offices that currently serve as PCT International Searching and Preliminary Examining Authorities (International Authorities), and a volume of International Search and Preliminary Examination Guidelines establishes the framework for the functions that those offices carry out.¹⁹ Finally, PCT Receiving Office Guidelines cover the responsibilities of national offices throughout the PCT procedure.²⁰

Under the Treaty, the Contracting States constitute a “Union,”²¹ the main body of which is the PCT Union Assembly.²² The Treaty also establishes a Committee for Technical Cooperation²³ whose responsibilities include advising the Assembly on the appointment of International Authorities and on the types of patent documents and non-patent literature that should be included in the patent documentation used by International Authorities when carrying out searches on PCT applications. The Assembly has, “as it deems appropriate to achieve the objectives of the Union,”²⁴ established other bodies, the most recent being the Committee on Reform of the PCT²⁵ and the Working Group on

15. Patent Cooperation Treaty, Regulations Under the Patent Cooperation Treaty, June 19, 1970, 28 U.N.T. 7645, 1160 U.N.T.S. 231 [hereinafter PCT Regulations], *available at* http://www.wipo.int/pct/en/texts/pdf/pct_regs.pdf.

16. WIPO, PCT: ADMINISTRATIVE INSTRUCTIONS UNDER THE PATENT COOPERATION TREATY (2005), *available at* http://www.wipo.int/pct/en/texts/pdf/ai_3.pdf.

17. The term “office” encompasses the patent office, patent and trademark office, industrial property office, industrial property institute, or any other specific name used in any Contracting State to designate the governmental authority in charge of patent matters.

18. The twelve agreements are available at http://www.wipo.int/pct/en/access/isa_ipea_agreements.htm.

19. WIPO, PCT INTERNATIONAL SEARCH AND PRELIMINARY EXAMINATION GUIDELINES (2004), *available at* http://www.wipo.int/pct/en/texts/gdlines_parts.htm.

20. WIPO, PCT RECEIVING OFFICE GUIDELINES (2005), *available at* http://www.wipo.int/pct/en/texts/pdf/ro_3rev1.pdf.

21. Patent Cooperation Treaty, *supra* note 1, art. 1(1).

22. *See id.* art. 53(1)(a).

23. *Id.* art. 56(1).

24. *Id.* art. 53(2)(a)(viii).

25. *See* Committee on Reform of the PCT,

Reform of the PCT,²⁶ both of which have spearheaded a major initiative to streamline PCT procedures. Moreover, although not expressly authorized by the Assembly, WIPO has constituted an ad hoc body of all the International Authorities referred to as the Meeting of International Authorities (PCT/MIA), which meets periodically to update the International Search and Preliminary Examination Guidelines and review issues relating to patent documentation, patent classification, and quality management.²⁷

III. ROLE OF OFFICES

The functioning of the PCT system would be impossible without the sharing of responsibilities in the daily handling of PCT applications by all Contracting States, their offices and authorities, and WIPO. Under the PCT, the Contracting States may decide that their national offices (as well as regional offices acting on behalf of their member States) will assume certain functions that are central to the PCT procedure. There are three such main functions.

First, a national office may act as “receiving Office.”²⁸ A regional office acting on behalf of one or more Contracting States may also act as receiving Office. The undertaking of this function is based on a unilateral notification made by the receiving Office to WIPO. A receiving Office receives new PCT applications, checks that they are validly filed with it, verifies compliance with a number of requirements (including, for example, national security), verifies the contents of the papers as filed, checks payment of fees, and receives and directs correspondence from the applicant to other PCT offices and authorities.²⁹ The national offices of almost all Contracting States act as receiving Offices; exceptions include a number of offices that have delegated their functions to another office (usually a regional office, but sometimes a national office or

http://www.wipo.int/meetings/en/topic.jsp?group_id=127 (last visited Jan. 2, 2006).

26. See Working Group on Reform of the PCT, http://www.wipo.int/meetings/en/topic.jsp?group_id=133 (last visited Jan. 2, 2006).

27. See Meeting of International Authorities Under the PCT, http://www.wipo.int/meetings/en/topic.jsp?group_id=128 (last visited Jan. 2, 2006).

28. Patent Cooperation Treaty, *supra* note 1, art. 10; PCT Regulations, *supra* note 15, R. 19.1(a).

29. See Patent Cooperation Treaty, *supra* note 1, arts. 11, 14; PCT Regulations, *supra* note 15, R. 20-23, 26, 26*bis*, 26*ter*, 27, 29-31.

WIPO).³⁰

Second, a national or regional office may act as International Authority³¹ if that office makes an express request to that effect and the PCT Assembly appoints the Office to act in that capacity. International Authorities are generally the patent offices that are most highly experienced in examining national or regional patent applications. The main tasks of these Authorities include discovering the relevant prior art,³² establishing the international search report,³³ examining the application as well as subsequent amendments made by the applicant,³⁴ and establishing opinions and preliminary reports on patentability.³⁵ There are currently twelve national or regional offices which act as International Authorities: the national offices of Australia, Austria, Canada, China, Finland, Sweden, Japan, the Republic of Korea, the Russian Federation, Spain, the United States of America, and the European Patent Office.

Third, a national or regional office may act as a “designated Office”³⁶ and an “elected Office.”³⁷ The undertaking of this double function is based on a unilateral notification made by the office concerned to WIPO. An office acting as a designated or elected Office will process applications from their date of entry into the national phase to the outcome of the national granting procedure (either grant or rejection). The difference between a designated and an elected Office is somewhat artificial. All offices involved with national processing in the national phase are designated Offices, but offices act in the capacity of an elected Office with respect to applications that enter the national phase after the international preliminary examination procedure. The national offices of almost all Contracting States, as well as all regional offices each acting for a number of national offices, act as designated and elected Offices.

Finally, the PCT is administered by WIPO,³⁸ whose

30. PCT Regulations, *supra* note 15, R. 19.1(b).

31. Patent Cooperation Treaty, *supra* note 1, arts. 16, 32; PCT Regulations, *supra* note 15, R. 36, 63.

32. Patent Cooperation Treaty, *supra* note 1, art. 15(2), (4).

33. *See id.* art. 18.

34. *See id.* arts. 33-34.

35. *See id.* art. 35; PCT Regulations, *supra* note 15, R. 43*bis*, 44*bis*, 70.

36. Patent Cooperation Treaty, *supra* note 1, arts. 2(xiii), 22.

37. *Id.* arts. 2(xiv), 22, 39.

38. *Id.* art. 2(xviii). Throughout the Treaty, Regulations and other texts, reference is made to the “International Bureau”, rather than WIPO. *See id.* art.

headquarters are in Geneva, Switzerland. The Treaty expressly provides for the WIPO mandate.³⁹ Under the mandate, WIPO must receive all PCT applications filed from all receiving Offices worldwide⁴⁰ and maintain the only legally binding copies of such applications. WIPO also publishes the applications and a PCT Gazette.⁴¹ It translates into English (and also, in some cases, French) various parts of the applications and other documents of a technical nature. It has an important translation function, producing English and/or French translations of all abstracts, titles, and text matter in drawings of applications filed in PCT languages other than English or French, and English translations of all international search reports, opinions and preliminary reports on patentability not established in English.⁴² But perhaps most significantly, WIPO acts as “Secretariat” of the PCT Union Assembly and other PCT bodies.⁴³ It constitutes the framework for the general coordination of the PCT system among offices and authorities. It offers assistance to current and potential Contracting States and their offices as well as to users of the system. Moreover, it operates its own receiving Office—currently the fourth largest worldwide.⁴⁴

Extensive informational material about the PCT legal and procedural framework can be found on a dedicated page of the WIPO Website (Patentscope)⁴⁵ and in a number of WIPO publications, in particular, the *PCT Applicant’s Guide*, the *PCT Newsletter*, PCT seminar materials, and tables of reservations and incompatibility notices made by Contracting States.⁴⁶

IV. PCT PROCEDURE

The PCT is limited to the protection of inventions,⁴⁷ and

2(xix) (defining “International Bureau”).

39. *Id.* art. 55.

40. *See id.* art. 12; PCT Regulations, *supra* note 15, R. 93.2.

41. *See* Patent Cooperation Treaty, *supra* note 1, arts. 21(1), 55(4); PCT Regulations, *supra* note 15, R. 48, 86.

42. *See* Patent Cooperation Treaty, *supra* note 1, arts. 18(3), 36(2); PCT Regulations, *supra* note 15, R. 48.3(c), 72.1, 86.2.

43. Patent Cooperation Treaty, *supra* note 1, art. 55(2).

44. PCT Regulations, *supra* note 15, R. 19.1(a)(iii).

45. Patentscope, <http://www.wipo.int/patentscope/en/> (last visited Jan. 2, 2006).

46. *See generally* Services for PCT Applicants, <http://www.wipo.int/pct/en/applicants.html> (last visited Jan. 2, 2006).

47. Patent Cooperation Treaty, *supra* note 1, art. 2(i).

therefore to the grant only of patents, utility models, and similar titles.⁴⁸ The PCT system is basically a two-phase process, consisting of an “international” and a “national” phase, each made up of several steps.

A. *The International Phase*

The international phase is a centralized procedure consisting of four main steps: the filing of an international application by the applicant and its processing, the carrying out of an international search, the publishing of the international application, and the carrying out of an international preliminary examination.

1. *Filing of the Application*

The filing of an application under the PCT has the effect of a “regular national filing” in each of the Contracting States,⁴⁹ provided the applicant has a link with at least one Contracting State, either by his/her nationality or his/her residence,⁵⁰ and the application conforms with the minimum requirements as to its content. As a result, the filing date of the international application, the “international filing date,” is considered to be the “actual” filing date in each of the Contracting States.⁵¹ If there are two or more applicants, it suffices that only one of them qualifies on the basis of nationality of, or residence in, a Contracting State.⁵² As to the contents of the application, it is sufficient that there be a part which appears to be a description, a part which appears to be one or more claims, the name of the applicant whose indication of

48. Design patents are not covered. Certain patents that are covered include “patents of addition” (available in Australia and Germany) and “extensions of European patents” (available in Lithuania and Romania). See TYPES OF PROTECTION AVAILABLE VIA THE PCT IN PCT CONTRACTING STATES (STATUS ON 1 AUGUST 2005), <http://www.wipo.int/pct/en/texts/pdf/typesprotection.pdf>.

49. Patent Cooperation Treaty, *supra* note 1, art. 11(3), (4).

50. *Id.* art. 9.

51. See *id.* art. 11. There is one exception to the principle that the international filing date is considered the “actual” filing date in each designated State: it is covered by a reservation that States can make under Article 64, which relates to the prior art effect of the international application, under certain circumstances. That reservation has been made by only one State, the United States, and it is still in effect, since it has not been withdrawn by the United States.

52. *Id.* art. 11(1)(i); PCT Regulations, *supra* note 15, R. 18.3. As a consequence, it is possible for corporations and inventors from non-PCT States to be PCT applicants as long as they are co-applicants with another person who is from a PCT Contracting State.

nationality or residence determines the link with a Contracting State, and an indication that the application is filed under the PCT.⁵³

It is interesting to note that the Treaty mandates additional requirements in order to obtain an international filing date, but the Regulations negate the impact of those requirements as a result of safeguards introduced in 1994.⁵⁴ Under the Treaty, an applicant must file an application in a prescribed language⁵⁵ and with a competent receiving Office.⁵⁶ As construed by the Regulations, however, an applicant may file an application with any receiving Office in any language and still be accorded an international filing date. The basis for this change is that the Regulations provide for any receiving Office to send to WIPO's own receiving Office (which is competent to receive all applications in all languages) any application which it lacks the competence to receive.

Similarly, until 2004, applicants expressly had to designate the Contracting States in which they wished to reserve the right to enter the national phase. Due to the introduction of an automatic designation system,⁵⁷ however, the filing of an application⁵⁸ now constitutes the designation of all Contracting States⁵⁹ that are bound by the Treaty on the international filing date. In addition, the designations apply to regional⁶⁰ patent offices, with the result that the filing of an international application encompasses the right to prosecute regional applications before the African Regional Industrial Property Organization (ARIPO), the Eurasian Patent Office (EAPO), the European Patent Office (EPO), and the African Intellectual Property Organization (OAPI).⁶¹

53. Patent Cooperation Treaty, *supra* note 1, art. 11(1)(iii)(a), (c)-(e).

54. See PCT Regulations, *supra* note 15, R. 19.4.

55. Patent Cooperation Treaty, *supra* note 1, art. 11(1)(ii).

56. *Id.* art. 11(1)(i).

57. See PCT Regulations, *supra* note 15, R. 4.9(a).

58. Actually, under Rule 4.9(a) of the Regulations, it is the filing of the request, rather than the filing of the application, which constitutes designation of all Contracting States. *Id.*

59. See Patent Cooperation Treaty, *supra* note 1, art. 11(1)(iii)(b).

60. The term "national" encompasses "regional," as in national office and regional office, national phase and regional phase, national law and regional law (that is, regional treaty).

61. As a number of countries are available through the PCT for the purpose of obtaining either a national patent or a regional patent, it is only at the time of entry into the national phase that applicants must express their choice for the national route or the regional route, or both, by engaging the national phase only before the national office or the regional office, or both, as the case may be.

In practice, an international application is filed at the “usual” office of filing of the applicant, that is, the national office acting as receiving Office. The application should also be filed in one of the languages accepted by the receiving Office,⁶² which for many applicants will be the language, or one of the languages, prescribed by that office for the filing of national applications. Subject to the requirement in the United States and other countries of obtaining a foreign filing license, applicants may also file applications directly with WIPO’s own receiving Office.

The international filing fees for the filing of an international application may be paid at one time, at the receiving Office and generally all in one currency.⁶³

Typically, an international application is a “subsequent” filing, in that it follows within a twelve-month period the filing of a priority application, as provided under the Paris Convention. As a result, a PCT application can generally benefit from the filing date of the priority application.⁶⁴

2. *International Search Procedure*

Each international application is subject to an international search by an International Authority chosen by the applicant.⁶⁵ The purpose of the search is to reveal relevant documents contained in the prior art.⁶⁶ Although the PCT defines prior art as everything “made available to the public anywhere in the world by means of a written disclosure,”⁶⁷ in general the body of prior art that is searched under the PCT is limited to the PCT “minimum documentation,”⁶⁸ which includes patent documents and non-patent literature from the largest industrialized countries.⁶⁹ For the purposes of the search, relevant documents must have been

62. See PCT Regulations, *supra* note 15, R. 12.1(a).

63. For a greater understanding of fees associated with filing a patent application pursuant to the Patent Cooperation Treaty, see Article 14(3) (indicating application defective without required payment), and Rules 14 (transmittal fee), 15 (international filing fee), 16 (search fee), and 16*bis* (time extension for late payments).

64. See Patent Cooperation Treaty, *supra* note 1, art. 8; PCT Regulations, *supra* note 15, R. 4.10; Paris Convention, *supra* note 12, art. 4.A(1), C(1).

65. Patent Cooperation Treaty, *supra* note 1, art. 15(1).

66. *Id.* art. 15(2).

67. PCT Regulations, *supra* note 15, R. 33.1(a).

68. See *id.* R. 34.1(b).

69. See *id.* R. 34.1(c).

published at a date prior to the international filing date.⁷⁰ The outcome of the international search is the establishment, normally within about sixteen months from the priority date,⁷¹ of an international search report;⁷² or, in the case that no search could be carried out, of a declaration of non-establishment of an international search report.⁷³ The report may also contain certain observations, particularly concerning the lack of unity of invention, in which case the report must indicate the total number of inventions and the identification of each invention.⁷⁴ After establishment of the report, the applicant has the opportunity, within two months, to amend the claims of the application, provided that such amendments do not go beyond the disclosure in the application as originally filed.⁷⁵ The search report and any amendments to the claims are published together with the application.⁷⁶ As a result of changes introduced in the Regulations in 2004 to streamline PCT procedures, the International Authority also establishes an opinion as to the compliance of the application with the criteria of patentability under the PCT.⁷⁷ The opinion is communicated to the applicant with the search report but is not published.⁷⁸

70. *Id.* R. 33.1(a).

71. The time limit fixed in Rule 42 is expressed slightly differently; it is actually three months from the receipt by the International Authority of the copy of the application that will serve as a basis for carrying out the search or nine months from the priority date, whichever expires later. PCT Regulations, *supra* note 15, R. 42. The sixteen-month time limit corresponds to the usual practice, even though some International Authorities have experienced delays in producing search reports on time.

72. Patent Cooperation Treaty, *supra* note 1, art. 18(1).

73. *Id.* art. 17(2). Such cases typically include those where the claims are unclear or the application relates to a subject matter which the Authority has no obligation to search (for example, scientific or mathematical theories). See PCT Regulations, *supra* note 15, R. 39.

74. See Patent Cooperation Treaty, *supra* note 1, art. 17(3)(a); PCT Regulations, *supra* note 15, R. 40.1(i).

75. Patent Cooperation Treaty, *supra* note 1, art. 19; see also PCT Regulations, *supra* note 15, R. 46 (explaining procedure for filing an amendment).

76. See Patent Cooperation Treaty, *supra* note 1, art. 21(3); PCT Regulations, *supra* note 15, R. 48.2.

77. See discussion *infra* Part IV.A.4.

78. See PCT Regulations, *supra* note 15, R. 44.1.

3. *International Publication*

WIPO publishes all international applications⁷⁹ “promptly” after the expiration of eighteen months from the priority date.⁸⁰ It does so in two main formats: (1) the full text of the application⁸¹ and (2) the gazette, which contains the bibliographic data, the title of the invention, the abstract, and one representative drawing of the invention.⁸² Each of those formats is available in two media types: paper and electronic.⁸³ Each application is published in one language, which is the language of filing if that language is one of the accepted publication languages (Chinese, English, French, German, Japanese, Russian, and Spanish);⁸⁴ otherwise, the applicant is required to file a translation of the application into one of the publication languages and it is that translation that is published.⁸⁵

The date of publication constitutes the date on which PCT applications become part of the prior art for the purposes of an international search under the PCT.⁸⁶ With some important exceptions, international publication also has the effect of national publication in the Contracting States, in particular in respect of provisional protection.⁸⁷ In some Contracting States, however, international publication does not have the same effect unless certain conditions are fulfilled; most importantly, the publication must be in the official language of that State.⁸⁸ For example, under United States law, applications must be published in English in order to have prior art effect in the United States.⁸⁹

Applicants can stop publication by withdrawing their application or they can delay publication by withdrawing the earliest priority claim.⁹⁰ If an applicant so requests, publication may

79. See Patent Cooperation Treaty, *supra* note 1, art. 21; PCT Regulations, *supra* note 15, R. 48.

80. Patent Cooperation Treaty, *supra* note 1, art. 21(1)-(2)(a).

81. PCT Regulations, *supra* note 15, R. 48.1-2.

82. See *id.* R. 86.1.

83. See *id.* R. 86.1(b). As of April 1, 2006, legal publication of both the pamphlet and the gazette will be the electronic versions.

84. *Id.* R. 48.3(a). The PCT Assembly has adopted an amendment to Rule 48.3 introducing Arabic as an accepted language of publication as of April 1, 2006.

85. *Id.* R. 48.3(b).

86. See *id.* R. 33.1(a), 34.1(b)(ii).

87. See Patent Cooperation Treaty, *supra* note 1, art. 29.

88. See *id.* art. 29(2).

89. 35 U.S.C. § 102(e) (2000).

90. Patent Cooperation Treaty, *supra* note 1, art. 21(5); PCT Regulations,

also take place earlier than eighteen months from the priority date.⁹¹ In addition, it is the published version of applications that WIPO communicates to national offices for their subsequent processing in the national phase.⁹²

The PCT provides that no access may be given to anyone, other than the applicant or a person authorized by the applicant, to any document contained in the file of an international application before the date of international publication.⁹³ On that date, all documents contained in the file held at WIPO are accessible to third parties, with the exception of documents relating to examination of the application.⁹⁴ The latter are generally accessible to third parties only after the expiration of thirty months from the priority date.⁹⁵ No documents contained in the files of receiving Offices or the International Authorities are accessible to third parties at any time.

Published international applications contain a wealth of scientific and technical information. An application's bibliographic data, description and claims provide unparalleled insight into the state of the art and the research activities of competitors. They serve as catalysts for technology transfer and as the basis for the generation of new technologies. International publication permits access not only to PCT applications but also to the priority applications on which they are based.⁹⁶ All this can be found in PCT application files accessible from WIPO.⁹⁷

4. *International Preliminary Examination Procedure*

The fourth step of the international phase is the preliminary examination procedure. The first part of the procedure consists of the establishment of a written opinion on the questions of novelty,

supra note 15, R. 90*bis*.1(c), .3(d), .3(e).

91. Patent Cooperation Treaty, *supra* note 1, art. 21(2)(b).

92. *See id.* art. 20; PCT Regulations, *supra* note 15, R. 47, 93*bis*.

93. *See* Patent Cooperation Treaty, *supra* note 1, arts. 30, 38; PCT Regulations, *supra* note 15, R. 44*ter*.1, 94.1(b).

94. Patent Cooperation Treaty, *supra* note 1, art. 38; PCT Regulations, *supra* note 15, R. 94. Access to documents in an application file may now be obtained online through Patentscope's public file inspection site. *See* PCT Online File Inspection Advanced Search, <http://www.wipo.int/pctdb/en/search-adv.jsp> (last visited Jan. 2, 2006).

95. PCT Regulations, *supra* note 15, R. 44*bis*.2, 44*ter*.

96. *See id.* R. 17.2.

97. *See* PCT Online File Inspection Advanced Search, *supra* note 94.

inventive step (corresponding to non-obviousness in U.S. terminology), and industrial applicability.⁹⁸ This part is automatically carried out by the International Authority in connection with the international search. The process is unilateral in the sense that the applicant has no possibility to intervene, and it is done exclusively on the basis of the international application as filed. If the applicant chooses not to proceed further, the written opinion becomes final and is converted into an international preliminary report on patentability⁹⁹ under Chapter I¹⁰⁰ of the PCT (IPRP (Chapter I)). For applicants who wish to respond to the written opinion and/or amend their claims and description or drawings,¹⁰¹ the written opinion serves as a basis for the second part of the examination procedure.¹⁰² That second part is carried out by the International Authority upon the express request of an applicant who must file, within twenty-two months from the priority date,¹⁰³ a “demand” for examination.¹⁰⁴ The examination concludes with the establishment of an international preliminary examination report (IPER), also known as an international preliminary report on patentability under Chapter II of the PCT (IPRP (Chapter II)).¹⁰⁵ Consequently, each application is always accompanied in the national phase by an examination report, either an IPRP (Chapter I) or an IPRP (Chapter II).

98. PCT Regulations, *supra* note 15, R. 43*bis*.1(a)(i), 66.2(a)(ii); *see also* Patent Cooperation Treaty, *supra* note 1, art. 33.

99. PCT Regulations, *supra* note 15, R. 44*bis*.1.

100. The terms “Chapter I” and “Chapter II,” which refer to the corresponding chapters of the Treaty, are used to mean, respectively, an application for which international preliminary examination has not been expressly requested by the applicant and an application for which international preliminary examination has been expressly requested by the applicant. Chapter I consists of articles 3-30; Chapter II consists of articles 31-42. *See* Patent Cooperation Treaty, *supra* note 1, Table of Contents.

101. Recent statistical data shows that the numbers of cases in which applicants wish to respond at that time are continuing to decrease; today’s rate is at about twenty-five percent. *See* WIPO, *supra* note 9, at 22.

102. *See* Patent Cooperation Treaty, *supra* note 1, art. 34; PCT Regulations, *supra* note 15, R. 66.

103. PCT Regulations, *supra* note 15, R. 53, 54*bis*.1(a). The applicable time limit is actually the later of (1) twenty-two months from the priority date or (2) three months from the date of transmittal of the international search report and written opinion by the International Authority. *Id.* R. 54*bis*.1(a).

104. Patent Cooperation Treaty, *supra* note 1, art. 31(1); PCT Regulations, *supra* note 15, R. 53.

105. Patent Cooperation Treaty, *supra* note 1, art. 35; PCT Regulations, *supra* note 15, R. 70.

The establishment of the IPRP constitutes the end of the examination procedure within the international phase. The IPRP cannot be the subject of appeal. It will normally serve as a basis for the start of national examination before national Offices. In the case of certain Offices, e.g. Singapore, the IPRP may even serve as a unique basis for granting a national patent or rejecting the application.

B. National Phase Procedure

A “national phase”¹⁰⁶ follows the international phase during which applicants pursue their applications in the national patent offices of countries in which they desire protection. The national phase reflects the fact that the PCT system is an application filing, but not a patent issuing, system. Therefore, the decision to grant patents remains solely within the jurisdiction of national offices.

Selecting the countries in which to enter the national phase is one of the most crucial decisions that applicants have to make. It is, however, preceded by the question of whether to enter the national phase at all. If the results of the international phase (international search and examination) are negative and the likelihood of obtaining patents is small, an applicant may merely stop proceeding with the application, or, alternatively, proceed only in a very small number of countries.¹⁰⁷ Entry into the national phase can be equated with “confirmation” that the applicant wishes prosecution of the application to continue in each selected national office under the respective national granting procedures.

To enter the national phase, an applicant merely files an express request, pays the required national fees, and—where the language in which the international application was published is different from the official language of the Office—files a translation of the international application in the Office’s official language.¹⁰⁸ It is then incumbent upon WIPO to communicate on behalf of the applicant the necessary documents in the application file, including the published version of the application, the

106. Note that the terminology used in the United States is “national stage” rather than “national phase.” U.S. patent attorneys also frequently speak of “nationalizing” a PCT application.

107. This is actually one of the main benefits of using the PCT system in terms of reducing overall costs of patent protection.

108. Patent Cooperation Treaty, *supra* note 1, arts. 22(1), 39; PCT Regulations, *supra* note 15, R. 49, 76.

international search report, any amendments to the claims, the international preliminary report on patentability (either under Chapter I or Chapter II), and the priority application document.¹⁰⁹

The time limit by which the applicant must undertake the necessary steps for entry into the national phase is thirty months from the priority date, with a few exceptions.¹¹⁰ In particular, a number of Offices, including the European Patent Office¹¹¹ and the Indian Patent Office,¹¹² have chosen—as the Treaty allows them to do—to fix the time limit at thirty-one months.¹¹³

In addition to the minimum requirements for entering the national phase, there may be other national requirements with which the applicant will subsequently have to comply, including appointment of a local agent and submission of powers of attorneys and declarations. Such requirements, however, may not be a prerequisite to national phase entry.¹¹⁴

Once national examination begins, the substantive conditions of patentability are governed exclusively by national laws. Accordingly, the Treaty provides that designated Offices are entitled to require the submission of evidence to help make the substantive determination of whether the patent should be granted or the application rejected.¹¹⁵

V. ADVANTAGES AND ACCOMPLISHMENTS OF THE PCT

Use of the PCT brings added value to the patenting process. The PCT permits the filing of one patent application, replacing the need for a multiplicity of separate applications. It provides for a consistent and uniform procedure that takes place in a predictable

109. See Patent Cooperation Treaty, *supra* note 1, art. 20; PCT Regulations, *supra* note 15, R. 47, 76, 93*bis*.

110. Patent Cooperation Treaty, *supra* note 1, art. 39(1).

111. Frequently Asked Questions, http://www.wipo.int/pct/en/faqs/article22_faq.htm (last visited Jan. 2, 2006).

112. See Patent Filing Information, http://www.patentoffice.nic.in/ipr/patent/patents_filing.pdf at 31 (last visited Jan. 2, 2006).

113. See Patent Cooperation Treaty, *supra* note 1, arts. 22(3), 39(1)(b). In contrast, a twenty-month time limit from the priority date for entry into the national phase (which was the time limit fixed in Article 22 of the Treaty from its conclusion) is still applicable in respect of a few designated Offices whose national laws are still in the process of being modified to replace that twenty-month time limit by the thirty-month time limit introduced in 2001 by a modification of Article 22.

114. *Id.* art. 27(1); PCT Regulations, *supra* note 15, R. 51*bis*, 76.

115. Patent Cooperation Treaty, *supra* note 1, art. 27(6).

sequence and according to well-established international standards. The PCT also facilitates the national granting procedure. The results of the international search and preliminary examination give applicants a better basis for deciding whether and in which countries to further pursue their applications. This in turn allows for better management of patent portfolios and the avoidance of unnecessary expenses. Moreover, since the PCT provides for the automatic deferral of national processing, applicants benefit from an eighteen-month time advantage that defers national filing costs and allows for better management of resources for the financing, testing, and commercialization of inventions as well as for the continued prosecution of applications.

The PCT has had a significant impact on the development of patent practice and procedure worldwide. As international patenting has taken hold, particularly in the past ten to fifteen years, the need for procedural consistency in national patent laws and among national offices has intensified. One tangible result has been the establishment in 2000 of the Patent Law Treaty (PLT),¹¹⁶ a treaty that deals with procedural patent matters.¹¹⁷ Not only does the PLT expressly refer to the PCT on matters of formality examination, but PLT procedural principles have also been introduced in the PCT Regulations, for example, the principle that offices may require applicants to provide further evidence of the truthfulness of allegations or submissions only if those offices can reasonably doubt the veracity of those allegations or submissions.¹¹⁸

The PCT system has also led to the rationalization of procedures and approaches among national offices, especially with respect to national phase processing of PCT applications. For example, in contrast to traditional practices, no national office today may require a certified copy or certified translation of any document, including the application itself, the priority document or the power of attorney, as a prerequisite to the start of national phase processing.¹¹⁹

116. Patent Law Treaty, June 1, 2000, 39 I.L.M. 1047, *available at* www.wipo.int/treaties/en/ip/plt/trtdocs_wo038.html.

117. *See generally id.*

118. *Compare id.* art. 6(6), *with* PCT Regulations, *supra* note 15, R. 51bis.2.

119. It should be noted that occasionally a national Office imposes requirements that the PCT does not allow and that, in such cases, WIPO endeavors to discuss the matter with the office so as to find a solution in the shortest time under the circumstances. There are, for example, cases of conflicting application of provisions of the national legislation and of the PCT and

Furthermore, PCT procedures have served as a model for national processing, search, and examination. For example, the criteria for unity of invention,¹²⁰ as agreed within the PCT context in the early 1990s, was adopted by many national offices in their national practice. As a result, the United States Patent and Trademark Office (USPTO), for example, applies the PCT concept of unity of invention when it acts in a PCT capacity,¹²¹ although it continues to apply “restriction practice” to direct U.S. national applications.¹²²

While attempting to meet the need for change, WIPO and the PCT Contracting States have also been mindful of the need to preserve the predictability of the PCT system. PCT applicants deserve to expect that PCT procedures will unfold as provided by the Treaty and Regulations. The administration of the system has therefore required that WIPO, as well as the International Authorities and national offices, effectively respond to evolving trends and shifts in applicants’ filing and patent prosecution strategies without endangering the integrity of the system.

VI. CONCLUSION

In view of the fact that the PCT is composed of almost 130 countries and that more than 100 national and regional patent offices, as well as WIPO itself, perform PCT functions, it is remarkable that the system operates so smoothly and continues to gain momentum. Perhaps the system’s greatest strength comes from the immense diversity of legal, linguistic, and national cultures that constitute the PCT. While the system has served to harmonize divergent practices, it has also been obliged to accommodate to the sometimes inflexible peculiarities of national law and procedure. The PCT’s ability to strike a balance between

Regulations. There are also cases where it is the absence of express provisions in the national legislation that causes the problem.

120. PCT Regulations, *supra* note 15, R. 13. “The international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept.” *Id.* This is known as the “requirement of unity of invention.”

121. 35 U.S.C. § 372(b)(2) (2000); 37 C.F.R. §§ 1.475-477, 1.488, 1.489, 1.499 (2005); *see also* U.S. PATENT & TRADEMARK OFFICE, U.S. DEP’T OF COMMERCE, MANUAL OF PATENT EXAMINATION PROCEDURE §§ 1850, 1875, 1893.03.d (8th ed. 2005), *available at* <http://www.uspto.gov/web/offices/pac/mpep/>.

122. *See* 35 U.S.C. § 121; *see also* Caterpillar Tractor Co. v. Comm’r of Patents & Trademarks, 650 F. Supp. 218, 219 (E.D. Va. 1986); 37 C.F.R. §§ 1.141, 1.142.

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the two has proven to be one of the system's greatest accomplishments. As the PCT looks to the future, it is also one of its most daunting challenges.