

Developing a Global Patent Portfolio



AGATHA H. LIU

Hickman Palermo Becker Bingham LLP

THIS ARTICLE PROVIDES GUIDANCE ON DEVELOPING a global portfolio of patents or other forms of protection for your clients' inventions. The article first describes the significance of global invention protection. Next, the article reviews key factors to consider when pursuing invention protection on a global scale and shows how evaluating each key factor helps improve the drafting and prosecution of an application for patents or other forms of protection in individual jurisdictions. Finally, the article presents a summary of practice tips for a patent practitioner.

GLOBAL INVENTION PROTECTION

With the advent of the Internet, the world has become more connected than it used to be. It is now often imperative to have a global perspective in any endeavor. In particular, the creation of the Internet has also ushered in a new technology-focused era. Computer technology that has made the Internet possible and other technologies continue to grow all around the world, albeit to different degrees. Certain types of technological products, such as software, are easily distributed and utilized and the associated intellectual property (IP) rights need to be protected across different jurisdictions. The reality is that there are few or no legal barriers to rampant unauthorized copying of such technological products in all jurisdictions for which patent protection is not explicitly obtained.

In general, different countries or regions (referred to as "jurisdictions" hereinafter) manage patent assets through national or international patent law, such as the Patent Cooperation Treaty (PCT). To pursue global invention protection, it is important to

adopt an effective approach of building a worldwide portfolio of patents or other forms of protection based on an understanding of the national and international laws, as discussed below.

Often times, a client may have candidate jurisdictions in mind for patent protection based on the locations of customers or competitors. A patent practitioner may then strategize the filing and prosecution of patent applications among these jurisdictions first. Knowledge of national and international laws, however, may sometimes also inform a practitioner on the selection of jurisdictions in which to pursue patent protection, as further discussed below.

FORMS OF PROTECTION

To pursue foreign patent protection, one of the first factors to consider is which forms of protection are available in a jurisdiction. The common forms of protection include a utility model¹ (providing patent-like protection and thus treated as a type of patent in this article), a utility patent, a design patent, or a plant patent. Different forms of protection have varied requirements and provide distinct sets of rights. Therefore, one form of protection may be more suitable for given subject matter than another.

In particular, for a utility model, while the requirement of novelty has to be met, that of non-obviousness may be less stringent or absent altogether. Similar to a utility patent, a utility model still allows the rights holder to exclude others from using the protected subject matter for a limited period of time. Therefore, a utility model may be more suited for subject matter that is weaker in inventiveness than would normally be required for a utility patent but can benefit from timely protection. Furthermore, in many jurisdictions, such as Germany, the validity of a utility model can be challenged for a fee, often to initiate substantive examination, only after the utility model is obtained.

In general, different forms of protection are mutually exclusive. While an applicant will be able to decide relatively easily whether to apply for a design or plant patent as opposed to a utility patent, the applicant may have difficulty choosing between a patent and a utility model, both of which are available in a significant number of jurisdictions (but not in the United States). Furthermore, the same invention might have different aspects or embodiments that are eligible for different types of protection. For example, for cars or cellular phones, applicants commonly obtain utility patents to protect the functional features and design patents to protect the ornamental features.

Therefore, once the patent practitioner has a disclosure meeting with the client, he or she should assess the merits of the given subject matter as well as the needs or desires for protection and determine which type(s) of protection are worth pursuing in a jurisdiction.

FILING COSTS

Another factor that is often on a client's mind initially is the cost of filing a patent application in a jurisdiction. The filing cost usually comprises most of the official fees, translation fees if the application or just its claims must be filed in another language than that of its preparation, and the practitioner's fees. As the official fees for search and examination are often charged at the time of filing, the filing cost can depend on the type of search and examination framework in use, the form of a patent application to be filed, and so on.

The search and examination fees will be higher when the search and examination framework of the jurisdiction is more sophisticated, as further discussed below. In terms of the form of the patent application, many jurisdictions charge extra fees when the number of claims or the number of pages is above a certain limit, as that in turns increases the amount of search and examination that needs to be performed. In some cases, the limits are quite low while the excess fees are fairly high, presenting a tradeoff between coverage and cost. For example, the European Patent Organization charges at least \$250 for each claim in excess of fifteen, while Japan charges a fee that is proportional to the total number of claims. For patent applications in the pharmaceutical industry, for example, the excess fees could turn out to be a major component of the total cost. When filing in jurisdictions where the applicant's language is not an official language, translation fees can also be quite significant due to the cost of translation of potentially a large amount of technical content.

At this time, other than the European Patent Organization, which represents a number of jurisdictions and imposes additional fees to search and examine a European patent application that can be nationalized in selected ones of those jurisdictions, the filing fees for a jurisdiction are generally in the \$1,000 to \$3,000 range, which are to be paid at the time of filing.² The additional costs of translation will vary with the length of the application and the language. After substantive examination begins, additional prosecution costs are incurred, such as practitioner fees for responding to office actions, appeals, or oppositions. The applicant must pay maintenance (or annuity) fees, which are official fees payable at prescribed intervals, usually every year, to keep a patent application or a granted patent in force, in those jurisdictions that require them. The United States, China, Japan, and Mexico are among the few jurisdictions in which the payment of maintenance fees begins only at the patent grant stage instead of earlier.

Therefore, a patent practitioner typically obtains an estimated filing cost in each jurisdiction of interest on or before the time of filing, to assist the client in financial planning.

SECURITY RESTRICTIONS

Another factor to consider initially is whether the jurisdiction applies any security requirements. A security restriction is a restriction imposed by a jurisdiction that makes filing an international or foreign application illegal due to security concerns of the jurisdiction unless a

security clearance has been obtained from the jurisdiction. The applicant should consider whether any security restriction applies before preparing and filing a patent application anywhere in the world, as a jurisdiction may require filing first in that jurisdiction or obtaining a foreign filing license.

More broadly, different jurisdictions have different security restrictions, which may depend on the nationality or residence of applicants or inventors, the location in which the invention was made, the sensitivity of the subject matter of the invention, and so on.³ For example, China and Russia have security restrictions for inventions made in those countries, while Korea and India have security restrictions for inventions made by residents.⁴ When an inventor resides in India, a foreign filing license should be obtained from India before filing a patent application in the United States or the first patent application should be filed in India. In many European countries, such restrictions apply only to subject matter related to national defense or security.⁵ To comply with the security restriction imposed by a jurisdiction, the applicant generally must first file a patent application in that jurisdiction or receive foreign filing permission from that jurisdiction.

Therefore, we advise patent practitioners to clearly identify, before preparing any patent application, relevant information regarding the inventor, applicant, and subject matter of the invention, to determine whether or when to obtain a security clearance from a jurisdiction and whether or when to submit an application in a jurisdiction.

CONTINUING APPLICATION FILING RULES

Another factor to consider initially is how a patent application can stay "alive" in a jurisdiction through the filing of continuing applications. A patent application may disclose one or more inventions in the written descriptions. A "continuing application" broadly refers to a new application that shares the same written description and drawings as the parent application but includes a different set of claims. The different set of claims may be directed to the same invention as the set of claims in the parent application or a different invention disclosed in the written description. A continuing application is often filed when the parent application is to issue into a patent or to be abandoned.

Different jurisdictions have different continuation application filing rules governing which types of claims can be included in a continuing application. In some jurisdictions, such as Brazil, a continuing application can include only claims that were filed but not examined in the parent application, when filed after the submission of a request for examination in the parent application.⁶ In this case, it requires carefully considering which subject matter to claim before examination of the initial application begins; new claims cannot be added in any divisional application afterwards. In some jurisdictions, such as Canada, a continuing application can claim only a different invention, one that essentially does not share inventive features with the particular invention claimed in the parent patent application. In this case, the practitioner should determine which features of an

invention to claim in the present application before it issues into a patent and which to save for a continuing application. In some jurisdictions, such as Australia, any subject matter described in the written description but not yet claimed in the parent patent can be claimed in a continuing application.⁷

Therefore, we urge patent practitioners to determine, before preparing any patent application in a jurisdiction, which aspects of an invention to focus on and which claims to include in the patent application in view of the continuation application filing rules in the jurisdiction in order to obtain the best overall coverage of the patent family.

SEARCH AND EXAMINATION FRAMEWORKS

Inventors or patent applicants are also advised to consider early on which types of search and examination frameworks or regimes are available in a jurisdiction, because this can determine what types of claims to include in a patent application.⁸ Broadly speaking, a search and examination framework may fall into any one of three categories. These categories vary in the nature and amount of search or examination performed.

The first category involves examination for formalities only and is sometimes referred to as a registration system. Certain countries, such as Japan and Germany, use this framework for utility models and most European countries use this framework for design patents.^{9,10} South Africa also uses this framework for utility patents.¹¹ Because an application would be accepted as soon as the examination for formalities is complete and successful, the window for correcting the application can be small and sometimes close to the time of filing. When this framework is applied to a utility model or a utility patent, the lack of examination over the prior art does not mean that broader scope should be obtained, but more attention should be paid by the applicant to the strength or validity of the utility model or patent.

The second category involves examination for formalities and prior art search only. This is the framework utilized under the Patent Cooperation Treaty (PCT) for an international application, where a search authority provides one or more search reports citing relevant prior art references but the substantive examination that leads to a final disposition will take place in a national phase.

The third category involves examination for formality, prior art search, and substantive examination. Many jurisdictions fall in this category. In the United States, for example, the substantive examination often includes negotiation with an examiner to provide some quality control on a granted patent.

Therefore, before preparing a patent application for a jurisdiction, it would be a good idea for a patent practitioner to determine specifically which claims to include in the patent application, the strength of these claims, and whether to perform an independent prior art search in order to maximize the possibility of obtaining protection or having lasting protection of the subject matter under consideration.

PROSECUTION PACE AND ACCELERATION PROCEDURES

In pursuing global patent protection, the prosecution timing can have a significant impact on the development of the global patent portfolio. For example, the prosecution of a patent application, including the amendment of claims of the patent application, in the applicant's local country may serve as a guide for how counterpart patent applications are prosecuted in other jurisdictions. Having such local prosecution take place first thus avoids having to delay prosecution in other jurisdictions. For enforcement purposes, it may also be desirable for the applicant to know the probable timeline of prosecution in order to permit timely assertion of claims for patent infringement.

In some jurisdictions, such as Canada and China, an application will generally take three or four years from filing to grant.¹² In other jurisdictions, an application may take up to six years.¹³ One jurisdiction that stands out in this respect is Brazil, where the examination backlog has resulted in an application pendency of eight through fifteen years.¹⁴

In general, receiving patent protection as soon as possible is beneficial to the applicant, especially for technological areas in which technology advances rapidly. Various acceleration procedures are available in different jurisdictions to shorten the time to substantive examination, skip certain formal or secondary steps during substantive examination, or skip the substantive examination altogether. The applicant may wish to take advantage of such acceleration procedures. Being able to do so often requires having strong claims in the patent application that require minimal amendment and lead to acceptance quickly.

A common acceleration procedure is a patent prosecution highway (PPH).¹⁵ A number of jurisdictions participate in the "global PPH,"¹⁶ where a patent application filed with any of the participating jurisdictions can benefit from favorable examination work products (such as an international search report indicating allowance of certain claims) regarding a counterpart patent application under the PCT or from another participating jurisdiction. Certain jurisdictions have made bilateral or multilateral PPH agreements with one another. For example, while Chile does not participate in the global PPH, the United States has a PCT-PPH agreement with Chile that enables expedited prosecution in the United States based on favorable examination work products by Chile directly or through the PCT.

The request to participate in a PPH, which typically needs to be submitted before substantive examination begins, has different effects in different jurisdictions. In many jurisdictions, including the United States, the request merely shortens the time to begin substantive examination. In certain jurisdictions, such as Australia, certain deference is given to the foreign patent office that has produced the favorable examination work product and the patent application may be accepted without further examination, which is effectively implementing the modified examination option discussed above.¹⁷ The

cost of filing the request is generally manageable or worth it for the amount of time saved in prosecution.

Additionally, individual jurisdictions may have their own specific acceleration procedures. As noted above, the modified examination option serves to accelerate prosecution, and some jurisdictions, such as Brazil, may offer similar options under different names. In some cases, such as in the United States, examination can be prioritized based on the nature of the invention or the health status of the applicant or by making an extra payment. In other jurisdictions, such as the European Patent Organization, certain examination stages can be shortened or skipped to compact the overall examination timeline.¹⁸ For example, the applicant may skip a designated waiting period before requesting substantive examination (when a request is required) or waive the opportunity to amend the application after a regional search report supplementing the one issued by the international search authority is issued.¹⁹

Therefore, we recommend that before preparing a patent application in a jurisdiction, a patent practitioner identify relevant information regarding the applicant and the invention, decide which claims to include in the patent application, and determine how and when to pursue applicable acceleration procedures in the jurisdiction to shorten the time to grant if that is desired.

PROSECUTION PROCEDURES

What type of prosecution procedure applies after a patent application is filed in a jurisdiction requires significant attention, often before the patent application is filed. A prosecution procedure typically involves substantive examination of the patent application.

Many jurisdictions have patent offices staffed with examiners to perform substantive examination. Some jurisdictions, such as the United States and the United Kingdom, may have bilateral agreements for sharing search and examination work products for reference purposes.^{20,21} In addition, a modified examination option exists in certain jurisdictions to allow systematic replacement of part or all of the national search and examination process by evidence that equivalent work has been performed by another recognized patent office. For example, Israel has modified substantive examination for patents granted by Australia, Canada, the European Patent Organization, the United States, and some other jurisdictions and would thus grant a patent for a counterpart application filed in Israel.²² Therefore, different jurisdictions may use different amounts of discretion in determining whether to grant a patent based on work products of a foreign jurisdiction, which is generally related to the amount of time required to grant.

When a jurisdiction is to perform substantive examination, an important aspect of the prosecution procedure is the negotiation process between the applicant and a patent office or other examination division, in terms of how the negotiation can be performed, how many rounds of negotiation are permitted, and so on. Some jurisdictions,

such as the United States, may issue an unlimited number of office actions upon payment of additional fees by the applicant. Some jurisdictions, such as the European Patent Organization, may not have a theoretical limit, but the examiner often is advised to terminate the substantive examination after issuing a small number of office actions to shorten the overall examination timeline.²³ In some jurisdictions, such as Australia, a fixed amount of time is allotted to substantive examination.²⁴ Furthermore, in some jurisdictions, such as Japan, only one or two rounds of negotiation are allowed.²⁵ Generally, a restricted amount of negotiation calls for a more aggressive prosecution approach to avoid having to appeal the examiner's decision or file a continuing application, as discussed below.

Therefore, we advise a patent practitioner to determine, before filing a patent application in a jurisdiction, whether to specifically request any prosecution procedure to shorten or skip the substantive examination and how to best draft or present claims and arguments in accordance with the resulting prosecution procedure.

OPPOSITION OPTIONS

Another factor to consider is what types of opposition options are available in a jurisdiction.²⁶ Various opposition options exist to allow third parties to influence the prosecution of a patent application as an alternative to a review process before a court. The opposition options typically differ concerning when an opposition option can be taken, what the threshold requirements are for the opposition option, and how different parties can participate in the examination of the patent application.

One opposition option is an opposition system *sensu stricto*²⁷ that allows a patent to be opposed by a third party *during a certain period* of time before or after grant. In particular, pre-grant opposition is made possible by pre-grant publication. When the timing of patent protection is important, it helps to anticipate the possibility of an opposer taking advantage of this opposition option during the prescribed period. In the United States, this opposition option is available in the form of a post-grant review. In some jurisdictions, such as India and the European Patent Organization, this opposition option is the only *inter partes* mechanism to challenge the validity of patents before the administrative body or patent office.²⁸ No *inter partes* opposition is possible after the prescribed period in these jurisdictions.

Furthermore, *sensu stricto* opposition generally involves reviews conducted by an examination division or proceedings held before a special opposition board that may include administrative judges. The utilization of government resources different from or beyond the ones originally allocated to the patent application often means a higher level of scrutiny of the patent application or patent and more expense for the parties.

Another opposition option is an administrative revocation and invalidation mechanism, which has quasi-judicial elements similar to *sensu stricto* opposition. However, this opposition option is not

limited to a time period and allows the possibility of *ex officio*²⁹ proceedings. Many jurisdictions other than the United States offer this opposition option.

Yet another opposition option is a reexamination system, which can be taken anytime during the patent's lifetime and is often conducted by a single examiner or a division of the patent office that granted the patent in the first place. The reexamination system can be *inter partes* or *ex parte* in nature. *Ex parte* reexamination is often characterized as providing for a quality check through a second examination of the patent by the patent office. Similarly, *inter partes* reexamination is generally conducted as a second examination by the patent office itself and not as a full *inter partes* administrative review by a specialized board. Therefore, a reexamination system is generally simpler in nature and thus easier to handle for patent owners. In the United States, this opposition option was available in the form of an *inter partes* reexamination before the America Invents Act. The *inter partes* reexamination is replaced by an *inter partes* review, which

can generally be initiated nine months after a patent is granted and is conducted by an administrative body, and thus is more likely to be considered as an administrative revocation and invalidation mechanism. Canada, for example, is one of the jurisdictions that does not support an opposition system *sensu stricto* or an administrative revocation and invalidation mechanism, but instead provides a reexamination system.³⁰

Therefore, we urge a patent practitioner to plan, no later than the filing or initial publication of the patent application, for possible opposition from third parties or even the patent office itself. Such planning may include identifying relevant activities of potential competitors and adjusting the scope of claims in the patent application.

SUMMARY OF PRACTICE CONSIDERATIONS

The discussion above is summarized below for an easy reference of practice considerations:

Factor	Timing of Initial Consideration	Scope of Effect	Action Items
Forms of Protection	Once a disclosure meeting is conducted	Type of patent application to file	Assess the merits of the given subject matter as well as the needs or desires for protection
Filing Costs	Before preparing any patent application	Whether to file a patent application	Estimate the cost of filing a patent application
Security Restrictions	Before preparing any patent application	Order and timing of patent applications to file	Identify relevant information regarding inventor, applicant, and subject matter of the invention and determine whether to apply for any security clearance/license to file abroad
Continuing Application Filing Rules	Before preparing a patent application for a jurisdiction	Nature and scope of claims to include in the patent application	Determine which aspects of an invention to focus on and which claims to include the patent application
Search and Examination Framework	Before preparing a patent application for a jurisdiction	Nature of claims to include in the patent application	Determine which claims to include in the patent application, the strength of these claims, and whether to perform specific prior art search
Prosecution Pace and Acceleration Procedures	Before preparing a patent application in a jurisdiction	Nature of claims to include in the patent application	Identify relevant information regarding the applicant and the invention, decide which claims to include in the patent application, and determine how and when to pursue applicable acceleration procedures in the jurisdiction
Prosecution Procedures	Before preparing a patent application in a jurisdiction	Nature of claims to include in the patent application and approach to amending claims	Determine whether to request any prosecution procedure and how to best draft or present claims and arguments
Opposition Options	Before filing or initial publication of a patent application in a jurisdiction	Timing of publishing the patent application and approach to amending claims in the patent application	Identify relevant activities of potential competitors and adjusting the scope of claims in the patent application

CONCLUSIONS

Given the number of jurisdictions in the world and the complexity of the national and international laws, effectively developing a global patent portfolio is a significant undertaking. This article has provided guidance on evaluating key factors that affect the development of a global patent portfolio, but other factors may come into play, such as prosecution costs and enforcement levels.

While various factors pertain to different stages of a patent's life cycle, early consideration of each factor is required to achieve an optimal effect. Furthermore, some of these factors can be related to one another and coordinated evaluation of these factors and subsequent planning would also help ensure the best outcome. A patent practitioner is thus expected to devise timely and comprehensive strategies on developing a global patent portfolio with respect to the client's technical and business priorities to maximize global protection of the client's patent assets. ◀◀

The views expressed in this article are personal to the author and do not necessarily represent or reflect the views of the author's firm, the Executive Committee of the Intellectual Property Law Section, the California Lawyers Association, or any colleagues, organization, or client.

© 2020 Agatha H. Liu.

Dr. Agatha H. Liu's practice concentrates on patent analysis, strategic counseling, and portfolio management. She advises inventors, business owners, and investors on developing international patent portfolios that spans more than a dozen countries on multiple continents. Recently, Dr. Liu helped many clients obtain worldwide protection for intellectual property related to artificial intelligence.

Endnotes

1. World Intellectual Property Association, *Utility Models*, available at https://www.wipo.int/patents/en/topics/utility_models.html (last viewed in April 2020).
2. For example, the filing cost for a patent application in EPO generally includes government fees of about \$4,500 for filing, designation, search, and examination. The filing fee could further include one renewal fee, excess page fees, and legal fees, which could easily add another \$2,000. The filing cost for a patent application in Canada generally includes government fees of about \$1,200.
3. World Intellectual Property Association, *International Applications and National Security Considerations*, available at https://www.wipo.int/pct/en/texts/nat_sec.html (last viewed in April 2020).
4. *Id.*
5. *Id.*
6. Renata Campello Afonso, *Divisional Patent Applications in Brazil*, The Patent Lawyer, CTC Legal Media, pages 36-7, available at [www.llip.com/Content/Files/Artigos/Divisional Patent Applications in Brazil.pdf](http://www.llip.com/Content/Files/Artigos/Divisional%20Patent%20Applications%20in%20Brazil.pdf) (last viewed in April 2020).
7. Australia Government IP Australia, *Divisional Application*, available at <https://www.ipaustralia.gov.au/patents/understanding-patents/types-patents/divisional-application> (last viewed in April 2020).
8. World Intellectual Property Association, *Alternatives in Patent Search and Examination* (2014), pages 6–9, available at https://www.wipo.int/edocs/pubdocs/en/wipo_pub_guide_patent-search.pdf (last viewed in June 2020).
9. Francesca Giovanni, et al., *Petty Patents Around the World*, available at <https://oshaliang.com/newsletter/petty-patents-around-the-world/> (last viewed in July 2020).
10. Elizabeth D. Ferrill, et al., *Around the World and Back: Making a Champion Out of Your Design with International Design Rights*, available at <https://www.finnegan.com/en/insights/articles/meeting-of-the-minds-around-the-world-and-back-making-a-champion-out-of-your-design-with-international-design-rights.html> (last viewed in July 2020).
11. Companies and Intellectual Property Commission South Africa, *Apply*, available at <http://www.cipc.co.za/index.php/trade-marks-patents-designs-copyright/patents/how-app/> (last viewed in April 2020).
12. Christopher Heer and Roxana Monemdjou, *How Long Does It Take to Get A Patent*, Heer Law Intellectual Property Law & Litigation (2020), available at <https://www.heerlaw.com/how-long-does-it-take-to-get-a-patent>.
13. InvnTree Patents | Trademark Designs, *How Long Does It Take to Get A Patent* (2011), available at <https://www.invntree.com/blogs/how-long-does-it-take-get-patent> (last viewed June 2020).
14. Claudio Szabas, *The Pendency of Brazil Patent Application and What You Can Do about It*, Dennemeyer IP Blog (2017), available at <https://blog.dennemeyer.com/pendency-brazilian-patent-application-what-you-can-do-about-it> (last viewed June 2020).
15. World Intellectual Property Association, *PCT-Patent Prosecution Highway Pilot (PCT-PPH and Global PPH)*, available at https://www.wipo.int/pct/en/filing/pct_pph.html (last viewed in April 2020).
16. *Id.*
17. Martin D. Hyden and Anthony C. Tridico, Ph.D., *IP5 PPH Pilot Program*, Intellectual Property Today (2014), available at <https://www.finnegan.com/en/insights/articles/ip5-pph-pilot-program.html> (last viewed in June 2020).
18. European Patent Office, *Information from the EPO*, Article 93, Office Journal November 2015 (2015), available at <https://www.epo.org/law-practice/legal-texts/official-journal/2015/11/a93.html>.
19. *Id.*
20. World Intellectual Property Association, *Sharing Search and Examination Work Products*, available at <https://www.wipo.int/patents/en/topics/worksharing/sharing-work-products.html> (last viewed in April 2020).
21. World Intellectual Property Association, *Alternatives in Patent Search and Examination* (2014), pages 9-15, available at https://www.wipo.int/edocs/pubdocs/en/wipo_pub_guide_patent-search.pdf (last viewed in April 2020).
22. Glazberg & Applebaum & Co., *Modified Examination: Avoiding Substantive Examination in Israel*, available at <https://www.ga-adv.com/obtaining-patent-israel-without-substantive-examination> (last viewed in April 2020).
23. Malwald Intellectual Property, *EPO Timelines – the EPO Speeds*

PORTFOLIO continued on page 20