PCT Filing and (some) Related Issues

By Jason Parker

INTRODUCTION

Broadly, the U.S. patent system seeks to encourage invention by having the government grant exclusive rights to the inventor for a limited time in return for the disclosure of the invention. Those rights include the right "to exclude others from making, using, offering for sale, or selling" the invention within the United States, or importing the invention into the United States. The inventor receives a limited monopoly of approximately 20 years from which they can make money, and once the time period is over, the technology becomes public domain. The goal of the US patent system according to the Constitution is:

> "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries; ''
> (W.S. CONST. *Art.* 1, *section* 8.)

This language provides the basis for the United States Congress to create copyright and patent law. The Constitution allows Congress to encourage technology by providing a limited monopoly on the invention to the inventor. But patents filed with the United States Patent Office can only be enforced within the United States, U.S. Territories, and U.S. possessions[1].

[1] General Information Concerning Patents (January 2005), http://www.uspto.gov/web/offices/pac/doc/general/#patent

WHETHER OR NOT TO FOREIGN FILE

If inventors want protection that extends outside of the United States, they need to look to foreign filing. Sales, licensing, or manufacturing the technology internationally, requires inventors to secure the foreign rights to gain the protection in applicable countries. Depending upon the invention, not having foreign protection can significantly decrease the value of the invention and hurt sales due to non-US competition. Even if the inventor is unsure of whether they will need foreign protection in the future it is advantageous to secure the foreign rights and not use them rather than need the rights, but be unable to obtain them due to missing statutory deadlines. Due to the Internet markets have become more global with instant communication and the ability to ship quickly and cheaply, thereby making protection in foreign markets more and more important.

CHOOSING WHERE TO FILE

Because there is no single global patent - at least not yet – inventors must get a patent in each country in which they desire coverage. Since each foreign country has its own set of rules and regulations, as well as administrative fees for filing patents, foreign filing is both expensive and time consuming and an inventor must carefully decide which foreign countries are within their critical market. The most common countries in which to file for a foreign patent are the United States, Japan, Germany, United Kingdom, France, Taiwan, Canada, and

South Korea[2]. Not coincidently, these are wealthy countries and among the largest manufacturing countries in the world.

While there is no single checklist for an inventor to decide whether or not to foreign file and where to file, but some useful factors to look at are:

(1) Where will the invention be manufactured and/or sold?[3]

(2) Where will competitors be manufacturing and/or selling their product? [4]

(3) Does the country have the ability to manufacture?[5]

(4) Is there a substantial market in the country?[6]

(5) Can the patent be cost effectively monitored and enforced in the country?[7]

(6) How long is the pendency for foreign applications? (5 to 10 years in Europe and potentially longer in Japan). [8]

COST

Costs are an important factor when determining if, and where to, foreign file. The cost varies dramatically from country to country based on the length of the application, the country where it is filed, whether it needs to be translated, annuity fees, and more. Inventors must therefore perform a careful cost-benefit analysis for each country. If the invention is expected

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[2] Patents By Country, State, and Year – All Patent Types (December 2008) http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_all.htm
[3] Rajiv Patel and Neil Maloney, International Patent Strategy: Springboard to Going Global (June 18, 2007)
[4] *Id.*
[5] Filing Foreign Patents: A Primer for Inventors – An Inventor's Guide to Decision-Making (November 29, 2009), http://www4.utsouthwestern.edu/technology_development/foreign.htm
[6] *Id.*
[7] Rajiv Patel and Neil Maloney, International Patent Strategy: Springboard to Going Global (June 18, 2007)
[8] Filing Foreign Patents: A Primer for Inventors – An Inventor's Guide to Decision-Making (November 29, 2009), http://www4.utsouthwestern.edu/technology_development/foreign.htm

to have a very high value, such as an important new drug, then the scales will easily fall in favor of over-protecting and filing in numerous countries. For these inventions the cost of patenting will be slight in comparison to the expected value of the patent. For most inventors, the cost-benefit analysis will need to be reviewed more carefully to determine where to file.

For an application that has already been filed in the U.S., the cost to file in Canada is around $1,500[9]. Filing in Australia or South Korea will cost approximately $4,000[10]. Filing in Japan can cost between $6,000-$12,000[11]. Filing in all European countries could cost nearly $100,000[12]. The cost can vary widely due to different filing and maintenance fees in each country as well as the cost of translation if needed. Because patent claim language is so important to the patent, and due to the technical nature of claims, translations can be very difficult and very expensive. Because of these high costs, it is important to limit the filing to countries where anticipated sales would justify the expense rather than attempting to simply file shotgun approach in as many countries as possible.

FOREIGN FILING

INTRODUCTION

Once the choice is made to seek foreign patent protection, there are two treaties that allow for and cover foreign patents; the Paris Convention and the Patent Cooperation Treaty.

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[9] Oppedahl & Olson LLP, What does it cost to file a PCT patent application? (November 29, 2009), https://www.oppedahl.com/cost/#pct

[10] Smith Hopen, Foreign Patent Filing (November 29, 2009), http://www.smithhopen.com/patents_foreign.aspx

[11] *Id.*

[12] European Patent Office; The cost of a sample European patent – 2005 study http://www.european-patent-office.org/epo/new/cost_analysis_2005_en.pdf

The Paris Convention is the older of the two and allows the member countries access to each other's intellectual property. The fairly new Patent Cooperation Treaty creates an international application that unifies the filing procedure throughout much of the world.

PARIS CONVENTION

If the inventor does not wish to file in a large number of countries, they can file directly with the foreign country's patent office. The ability to file in a foreign country's patent office is created by the Paris Convention for the Protection of Industrial Property (Paris Convention). The Paris Convention was originally signed in 1883 by the U.S. and 10 other countries. The treaty unifies the basic principles of a patent system such as procedure, novelty and subject matter and makes patents accessible to all signing member parties. Assuming the inventor lives in one of the 173 contracting member countries, the inventor is able to use the original non-foreign filing date as the effective filing date in all other contracting countries[13]. To get this priority filing date as the effective filing date, the inventor must simply file a certified copy of their original patent application with the contracting foreign country within 12 months of the priority filing. Because getting a certified copy can take several weeks, it is better to file early rather than wait until the 12 month deadline[14].

Under the Paris Convention the patent application is filed directly in a regional patent office. The United States Patent Office (USPTO) is a regional patent office, as is the European

[13] World Intellectual Property Organization, Contracting Parties (November 29, 2009), http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=2
[14] Smith Hopen, Foreign Patent Filing (November 29, 2009), http://www.smithhopen.com/patents_foreign.aspx

Patent Office (EPO) even though the EPO covers 36 countries. When filing with a regional patent office, the regional patent office rules apply and must be followed to obtain the patent.

Filing in the EPO, despite being a regional patent office, is slightly different. The EPO allows for one application to be filed for all of the countries covered by the EPO rather than being required to file up to 36 separate applications. The EPO rather than the individual countries examines the application. Assuming the application meets all of the requirements, it is then granted. Once granted, the inventor must still perfect the grant with the individual countries in which the inventor wants protection. To perfect the grant, the inventor will need to pay administrative fees to the specific country, and may need to translate some or all of the patent.

Because of the strict 12 month deadline with filing, when filing under the Paris Convention the inventor does not have a lot of leeway and will not be able to file in other countries once the statutory time period has elapsed.

Patent Cooperation Treaty

The Patent Cooperation Treaty (PCT) is a global patent protection treaty open to members of the Paris Convention. The PCT was created in 1970, but has been modified as recently as 2001[15] with the purpose of providing a simpler, cheaper way for inventors to gain patent protection in multiple countries. The PCT creates an international application for at least 30 months from the priority date. Prior to the expiration of the international application, applicants must enter National Stage in individual countries or regional offices. National laws

[15] World Intellectual Property Organization, Patent Cooperation Treat ("PCT")(1970) (November 29, 2009), http://www.wipo.int/pct/en/treaty/about.htm

can extend the 30 month time period, as seen with the EPO and several other countries which allow for 31 months. The PCT examines the application thereby making the prosecution procedure once National Stage is entered more uniform. The PCT application further provides the inventor with a significantly large time window in which to make a decision on where to foreign file, and delays the costs associated with National Stage filing and translation.

The international application can be filed in any of the 142 countries that have joined the PCT[16]. Most industrialized countries are members, including the United States, Japan, Germany, South Korea, Australia and the United Kingdom. One of the few exceptions is Taiwan, which despite being among the top 25 gross domestic product, is not a member[17]. Therefore patent protection in Taiwan must be obtained by filing nationally under the Paris Convention.

The cost of filing a PCT application varies based on the International Search Authority (ISA), the length of the application, and whether a Demand is filed. The cost ranges approximately $3,000-$10,000. The PCT fees are determined by a PCT-created Union Assembly made up of every country that is a party to the PCT. The Assembly is also responsible for amendments of the regulations issued under the treaty, the adoption of the biennial program, and budget of the Union[18].

When determining whether to file a PCT application instead of directly filing nationally, there are several questions to consider, including:

(1) Are the countries where the inventor wants patent rights members of the PCT?

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[16] World Intellectual Property Organization, Contracting Parties (November 29, 2009), http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=2

[17] http://en.wikipedia.org/wiki/List_of_countries_by_GDP_sector_composition

[18] World Intellectual Property Organization, Patent Cooperation Treat (“PCT”)(1970) (November 29, 2009), http://www.wipo.int/pct/en/treaty/about.htm

(2) Does the inventor know which countries they wish to file in?

(3) Does the inventor want to defer costs?

(3) Does the inventor want to assess the results of the U.S. prosecution before filing in other countries?

(4) Does the inventor want to assess the commercial viability of the invention in the U.S. before filing in several countries?

PATENT COOPERATION TREATY STEPS

A PCT application differs from a standard national patent application. To file a PCT application, a patent application must have already been filed, or be filed simultaneously, in the inventor's home country, and the home country must be a member of the PCT.

The PCT procedure starts with the priority filing and then goes into the international stage phase which includes an international search, publication and an international preliminary examination. After the international stage is complete it then moves to the national stage where the inventor files directly with the individual countries.

FILING

After the patent application has been filed in the inventor's home country, the PCT application can be filed. The inventor has up to 12 months from the priority filing to file the PCT application, after which time no foreign filing can be done due to statutory bars. The PCT application is filed either with the inventor's national patent office (for the U.S. it is the USPTO)

or with the International Bureau of WIPO[19]. If the applicant is a national or resident of a party to the European Patent Convention, the Harare Protocol on Patents and Industrial Designs (Harare Protocol), the revised Bangui Agreement Relating to the Creation of an African Intellectual Property Organization or the Eurasian Patent Convention, the international application may also be filed with the European Patent Office (EPO), the African Regional Industrial Property Organization (ARIPO), the African Intellectual Property Organization (OAPI) or the Eurasian Patent Office (EAPO), respectively[20].

Prior to January 1, 2004, inventors had to stipulate when filing the PCT application which countries they wished to file in, although they could file in as many as they liked as long as the countries were PCT members. This affects the priority date because if the country was not included in the originally filed PCT application, and the PCT application was filed prior to January 1, 2004, the inventor will not get the priority date. Post January 1, 2004, all PCT countries are automatically chosen, and this is no longer an issue.

Once the PCT application is filed, the original filing date is preserved, as is the right to file the same invention in all Patent Cooperation Treaty member countries. Since the PCT applications claim a priority date from the initial patent application, the PCT application acts as a placeholder, reserving the patent rights in all member states. Because the initial filing date is preserved, the application cannot be rejected for prior art that emerges between the time of the original filing, and the time the inventor files the national application. This is important since an applicant can delay filing the national application for up to 30 months thereby

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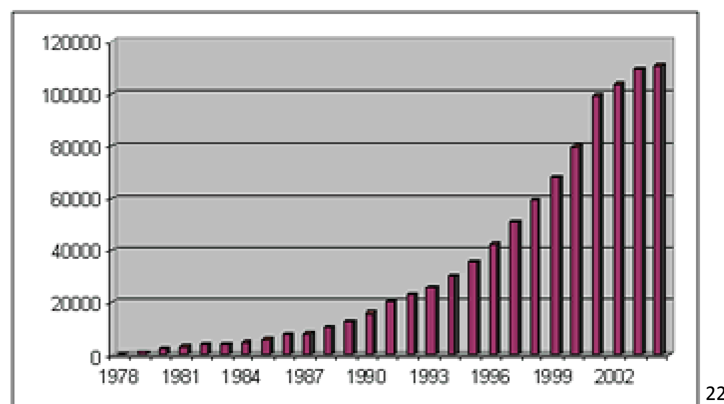
[19] World Intellectual Property Organization, Summary of the Patent Cooperation Treat ("PCT")(1970) (November 29, 2009), http://www.wipo.int/treaties/en/registration/pct/summary_pct.html

[20] World Intellectual Property Organization, Patent Cooperation Treat ("PCT")(1970) (November 29, 2009), http://www.wipo.int/pct/en/treaty/about.htm

accumulating 30 months of prior art.   With a PCT filing the prior art for the last two and a half years cannot be used against the inventor, as the filing date is that of the initial filing in the home country.

Since the first PCT filing in 1978, over one million PCT applications have been filed globally[21].



[22]

INTERNATIONAL SEARCH

After the PCT application filing, an international search is performed looking for prior art related to the PCT application including patents and publications.. The search typically occurs between three to nine months after the filing of the PCT application. This is almost always faster than the national filing as in the USPTO and JPO an examiner may not review an application for over a year.

The search is carried out by an International Searching Authority (ISA), one of the major patent offices appointed by the PCT Assembly. The inventor can request a different ISA than

[21] World Intellectual Property Organization, PCT One million and counting (November 29, 2009), http://www.wipo.int/pct/en/million/index.html
[22] Tracy Davis, *A Million Filings Later … The Patent Co-Operation Treaty*, Thomson Scientific (April 2005)

the patent office in which it was filed, thereby cutting costs as some ISA's are less expensive than others. Since not all national patent offices are qualified as International Searching Authorities, the search may not even be able to be performed by the patent office in which it was filed. There are no quality control standards set for the various ISA's, which can result in poor searches and examinations, leading to increased workloads by examiners at the national level.

There are strategic advantages to consider when determining where to file. If the inventor is a US inventor and they file their original application in the US, and chose to have their PCT application reviewed by the USPTO, the same examiner will likely handle both applications. This provides greater insight into the examiners opinion on both the national and PCT applications. The examiner will also provide the inventor with the international search information much sooner for the PCT application than the national application, which can provide the inventor with valuable information on how the examiner will handle the national application.

Alternatively, if the original application was filed in the US, the inventor may opt to have the EPO, Australian or Korean Intellectual Property Office provide the international search in order to get the benefit of two separate prior art searches. This can provide a larger, more complete search for the inventor.

Once the search is completed, an international search report is created that includes all relevant prior art found in the search. The ISA also includes a written opinion based on the findings of the search report that provides their opinion on the patentability of the PCT application. The opinion is non-binding, but provides important insight into the likelihood of

getting a patent. The opinion is also important as the countries will rely on it at the national filing level. A copy of the international search report and the written opinion are provided to the inventor. If the opinion is negative, the inventor may wish to withdraw the PCT application.

PUBLICATION

If the inventor does not wish to withdraw, the PCT application and the international search report (but not the written opinions) are published 18 months after the initial application is filed.

INTERNATIONAL PRELIMINARY EXAMINATION

Once the international search report and opinion have been completed, the inventor has the option to file a Demand. If no Demand filed, the ISA written opinion becomes the intentional report on patentability. If the inventor does file a Demand, they have the ability to try and change the written opinion. The cost for filing a Demand is between $1,000-$3,000, but can be incredibly important if the inventor wants to change a negative opinion. Once the Demand is filed, the matter goes to the International Patent Examination Authority (IPEA). The IPEA starts with the ISA's written opinion, but allows the inventor to amend the application and formally argue the merits of the PCT application and argue against the existing written opinion. These arguments can be made to the IPEA both orally and in writing. The inventor's goal is to create a more favorable written opinion to make getting the patent easier in the national stage since the countries show deference to the report.

An inventor can also file an Article 34 amendment in response to the Written Opinion to amend the claims, the description, and the drawings, although the amendment cannot go beyond the disclosure in the international application as it was filed[23].

The IPEA has the option change its written opinion based on the amendments and responses, but there is no obligation on the part of the IPEA to do so. Once this process is complete, the IPEA issues a final international preliminary report on patentability. Like the previous report, it is a non-binding opinion on the patentability.

Prior to April 2002, the inventor had to enter the national stage at 20 months after the filing date, but that could be extended by 10 months if the inventor filed a Demand. In most countries the inventor now has the full 30 months in which to claim priority without having to file the Demand. The change required PCT member countries to change their national patent laws in order to conform to the new 30 month time frame, something that several countries have opted not to do, remaining with the 20 month time period. The remaining countries, however, can either be accessed through the EPO filing or are so small that most applicants do not apply for national applications.

Recent changes have been made by the Assembly regarding the Demand. With the changes, the inventor is not provided the ability to formally argue with the ISA regarding the written opinion[24]. The changes also allow the IPEA to issue an International Preliminary Examination Report (IPER) without any discussion from the inventor. Since there is also no longer a need to file a Demand to get 30 months instead of 20, filing a Demand has increasingly

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[23] World Intellectual Property Organization, Patent Cooperation Treat (PCT) – Article 34, (November 29, 2009), http://www.wipo.int/pct/en/texts/articles/a34.htm

[24] Michael Caine, *Why and How the PCT is Used – Advantages and Problems*, Intellectual Federation of Intellectual Property Attorneys. (November 29, 2009), http://www.ficpi.org/library/NICE/caine.doc

less value. While this reduces the workload for the IPEA, it increases the workload for the national patent offices[25].

NATIONAL PHASE

The final phase in a PCT application is the national phase. This occurs up to 30 months from the priority filing. At this stage it is very similar to filing under the Paris Convention. During this stage, the inventor files with a specific country's patent office. The national patent office will use the search results and opinion provided from the PCT and may do further searching. The patent must still meet the national requirements such as patentable subject matter, novelty and obviousness and in most countries is independently examined. Depending upon where it is filed, the application or claims may need translation as well.

WEIGHING ADVANTAGES

Once the national phase is entered for the PCT application, it is almost identical as if the application was directly filed nationally. Since at the national stage the two methods are similar, it becomes a matter of whether the international phase of the PCT provides a significant benefit to the inventor. There are a number of factors in favor of using the PCT method.

1) Inventor Pro – With a PCT application, the inventor gets up to an additional 30+ months, allowing a significant time to delay costs and the decision on where to file. That is an additional 18 months more than he has in a procedure outside the PCT.

[25] *Id.*

2) Inventor Pro - Early patentability review – between 3 and 9 months.

3) Inventor Pro – Uniform applications for countries, and applications filed through PCT cannot be rejected at the national level for procedural reasons.

4) Patent Office Pro – The international search report, the written report, and the optional international preliminary examination report are provided to the all of the national patent offices, reducing the time and effort required to review the application.

5) Patent Office and 3rd Party Pro – The PCT application and search report are published at 18 months, giving 3rd parties access to the applications.

These advantages come at a cost of $2,000-$6,000 dollars, plus an additional $1,000-$3,000 if a Demand is filed. While that is a significant cost, given the overall high cost of filing nationally, the PCT application costs do not dramatically increase the cost of foreign filing for the inventor.

Not all aspects of the PCT process are positive. The 30 month time period is a definite advantage for the inventor, but can cause significant problems for third parties. Even with publishing at 18 months, there are potentially long periods of uncertainty for third parties. In addition, third parties have no way to gather information regarding national phase entry.

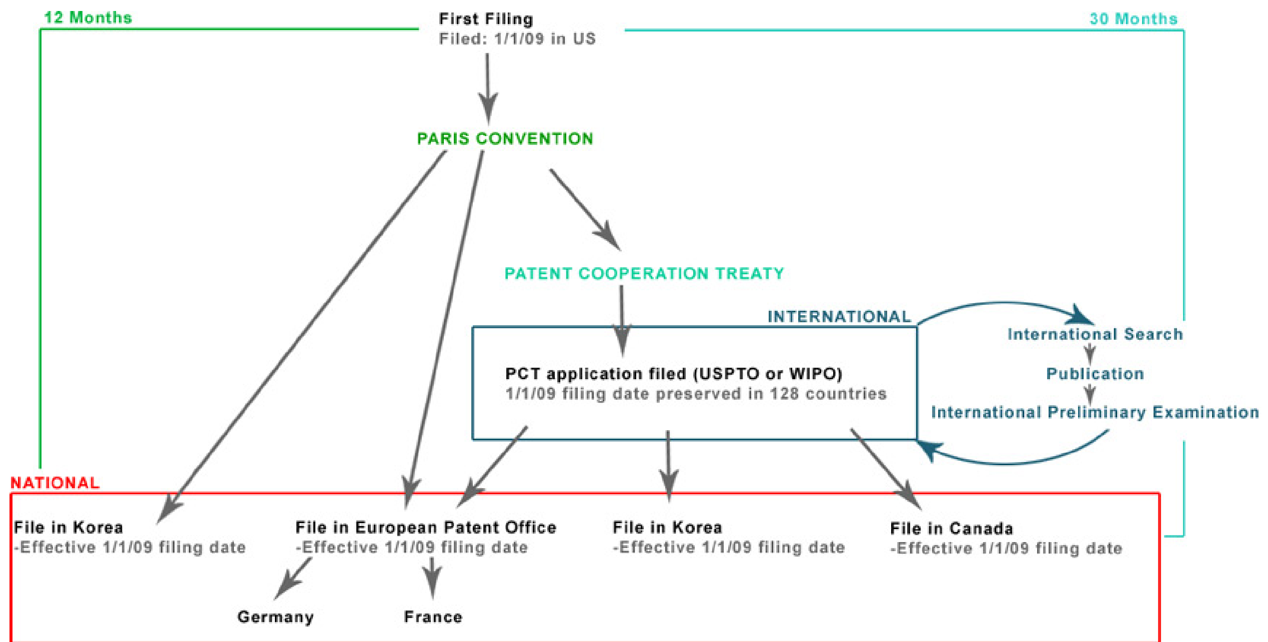
FOREIGN FILING EXAMPLE:

A US inventor wishes to get protection on their widget in the US, but also wants foreign patent protection. The inventor files their US application on 1/1/09 with the USPTO. They then have 12 months to determine if they are going to file nationally, or file a PCT. The inventor will

need to evaluate their widget, the market, the manufacturing, how much they are willing to spend and other factors to determine where exactly they wish to file.

If they are filing in a single foreign country like Korea or if they want to file in the EPO and wish to save as much money as possible, they will file nationally under the Paris Convention directly with that country. If they determine they need to file with numerous countries such as the EPO, Korea and Canada, they will file a PCT application. Once the PCT application is filed on or before 1/1/10, they will have 30 months from the priority filing (1/1/09) before they need to begin filing nationally.

Although the PCT will cost more in the long run, the upfront foreign filing costs are limited to the PCT fees because the foreign filing is delayed. This also gives the inventor a longer span to determine exactly which countries they wish to file in. The PCT application will be published approximately 7/1/2010. The national filing will need to start no later than 7/1/2011, otherwise the inventor will be barred from national filing. If the inventor enters into the national phase on 7/1/2011 in the EPO and ultimately gets a patent in Germany after two more years of patent prosecution, the national patent will still have the priority date of 1/1/09. That means the patent protection will run from 1/1/09 until 1/1/29 even though the patent did not grant in Germany until 2013.



SOME RELATED TREATIES (BRIEF OVERVIEWS)

<u>TRIPS</u>

The Agreement on Trade-Related Aspects of Intellectual Property Right (TRIPS) is an international intellectual property agreement that (among other things) sets forth the patent principles of subject matter, non-discrimination, novelty, inventive step and disclosure. TRIPS also deals with the principles of patent prosecution, meaning conflicts could potentially arise between the PCT and TRIPS.

TRIPS has forced national changes in an effort to harmonize substantive patent laws. Two of the better known examples in the U.S. include the change of a patent's term to 20 years from the date of filing and the publication of patent applications at 18 months. Other changes include the scope of patent infringement and the creation of a provisional application.

These changes help to create uniformity in the patent systems such that once the PCT application goes national the rules are uniform. Having uniform patentable subject matter, same novelty requires and similar hurdles ensures the inventor will be able to get protection in all countries. This is particularly important for biotech which is not uniformly patentable subject matter. Once the PCT application has passed the initial threshold requirements, TRIPS helps to unify the patent prosecution. Finally, once the PCT application has been granted at the national level, TRIPS also ensures equal rights at the national level, and harmonizes infringement.

MADRID PROTOCOL

The Madrid Agreement Concerning the International Registration of Marks (Madrid Protocol) covers Trademarks, not patents, but it is worth mentioning because it deals with foreign intellectual property filing and has some features that make it similar to the PCT. Like the PCT, registration of the international application through the Madrid Protocol does not create an international registration. Like the PCT, each country where there is protection will apply their national rules and laws. The goal of both the PCT and the Madrid Protocol is to provide a more efficient system for gaining access to protection in many countries by allowing the person to file centrally instead of with each individual country. Too, the international application for both can be filed through the USPTO. Both the PCT and the Madrid Protocol are important steps in providing foreign IP protection, and harmonization of the systems.

PLT

The Patent Law Treaty (PLT) is a recent treaty, having only been signed in 2000. The primary purpose of the PLT is to simplify and further harmonize the procedure for national and regional patents. This means the procedural rules that apply once the PCT application has reached the national stage will be largely similar between countries.

CONCLUSION

While there is no global patent system, and may never be one, it is important to make patent protection available globally – or at least available in key countries. The PCT application takes an important step in providing easy access to foreign filing for inventors.