Filing International Patent Applications under the Patent Cooperation Treaty (PCT): Strategies for Delaying Costs and Maximizing the Value of Your Intellectual Property Worldwide

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ABSTRACT

Obtaining international patent protection for an invention can present a significant financial commitment for an early-stage company, entrepreneurial venture or not-for-profit organization with a limited budget for intellectual property management. This chapter examines the use of patent application filings under the Patent Cooperation Treaty (PCT) to delay, consolidate, or minimize the costs of patenting overseas. Using the PCT to file internationally enables a patent applicant to delay, generally for up to 30 months after the first (priority) filing date, strategic decisions about the countries in which to pursue patent protection. The delay offers a significant advantage, since it allows the applicant more time in which to evaluate commercial demand for the invention, the likelihood of its success in overseas marketplaces, and the likelihood of obtaining a patent grant in a particular country, prior to filing national-phase patent applications in the countries in which patent protection is sought.

1. INTRODUCTION

Obtaining international patent protection for an invention can present a significant financial commitment, especially for small or early-stage companies, entrepreneurial ventures, not-for-profit organizations (such as universities and charitable organizations), and independent inventors. Such entities usually have to conserve their financial resources while striving to build, maintain, protect, and expand their intellectual property (IP). The cost of procuring a national or regional patent, from the initial drafting of the application through prosecution of the patent application, allowance, issuance, and post-issuance maintenance of the patent, can easily run from US$30,000 to US$50,000 in legal and patent-office fees. Should patent protection for an invention be sought in more than one country, the costs of international patent procurement can multiply accordingly. Since the costs associated with obtaining patent protection are so significant, IP protection strategies that delay, consolidate, or minimize costs are advantageous.

The Patent Cooperation Treaty (PCT) is an important IP protection tool that can be used to confront the financial challenges associated with international patent protection. By facilitating the filing in any number of PCT member countries of parallel patent applications, a PCT patent application offers a valuable means of managing, delaying, or consolidating the costs of international patent protection for a given invention. The PCT can buy time to strategically evaluate the overall potential value of an invention, that is, provide time within which to make an informed decision as to how to best proceed.[1]

The challenge of managing the costs of protecting IP so that the IP becomes a commercial asset—and not a financial liability—is one that is faced universally by technology managers. An enterprise that has developed (or acquired) IP must

Schneiderman AM. 2007. Filing International Patent Applications under the Patent Cooperation Treaty (PCT): Strategies for Delaying Costs and Maximizing the Value of Your Intellectual Property Worldwide. In *Intellectual Property Management in Health and Agricultural Innovation: A Handbook of Best Practices* (eds. A Krattiger, RT Mahoney, L Nelsen, et al.). MIHR: Oxford, U.K., and PIPRA: Davis, U.S.A. Available online at www.ipHandbook.org.

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decide at the outset whether that IP is worth protecting with a patent. The costs and benefits of patent protection must be carefully analyzed. Although a discussion of such a cost-benefit analysis is beyond the scope of this chapter, it is worth noting here that a granted patent generally "protects" the subject IP only to the extent that it confers to the patent owner the right to enforce the patent, that is, to exclude others from making the invention, using it, importing it, and so forth. In conducting a cost-benefit analysis, an enterprise may decide that the total expected value of a particular piece of IP simply does not merit the expense of obtaining a patent and enforcing the rights the patent confers.

The patent applicant (or IP owner) must determine the merits of the invention, the commercial demand for the product or process provided by the invention, the likelihood of its success in the marketplace, and whether protection should be sought in a particular country.[2] The applicant must also determine, preferably with the advice of a patent attorney, patent agent, or other professional with expertise in patent law, the likelihood that the patent application would succeed in the patent office of a particular country or region and whether that national patent office would decide that the invention meets its requirements for patentability and, thereby, grant a patent.

Ideally, these analyses are conducted prior to selecting specific countries in which to file patent applications. Thus, any strategy that extends the time limit for filing a patent application in a country, while preserving the priority (first filing) date for the application, potentially gives the patent owner more time for analysis and decision-making before making the financial commitment to seek patent protection abroad.

For patent owners and other entities with a proprietary interest in the subject matter to be patented, but without large budgets for patent portfolio development (for example, not-for-profit organizations, universities, regional technology incubators, and agricultural cooperatives), extending the time limit for filing a patent application can provide a much-needed opportunity to stimulate investment and technology transfer. The extended time period afforded by filing an international PCT application, as described below, is increasingly recognized by developing countries as an opportunity to publicly promulgate an invention with "patent pending" status, to identify and negotiate with potential corporate sponsors, investors, licensees, and others involved in technology development and commercialization and to stimulate further domestic inventive and related technological activities.

2. APPROACHES TO INTERNATIONAL PATENT PROTECTION

There are three basic approaches to procuring international patent protection on an invention.[3] The first approach, and the most expensive, is to file (usually on the same day) separate patent applications in the national patent office of each country or region[4] in which protection is sought.[5] The drawback of this approach is that legal and filing fees for each country begin to accrue as soon as the application is filed.

The second approach for filing internationally is to file a patent application in accordance with the Paris Convention for the Protection of Industrial Property.[6] Taking this route, the applicant files a patent application in a single Paris Convention member country[7] (usually required to be the country of residence of at least one of the inventors), which establishes a first or *priority filing date* for the application. The applicant can then delay filing in other Paris Convention countries for up to 12 months after the priority filing date. Member countries of the Paris Convention agree to recognize the priority date of a patent application filed in one member country and to give the benefit of that priority date to corresponding applications in all member countries. This approach delays the costs associated with international patent procurement for one year. Procurement costs initially accrue in the country of first filing, and then, up to one year later, the costs associated with filing applications in the other Paris Convention countries begin to accrue (Figure 1).

The third and least-expensive approach, which is the primary focus of this chapter, is to file a single "international" application under the

auspices of the PCT. Of the three approaches, filing a PCT patent application is, financially and strategically, the most advantageous for managing, delaying, or consolidating the costs of international patent procurement. Filing a PCT patent application allows the applicant to delay, for up to 18 months after the filing the application or in most cases, for up to 30 months after the filing of the first (priority) application, strategic decisions about which countries to pursue patent protection in. The delay provides a significant advantage, since it allows the applicant more time to evaluate the commercial strength and viability of the invention prior to filing national-phase patent applications in the countries in which patent protection is sought.

3. THE PATENT COOPERATION TREATY (PCT)

The Patent Cooperation Treaty (PCT) is a cooperative agreement entered into by more than 130 countries (called PCT contracting states) with the purpose of bringing international conformity to the filing and preliminary evaluation of patent applications,[8] both simplifying and making more economical the process of seeking patent protection in other countries. An applicant does not apply for an "international" patent by filing an application under the PCT. The World Intellectual Property Organization (WIPO), which administers the processing of PCT applications, does not grant international patents. Instead, the PCT filing process produces a single patent application that has been vetted for compliance with filing formalities and that has undergone a preliminary search and evaluation. This single application can then be transmitted to the national patent offices of as many PCT member countries as the applicant chooses, for filing as a *national-phase* application in that country. The PCT thus streamlines and consolidates the process of seeking patent protection in more than one country into a single series of steps and a single set of preliminary requirements (see Section 4).

Filing international applications with the PCT is becoming increasingly popular. In January 2005, the one millionth PCT application was

Figure 1: Traditional Filing Route under Paris Convention



Local first-filed patent application followed within 12 months by multiple foreign applications claiming priority under the Paris Convention:

- multiple formality requirements
- multiple searches
- multiple publications
- multiple examinations and prosecutions of applications
- translations and fees required at 12 months

Some rationalization because of regional arrangements: ARIPO, EAPO, EPO, and OAPI†

† African Regional Intellectual Property Organization, European Patent Office, Eurasian Patent Organization, Organisation Africaine de la Propriété Intellectuelle.

Source: Courtesy TDR Patents: T. David Reed LLC.

filed, with the doubling time for numbers of applications filed having gone from 22 years (for the first half million applications) to just 4 years (for the next half million applications).[9]

3.1 *Non-PCT member countries*

More than one hundred countries, however, are *not* members of the PCT, including a number of countries in Asia (for example, Cambodia, Nepal, Pakistan, Thailand), South America (for example, Bolivia, Chile, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela), Central America (for example, Panama), the Middle East (for example, Iran, Iraq, Jordan, Kuwait, Lebanon, Saudi Arabia, Yemen), and Africa (for example, Ethiopia, Rwanda, Somalia). To obtain patent protection in nonmember countries, a patent application must generally be filed directly with the national (or regional) patent office.[10] Since patent protection involves complex questions of law, the applicant is well-advised to consult with patent counsel familiar with local patent law, international Paris Convention patent practice, and international PCT patent practice *before* filing a patent application, especially if applicants are either residents of non-PCT contracting states or inventions were made in non-PCT contracting states. For example, if all of the applicants on a patent application are residents or nationals of non-PCT countries, then an application filed with the PCT is generally denied an international PCT filing date.

In general, if the application is first filed in a country that is not a member of the PCT but *is* a member of the Paris Convention,[11] then the applicant will be *ineligible* to file a PCT application but may choose to file additional applications in the national patent offices of other Paris Convention member countries within 12 months of the filing (priority) date of the first application (Section 2, second approach, above).

If the application is first filed in a country that is not a member of the PCT or the Paris Convention, then the applicant will be *ineligible* to file a PCT application, or an application under the Paris Convention in Paris Convention member countries, within 12 months of the filing (priority) date of the first application. The applicant will be obliged to file a separate patent application (usually on the same day) in the national patent office of each country or region in which protection is sought (Section 2, first approach, above).

3.2 *Costs associated with filing a PCT patent application*

Filing a PCT patent application entails paying a single set of filing fees, as opposed to multiple filing fees for each country in which patent protection is sought. Currently, PCT filing fees are approximately US$1100 for filing an application (with a fee reduction for filing electronically online or via other electronic media), from US$200 to US$2100 for a search of prior art publications (depending on which international searching authority performs the search), and a nominal transmittal fee (around US$300) charged by the PCT receiving office. The applicant can also elect to file a *demand* (request) for international preliminary examination of the application, which entails an additional fee of approximately US$600 to US$750.

3.3 *PCT filing consolidates and delays patent prosecution costs*

Filing a patent application under the PCT consolidates or eliminates the duplication of costs associated with multiple filings in multiple countries and enables the applicant to submit a single patent application in a single language and in a format that conforms to the requirements of all the national patent (or regional) offices of PCT contracting states. The added burden and expense of translating the application and of filing it in a particular format for a particular national patent office is thus avoided.

During the *international phase* of its pendency, a PCT application undergoes a preliminary evaluation that comprises an international search for prior art publications, a written opinion and a preliminary report on patentability, and optionally, a preliminary examination and a second, more detailed, report on patentability. The applicant can then choose to transmit the uniform application and accompanying evaluation documents to the national patent offices of as many PCT contracting states as desired, in which the application enters the national phase of the patent procurement process.

By far, the most expensive aspect of international patent procurement is the national-phase cost, which includes the fees paid to each national patent office for entrance into the national phase and during the patent prosecution process, the legal fees of local attorneys or agents to obtain a national patent, and the fees to the national patent office to maintain the granted patent in force. Filing under the PCT enables costs associated with the national phase to be deferred, in most cases for up to 30 months from the priority (first filing) date, while an international patent-protection strategy is formulated and decisions are made about which countries to seek protection in.

3.4 *The role of WIPO in the Patent Cooperation Treaty*

WIPO, an international organization based in Geneva, Switzerland, is the administrative body that oversees the filing of international applications under the PCT. The International Bureau of WIPO administers the international phase of the PCT application process, prior to entrance into the national phase of countries in which patent protection is sought. WIPO receives and stores PCT applications, along with their associated files of patent search and examination documents and correspondence. WIPO examines each application for its adherence to filing formalities (such as the required format for the patent application, accompanying administrative filing papers, and fees paid). Based on this initial examination, the applicant may be required to correct any formal defects to bring the application into conformity with the PCT format accepted by patent offices in the member states. The carrying out of these procedures reduces the costs of patent procurement at an early stage. Formalities defects in the PCT application that are identified during the international phase can be rectified before the application reaches the national patent offices and enters the national phase of the patent examination and procurement process. Thus, separate formalities rejections by national patent offices in which patent protection is sought can be avoided.

WIPO is responsible for publishing PCT applications[12] and accompanying information about them, which can be accessed worldwide via the Internet at the WIPO Web site. WIPO oversees translation of portions of the PCT application and associated documents into English or French, also available on the Internet, and can provide the national patent offices of contracting states with application documents.

4. OPTIONS AND STEPS FOR FILING UNDER THE PCT

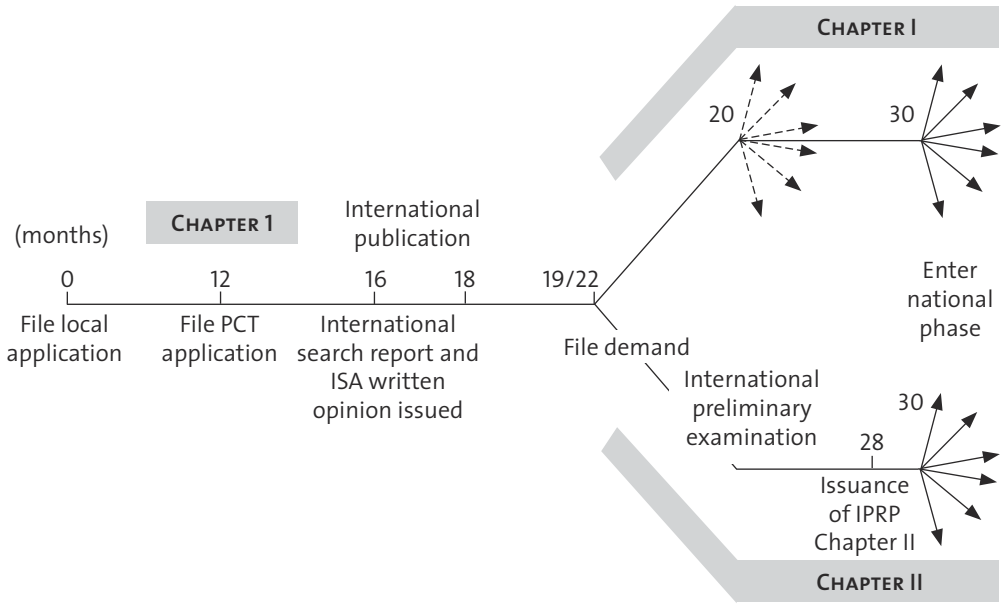
4.1 *Alternative 1: File an international PCT application that complies with PCT formality requirements and pay one set of fees.*

An international patent application can be filed under the PCT if at least one of the inventors of the invention is a resident of a PCT contracting state. Applicants can generally file an international PCT application with the national patent office of their country of residence, with the national office acting as a receiving office for the PCT. Under some circumstances, the PCT application can be filed directly with WIPO in Geneva.

The WIPO Web site provides detailed guides to PCT filing requirements,[13] as well as a guide to PCT time limits[14] and a PCT time-limit calculator[15] to assist applicants in computation of essential time limits for filing applications and for submissions of other required documents. Time limits under the PCT are measured from the priority date of the application (Figure 2). The priority date is defined in PCT Article 2(xi) as follows:

> *(xi) "priority date," for the purposes of computing time limits, means:*
>
> *(a) where the international application contains a priority claim under Article 8 [of the PCT], the filing date of the application whose priority is so claimed;*
>
> *(b) where the international application contains several priority claims under Article 8, the filing date of the earliest application whose priority is so claimed;*
>
> *(c) where the international application does not contain any priority claim under*

Figure 2: PCT Time Limits



Time limits for international PCT applications filed on or after 1 January 2004.

- "Month 0" corresponds to the priority date, the date of earliest filing of a local, regional or national application. An international PCT application claiming priority to the priority date must be filed prior to the expiration of ***12 months*** from the priority date.
- Approximately ***16 months*** after the priority date, the international search report and the written opinion are issued by the international searching authority (ISA).
- Approximately ***18 months*** after the priority date, the application is published.
- In countries that have ***not*** withdrawn their notifications of the incompatibility of the time limit under PCT Article 22(1) with applicable national law, a ***demand*** for international preliminary examination should be filed prior to the expiration of ***19 months*** from the priority date, if the applicant wishes to postpone entry into the national phase. Otherwise, a demand may be filed for up to three months from the date of transmittal of the international search report and written opinion of the ISA, or ***22 months*** from the priority date, whichever expires later.
- The international preliminary report on patentability (Chapter II) is issued by the international preliminary examining authority (IPEA), approximately ***28 months*** from the priority date. Unless an international preliminary examination report is established under Chapter II, the International Bureau of WIPO issues a report on behalf of the ISA that has the same contents as the written opinion. This report, the international preliminary report on patentability (Chapter I), is communicated to each designated national-phase office not before the expiration of 30 months from the priority date.
- The national phase usually must be entered prior to the expiration of ***30 months*** from the priority date. Some countries make provisions for entering the national phase later than the PCT 30-month time limit (see endnote 15). As with all deadlines mentioned in this chapter, the PCT articles, rules, applicant's guides, and the PCT time-limit calculator should be consulted, and deadlines should be confirmed by a qualified patent attorney or agent.
- For all designated states to which new Article 22(1) of the PCT does not yet apply, the applicant must decide whether to file demand by 19 months or to enter national phase by 20 months. As of 26 June 2006, these countries maintain reservations to the new Article 22(1) timing: Switzerland, Lithuania, Sweden, Tanzania, and Uganda.

Source: Modified after the U.S. Patent and Trademark Office.[17]

Article 8, the international filing date of such application[.][16]

The time limits are based on the earliest priority date of the PCT application and include:

- time limit for submission of the priority document on which the priority date of the PCT application is based
- earliest potential date for international publication of the PCT application, which is usually 18 months after the priority date
- time limit for a demand for international preliminary examination
- time limit for entry of the application into the national/regional phase

4.2 *Alternative 2: File a national application first and then a PCT application within 12 months*

Once a PCT application is filed, the applicant has up to 18 months to delay before deciding to enter the national phase and file national applications in one or more PCT contracting states (Figure 2). To delay even further the time between the first filing (priority) date of an application and entry into the national phase, the applicant has the option of filing a national application first, and then, up to 12 months later, filing a PCT application claiming priority to the national application. Laws of individual PCT contracting states generally require that if an applicant desires to file a patent application and the invention was made in a particular state, then either a national patent application must be filed in that state (and generally, a foreign filing license obtained) before the application is filed as a national application in other states, or an international PCT application must be filed directly with a PCT receiving office.

During the 12-month period following the filing of the priority application, the applicant can choose to file one or more additional national applications, as new refinements or embodiments of the invention are developed. A PCT application must be filed no later than 12 months after the filing date of the first application, however, to claim benefit of that earliest application's priority date.

The PCT application, however, can incorporate the disclosures of, and claim priority to, all the national applications directed to that invention that were filed during the previous 12-month period. The disclosure and claims of the PCT application may therefore differ from those of the priority application(s) preceding it in the *patent family*.[18] The PCT application can also include new disclosure pertaining to the invention (for example, a description of new embodiments of the invention) or new claims that were not set forth in any of the priority applications. However, to obtain benefit of an earlier priority date, a new claim included in the PCT application must be supported by the disclosure of the priority application filed on that date.

After filing the PCT application, the applicant has, as described above, up to 18 months to delay before deciding to enter the national phase and to file national-phase applications in separate PCT member countries. Hence, the applicant can delay for 12 months plus 18 months, or in most cases up to 30 months, after the filing of the initial priority application before entering the national phase in a desired PCT contracting state.[19] In the meantime, the applicant can use this delay to advantage, and take the time to evaluate the merits of seeking protection in specific countries and to delay the assessment and accrual of patent prosecution fees in multiple countries.

Hence, with this approach:

- A *national* patent application is filed in the patent office of a PCT contracting state (member country), establishing the priority (first filing) date. This national application is sometimes referred to the *priority application*.
- Within 12 months after the priority date, a PCT application is filed and enters the *international phase*.
- Within 18 months of PCT filing, or within 30 months of the priority date, the PCT application enters the *national phase* of selected PCT member countries.[20]

4.3 *Designating countries in which to file a national-phase application*

When a PCT application is filed, all contracting states that are bound by the PCT to the

international filing date are designated, by default, as potential venues for filing subsequent national-phase applications.[21] Before the expiration of the 30-month time limit after the priority date, the applicant can select a specific subset of the designated states for actual filing of national-phase applications with national patent offices. The transmittal to, and filing of, the international PCT application with the national patent office of a contracting state is known as entering the national phase of international patent prosecution (Figure 2). By filing under the PCT just before the expiration of the 30-month time limit, the applicant delays examination of the application for patentability by a national patent office significantly past the point at which national examination would normally occur had application been filed directly with the national patent office.

The prosecution phase of a national-phase patent application can become very expensive. It can take several years of interaction between the patent attorney and the patent examiner during the examination proceedings and cost tens of thousands of dollars (US$) in attorney costs and national-patent-office prosecution fees, before patent claims are possibly allowed and the application issues as a patent. If patent prosecution is undertaken in more than one country, then the costs of obtaining patent protection multiply accordingly. Thus, one of the chief advantages of filing under the PCT is the permitted delay of up to 30 months after the priority date to enter the national phase.

4.4 *PCT international search report and written opinion*

Prior to publication of the PCT application 18 months after the priority date, and during the international phase, a PCT international searching authority (ISA) conducts a search of the international technical literature to identify patent publications, technical publications, and other prior art references that are material to patentability of the claimed invention. Current ISA's are the European Patent Office and the national patent offices of Australia, Austria, Canada, China, Finland, Japan, the Republic of Korea, the Russian Federation, Spain, Sweden and the United States. The ISA conducts the search according to search standards set by the PCT and compiles an international search report containing a list of references that are deemed material to patentability. For each reference, the search report states the patentability criteria (for example, novelty, nonobviousness or inventive step, and industrial applicability) for which the reference is considered material. The ISA issues a written opinion that accompanies the search report and that states whether the invention appears to be patentable based on the results of the search.

The international search report and the written opinion provide the applicant with an early indication of the likelihood of success in obtaining a patent based on the claims as filed. This early indication is another significant advantage of filing under the PCT. In view of the search report and the written opinion, the patent claims can be amended by the applicant to better distinguish the invention from the prior art before the application enters the national phase. Thus, the possibility of having the same claims rejected by multiple national patent offices for the same (or similar) reasons can be minimized or avoided. The added legal and administrative expense of filing separate claim amendments in each national patent office can also be avoided.

Another distinct advantage is that the applicant may submit to WIPO informal written comments addressing, and possibly rebutting, the reasoning and conclusions set forth in the written opinion. This enables the applicant to begin creation of a prosecution record for the application that sets forth reasons for patentability of the claims, and that accompanies the application as it enters the national phase in each country and is examined by each national patent office.

The applicant (as explained in Section 4.5) also has the option to file a demand and to pay for an international preliminary examination (a *Chapter II examination*), which is a more detailed evaluation of the patentability of the claims that results in the issuance of an international preliminary report on patentability (IPRP Chapter II). The time limit for filing a demand is three months from the date of transmittal of the international search report and the written

opinion, or 22 months from the priority date, whichever comes last.[22]

If the applicant does *not* file a demand for international preliminary examination, the ISA's written opinion will be subsequently converted into an international preliminary report on patentability (IPRP Chapter I), which is sent, along with the applicant's informal comments responding to the written opinion, to each of the patent offices selected for national-phase entry, not before the expiration of 30 months from the priority date.

Thus, when the national phase is entered in each country, each national-phase patent application is accompanied by the same search and international preliminary report(s) on patentability (a Chapter I report, and optionally, a Chapter II report, depending on whether international preliminary examination has been elected or not). This significantly reduces the search and examination effort required for each separate national patent office.

4.5 *International preliminary examination*

If an applicant requests and pays the additional fee for international preliminary examination, then a second, more-detailed evaluation of the patentability of the claims is conducted by a PCT examiner associated with one of the international preliminary examining authorities (IPEAs), which are the same as the international searching authorities (ISAs) described above. A demand (request) for international preliminary examination may be made at any time prior to (a) three months from the date of transmittal to the applicant of the international search report and the written opinion or (b) 22 months from the earliest priority date (whichever is later).

The international preliminary examination provides a formal opportunity for the applicant to respond to the reasoning and conclusions of the PCT examiner, as set forth in the written report or the international preliminary report on patentability (Chapter I), regarding patentability of the claims, and to set forth on the record amended claims and arguments for patentability. The international preliminary examination concludes with the issuance, by the PCT examiner, of a second or international preliminary report on patentability (Chapter II), which is transmitted to the national patent offices. The international preliminary report on patentability (Chapter II) will be issued by the IPEA, in general, at around 28 months from the priority date (see Figure 2).

This creation of a formal-patent prosecution record prior to national-phase entry further reduces the duplication of efforts of each separate national office in performing a separate preliminary examination and the expense incurred by the applicant in responding to the results of each such national examination. The international preliminary report on patentability (Chapter II) accompanies the patent application as it enters the national phase, which can further reduce the duplication of examination efforts in each national patent office. It also can serve to consolidate and focus the prosecution strategy for the application and avoid the duplication of efforts by patent attorneys or agents prosecuting the application in each country.

Although national patent offices have no legal obligation to consider the reasoning and conclusions of the international preliminary reports on patentability (Chapters I and II), they will frequently do so. Thus, international preliminary examination is a means to reduce the effort expended on separate examination of the same application in various national patent offices, and hence to reduce the applicant's legal fees associated with separate examinations. For example, examiners in several national patent offices may have the same basis for objection to (or rejection of) the same group of claims in the application, and the applicant may choose to submit similar arguments to each examiner to overcome the objection. The examiner in each country, however, may respond very differently to these arguments, taking into account the differences in national or regional patent law. Thus, although a national-phase application may elicit similar objections in the initial office actions issued by examiners in different national or regional patent offices, there may be much less conformity in the subsequent prosecution history of the application as the application progresses through the various patent offices. In patent offices of countries that have less

capacity or resources for patent examination, however, patent examiners may rely on IPRPs more extensively. Thus, the IPRPs can have a greater influence on the patent claims that eventually are granted in those countries, thus promoting some similarity or uniformity in the claims granted in various countries.

Furthermore, the PCT examiner who issues the written report or the international preliminary report on patentability (Chapter I), and who performs the optional international preliminary examination and issues the more-detailed international preliminary report on patentability (Chapter II), may be the same person and be assigned to examine the application during the national phase. For example, the examiner who examines a PCT application submitted to the U.S. receiving office may be the same person who examines the corresponding application filed with the United States Patent and Trademark Office (PTO). This also avoids duplication of efforts and can result in a more thorough and informed evaluation by the patent examiner, who has previous experience with the application during the international phase.

4.5 *National-phase entry*

National-phase entry of a PCT application requires, by the end of the 30th month after the first priority date of the application, that the applicant selects the PCT contracting states in which to file a national phase application, files an application with each national-patent office, pays the associated national filing fees, and, under certain circumstances, furnishes a translation of the application.[23]

An advantage of filing a national-phase application, as opposed to filing a national application directly with a patent office, is that the applicant can use information acquired during the PCT international phase to strengthen the application upon entry into the national phase. The applicant can use information derived from the written opinion and the international preliminary report(s) on patentability to plan which claims to amend or eliminate prior to entry into the national phase. In countries that charge filing surcharges for claims in excess of a prescribed number, such surcharges can be reduced or avoided.[24] For example, the United States charges significant surcharges for independent claims in excess of three or total claims in excess of 20 in an application. Under the PCT, there is no claim limit or charge for excess claims. Hence, an applicant planning a subsequent U.S. national-phase entry can choose to include a large number of contemplated claims in the PCT application and then consider the results of the PCT evaluation from the international phase and amend or eliminate claims accordingly.

5. SUMMARY AND CONCLUSIONS

Filing a patent application under the PCT enables the applicant to delay strategic decisions about where to pursue patent protection by:

- consolidating patent prosecution costs: single-application format, language, and set of fees
- providing the applicant with preliminary feedback regarding patentability of the invention
- providing the applicant with the opportunity to present arguments for patentability, to amend claims, and to strengthen the application prior to filing with national patent offices
- enabling the applicant to delay filing the application in individual national patent offices for up to 30 months after the first (priority) filing date
- delaying prosecution costs of filing applications in multiple countries
- streamlining the process of filing applications in multiple countries

Delaying international patent prosecution provides more time to determine:

- the value of IP to applicant or owner
- the strength of commercial demand abroad
- which claims in a patent application are likely to be patentable
- which countries are most attractive for pursuing patent protection
- the likelihood of obtaining a patent grant in target countries. ■

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1 This chapter reflects the present considerations and views of the author and provides information for educational purposes only. It is not intended to constitute legal advice or to substitute for obtaining legal advice from a lawyer about a particular legal issue. Legal advice needs to be tailored to specific circumstances, and readers are therefore urged to consult directly with a lawyer for assistance regarding their particular legal issues.

2 See also Radack DV. 1992. Patents Outside of the U.S.: A Cost-Effective Approach. *JOM* 44(4): 62. www.tms.org/pubs/journals/JOM/matters/matters-9204.html.

3 World Intellectual Property Organization (WIPO). 2006. WIPO Publication, No. 433(E): Protecting Your Inventions Abroad: Frequently Asked Questions about the Patent Cooperation Treaty (PCT). WIPO: Geneva, Switzerland. www.wipo.org/pct/en/basic_facts/faqs_about_the_pct.pdf.

4 Examples of regional patent offices include African Regional Industrial Property Organization www.aripo.wipo.net/index.html; Eurasian Patent Organization www.eapo.org/index_eng.html; and the Gulf Cooperation Council www.gulf-patent-office.org.sa.

5 Since patentability is based, in part, on novelty and nonobviousness of an invention, patent applications on the same invention should be filed on the same day and should not be spaced out (filed in different countries at different times).

6 Articles of the Paris Convention for the Protection of Industrial Property can be viewed online at www.wipo.int/treaties/en/ip/paris/pdf/trtdocs_w0020.pdf.

7 Many, but not all, members of the Paris Convention are also members of the PCT (and vice versa). List of Paris Convention contracting parties (currently 170) can be viewed online at www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=2.

8 Articles of the Patent Cooperation Treaty (PCT) can be viewed online at www.wipo.int/pct/en/texts/pdf/pct.pdf. PCT Regulations, including rules and requirements for filing applications, time limits, and so on, can be viewed online at www.wipo.int/pct/en/texts/pdf/pct_regs.pdf. A list of PCT contracting states (currently 134 contracting states) can be viewed online at www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=6.

9 World Intellectual Property Organization (WIPO). 14 January 2005. Press Release 401: WIPO Marks Filing of One Millionth PCT Application. WIPO: Geneva, Switzerland. www.wipo.int/edocs/prdocs/en/2005/wipo_pr_2005_401.html.

10 See also World Intellectual Property Organization (WIPO). No stated date. *WIPO Publication No. 849(E): A Brochure on Intellectual Property Rights For Universities and R&D Institutions in African Countries*. WIPO: Geneva, Switzerland. ISBN 92-805-1097-7. www.wipo.int/freepublications/en/intproperty/849/wipo_pub_849.pdf.

11 See *supra* note 7.

12 Languages of international publication: Arabic, Chinese, English, French, German, Japanese, Russian, and Spanish.

13 WIPO provides detailed guides online to filing under the PCT: World Intellectual Property Organization (WIPO). *PCT Applicant's Guide (Volumes 1 and II)*. WIPO: Geneva, Switzerland. Volume I is available at www.wipo.int/pct/guide/en/gdvol1/pdf/gdvol1.pdf and Volume II at www.wipo.int/pct/guide/en/gdvol2/pdf/gdvol2.pdf.

14 World Intellectual Property Organization (WIPO). PCT Timelines and Time Limits. WIPO: Geneva, Switzerland. www.wipo.int/pct/en/seminar/basic_1/timeline.pdf.

15 PCT time limit calculator. www.wipo.int/pct/en/calculator/pct-calculator.html.

16 PCT Article 2. www.wipo.int/pct/en/texts/articles/a2.htm#_2.

17 www.uspto.gov/web/offices/pac/mpep/documents/1800_1842.htm.

18 The term *patent family* is used to designate a relationship between a patent application and its priority application(s) or other patent priority document(s). At least three descriptions are commonly used in patent practice to characterize a patent family:

(1) The applications or documents are directly or indirectly linked to a specific priority application or document.
(2) All applications or documents have at least one priority application or document in common.
(3) All documents have exactly the same priority or priorities in combination.

See also European Patent Office (EPO). About: Patent Families at gb.espacenet.com/espacenet/gb/en/help/161.htm.

19 There are a few instances in which the national law of a contracting state is incompatible with the PCT 30-month time limit-rule and in which the national patent offices of these countries still adhere to the old 20-month time limit for entering the national phase (This older rule was replaced on 1 April 2002 with the new time limit). In countries with a 20-month time limit for entry into the national phase, the limit can be extended to 30 months if a demand for international preliminary examination is made. Some countries make provisions for entering the national phase later than the PCT 30-month time limit. In these cases, if the applicant fails to meet the time limit to nationalize their PCT application within 30 months, the time limit can be extended upon petition and payment of extension fees. As with all deadlines mentioned in this chapter, the PCT Articles, Rules, Applicant's Guides,

and the PCT Time Limit Calculator (available online at www.wipo.int) should be consulted in determining time limits and the deadlines confirmed by a qualified patent attorney or agent.

20 If the country in which the *national* (priority) application was filed is also selected as a country into which the PCT application enters the *national phase*, this essentially creates a continuation application in that country.

21 The PCT request form, which is one of the administrative forms filed with a PCT application, sets forth this default designation. Certain exclusion provisions can be selected, using the request form, to exclude a country from designation.

22 A demand should be filed prior to the expiration of 19 months from the priority date if the applicant wishes to postpone entry into the national phase in countries that have not withdrawn their notifications of the incompatibility of the time limit under PCT Article 22(1) with applicable national law (see Figure 1 and World Intellectual Property Organization). *PCT Practical Advice 2003*. www.wipo.int/pct/en/newslett/practical_advice/pa_122003.htm.

23 The general national-phase entry requirements and the specific requirements for each PCT contracting state are described in detail in: World Intellectual Property Organization (WIPO). *PCT Applicant's Guide Volume II*. WIPO: Geneva, Switzerland. www.wipo.int/pct/guide/en/gdvol2/pdf/gdvol2.pdf.

24 See also Austin CB. 2005. Leveraging PCT Patent Applications to Gain Advantages in Patent Prosecution. www.michaelbest.com/articles.cfm?action=view&publication_id=1648.