Cost-Conscious Strategies for Patent Application Filings

OREN LIVNE, *Associate Director, Licensing, Office of Technology & Industry Alliances, University of California, Santa Barbara, U.S.A.*

ABSTRACT

Timing and cost are two key factors involved in patent-filing decisions. This chapter explores mechanisms for delaying the high costs of filing a patent application as long as possible, so that additional information on an invention and evidence of its worthiness can be gathered. The efforts to minimize up-front costs are balanced against the potential need to secure viable patent rights at some point in the future. This chapter begins by walking through the stages of the publication process—from prior to submission, to after publication—and suggests cost-conscious patent-filing strategies that are possible at each stage. The focus is on delaying significant costs until the value of the invention is more certain. The chapter concludes with additional points to consider when making patent-filing decisions.

1. INTRODUCTION

With university inventions, research is often early stage and an invention's worthiness can be uncertain from both a scientific and market perspective. At the same time there is a drive to publish that forces early patenting decisions. Companies have some extra leeway with respect to delaying publication, but are pushed by competitors and a need to demonstrate technical capabilities and, as a result, often face patenting decisions well in advance of a clearly defined product line. Both universities and companies must therefore make decisions on inventions that represent only possibilities—an invention that might end up in a product, an invention for which additional research may demonstrate some significant result, or an invention that may be licensed in the future.[1] The cost-minimizing approach recommended in this chapter is intended for such inventions with questionable or uncertain value. The approach is not recommend for a blockbuster drug or an invention that represents the core of a company's products.

2. DECISIONS, DECISIONS

2.1 *No publications planned*

When the inventors plan no publications and there are no other reasons (such as concerns over competing groups) to secure a priority date, a company or university can enjoy the luxury of time. There is no need to do anything on the patent side so long as the invention will not be suppressed, concealed, or abandoned. Technical research and market evaluation may continue until the invention's value is determined. Then a patent application may be filed, if appropriate.

2.2 *Publication planned for a future date*

If there is significant time before publication submission, technical research and market evaluation may continue in the hopes that additional information will be gathered that can support

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the patent filing decision. Often publication submissions are delayed, providing additional time for evaluation. When submission becomes more definite, the steps in the following section may be followed.

2.3 *Publication submission*

Submission of a publication is not necessarily a dire situation. Not all submissions are considered publications. Usually submissions will be maintained in confidence until the publication date (it is advisable to note "CONFIDENTIAL" on the manuscript). If that is the case, several additional months are gained for technical research and market evaluation (again, assuming there are no other reasons to secure an earlier priority date). If the submission will not be maintained in confidence and is considered a publication, then a patent application may need to be filed prior to submission (see section 2.4).

2.4 *Publication imminent*

When publication is imminent, an application needs to be filed only if foreign (non-U.S.) patent rights are desired. If foreign patent rights are not desired, the U.S. patent-application filing does not need to occur until a year after publication. In this case, the steps in section 2.5 "Publication" can be followed (assuming there are no other reasons to secure an earlier priority date).

If foreign patent rights are desired, an application must be filed prior to publication (only a few countries in addition to the United States have grace periods).[2] Figure 1 details the steps that may be taken (see the left-hand "YES" side of the Figure).

There are two main options to choose from. A U.S. provisional application can be filed. Alternatively, if the invention's value is more certain or it has the potential to generate significant revenues, a nonprovisional U.S. application can be filed. By avoiding the provisional stage for more certain inventions, the total patenting cost can be reduced.

2.4.1 *Nonprovisional U.S. application*

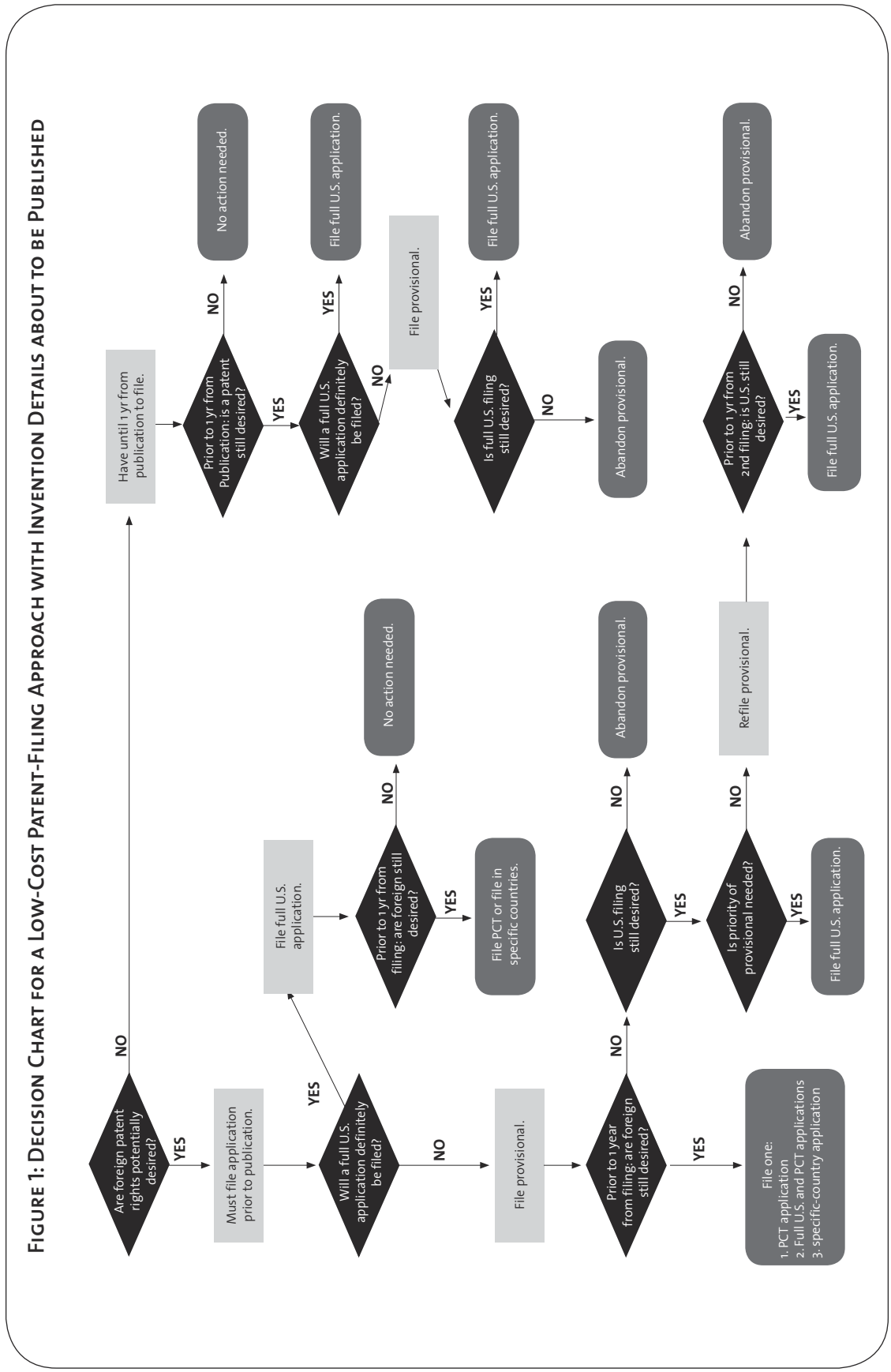
If the nonprovisional application filing route is taken,[3] attorney costs can be reduced by providing a single cohesive document containing all data and information relating to the invention. If possible, this document can be drafted by the inventors and then reviewed by the invention manager. The invention manager can discuss the description with the inventors and work to add any missing information, alternative methods, compositions or devices, and additional breadth to the description. The attorney will then have a more-solid starting point from which to draft the application. Depending on the nature of the invention, costs may be kept below US$10,000.[4]

Once the nonprovisional U.S. application is filed, there is one year during which foreign rights can still be pursued (assuming no prior publication has taken place). If foreign patent rights are no longer desired, no action needs to be taken. If foreign rights are still desired, one of the two following filing approaches can be employed prior to one year from the initial filing:

1. **File a Patent Cooperation Treaty (PCT) application claiming all or specific nations**. Filing a PCT application provides 30 months from the earliest priority date (filing date of the nonprovisional application) before which national-stage patent filings need to occur. Most countries are now members of the PCT (with the Republic of China [Chinese Taipei] one notable exception), so the PCT application is a valuable interim step for maintaining worldwide patent protection.

   The PCT route will reduce initial costs significantly, but total costs will be higher (by the amount of the PCT filing). If the specific countries or regions of interest are not yet known, this is a good route to take (the PCT filing may designate all member nations). Since the U.S. application was already drafted, PCT costs will be limited to governmental fees, and a small amount for attorney time (currently a total of less than US$4,000 for all nations). The U.S. Patent and Trademark Office (PTO) and the World Intellectual Property Organization (WIPO) have extensive Web sites with helpful information on PCT filings.[5]

Figure 1: Decision Chart for a Low-Cost Patent-Filing Approach with Invention Details about to be Published



2. **File national-phase applications in specific countries or regions of interest**. If the desired countries or regions of interest are already known, patent applications may be filed directly in those countries. The cost per country is significant, including translation costs, governmental fees, and attorney time. This route is typically reserved for inventions whose potential has already been demonstrated or whose value, if proven, will be very significant.

2.4.2 *Provisional patent applications*

If the provisional-application filing route is taken, attorney costs can be reduced also by providing a single cohesive document containing all data and information relating to the invention. Like the nonprovisional application discussed above, this can be drafted by the inventors and then reviewed by the invention manager. The invention manager can discuss the description with the inventors and work to add any missing information, alternative approaches, and additional breadth to the description.

This description can then be filed "as is," without claims, at minimal cost (roughly US$300, including attorney time) or, with some sample claims, for a little more. This is a somewhat risky approach, as the attorney will not have reviewed the description to ensure that it provides the information necessary to support desired claims. If it is very uncertain whether or not foreign rights are desired and the added provisional year is likely to provide that information, this may be an appropriate approach. If foreign rights are very likely of interest or the invention has strong potential in foreign markets, it may be preferable to provide the attorney with the single reviewed document and ask that an additional review be conducted and claims added (a total cost of roughly US$1,500–US$2,500, depending on the nature of the invention).

2.4.2.1 *Foreign rights desired*

Once the provisional U.S. application is filed, there is one year during which foreign rights can still be pursued. If foreign rights are desired, one of the three following approaches can be employed up until one year after the initial filing:

1. **File a PCT application claiming all or specific nations**. Filing a PCT application provides 30 months from the priority date (filing date of the provisional application) before which national-stage patent filings need to occur. Most countries are now members of the PCT (with the Republic of China one notable exception) so the PCT application is a valuable interim step for maintaining worldwide patent protection.

   The PCT route provides the lowest upfront costs, but total costs will be higher than the combined costs of filings directly in a few specific countries or regions of interest. If the specific countries or regions of interest are not yet known, a PCT filing is a good route to take (it may designate all member nations). The cost of converting a previously filed provisional application into a full PCT filing can vary significantly depending on how strong the provisional filing was and whether any new information needs to be incorporated (depending on the nature of the invention, costs may be kept below US$10,000)
2. **File a PCT application claiming all or specific nations and file a separate nonprovisional U.S. application**. Filing a U.S. patent application in addition to the PCT at this stage has certain benefits. The U.S. patent application will likely issue sooner. Also, it is possible that the PTO will issue an office action in time to help with the decision on whether or not to go national-phase in other countries. There will be added costs for filing the additional U.S. application, primarily in the form of government fees (roughly US$1,500 to US$2,500 for the filing fee, plus minimal attorney time). If an office action is issued on the U.S. application, there will be additional costs for drafting and filing the response (roughly US$3,000, depending on the nature of the office action).

3. **File applications in specific countries**. If the desired countries or regions of interest are already known, patent applications may be filed directly in those countries. The cost per country is significant, including translation costs, government fees, and attorney time. This route is typically reserved for inventions whose potential has already been demonstrated or whose value, if proven, will be very significant.

2.4.2.2 *Foreign rights not desired*

If foreign rights are not desired but U.S. rights still are, a full U.S. application must be filed within one year of the provisional U.S. filing if the priority date of the provisional is needed.

If priority to the provisional is not needed (for example, if there are no concerns about competing groups), then a full U.S. application does not need to be filed. The provisional application can be refiled within one year of the earliest publication—the cost would be minimal since all the paper work would already be in place (roughly US$300 if an attorney is used). Using this strategy, a company or university would have a year to decide if foreign patent rights were worthwhile (the first provisional) and an additional year to see if a full U.S. patent is desired (the second provisional). If a full U.S. patent is desired, the application must be filed within one year from the filing of the second provisional application.

2.5 *Publication*

If enabling details of the invention have already been published, then non-U.S. rights are generally not attainable.[6] The right hand, "NO," side of Figure 1 outlines the steps that may be taken in such cases. A U.S. patent application does not need to be filed until one year from the publication. During this time additional research and market analysis can occur.

If, toward the end of the one-year time period, the invention's value becomes more certain, a nonprovisional U.S. patent application may be filed.

If the value of the invention is still uncertain but it continues to have potential, a provisional U.S. application may be filed, providing an additional year for evaluation. Filing a provisional application would raise the total costs somewhat, but can dramatically reduce the initial costs. If the evaluation proved positive and a U.S. patent is desired, a nonprovisional application must be filed by one year from the provisional filing date.

3. CONCLUSIONS

This chapter offers ideas for delaying the upfront cost of patent filings in a manner that allows patent rights to be secured in the future. Below are some important points to consider when employing these strategies:

- Before applying the strategies described in this paper, please consult with an attorney to confirm they are appropriate for your specific circumstances.
- There are risks associated with delaying a patent filing. There may be prior art of which you were unaware. Sometimes a paper will be published online prior to print, or a journal will be mailed before its cover date, or conference proceedings sent to attendees prior to the conference. Other groups may publish before you have a chance to file. Foreign countries (and possibly soon, the United States) have a first-to-file system, so delay may result in other groups securing patent rights before you have an opportunity to do so.
- Consider what information will be gained before the next patenting-decision point. If, for example, it will take three years of research to confirm whether an invention is viable, filing a provisional application is not likely to be worthwhile: going straight to a nonprovisional filing will reduce the total costs. On the other hand, if only six months are needed to confirm the value of an invention, a provisional application might be preferable.
- Delaying filings through provisional applications and the other approaches discussed in this paper makes sense only if some applications are abandoned at future decision points. The main benefit of the delay is that

it allows additional time for research and market evaluation so the strong inventions can be separated from the weak. If a patent filing is definitely going to occur, adding the provisional application will increase the total costs.

- Evaluate whether or not foreign (non-U.S.) patent rights are truly desired. Significant flexibility is gained if foreign patent rights are not needed.
- Remember, attorney costs can be reduced by providing a single cohesive document containing all data and information relating to the invention, enhanced by the invention manager who could add any missing information, alternative methods, compositions or devices, and additional breadth to the description. ■

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OREN LIVNE, *Associate Director, Licensing, Office of Technology & Industry Alliances, University of California, Santa Barbara, 552 University Avenue, Santa Barbara, CA, 93106-2055, U.S.A. livne@research.ucsb.edu*

1 Livne O. 2002. Investigation of At-Risk Patent Filings. *Journal of the Association of University Technology Managers* 14:19-29.

2 See Strauss J. 2000. *Expert Opinion on the Introduction of Grace Period in the European Patent Law.* Max-Planck Institute: Munich. www.european-patent-office.org/news/pressrel/pdf/straus.pdf. Page 44 provides a summary of countries with various types of grace periods ranging from six to 12 months. If detailed information on specific countries is needed, see the WIPO Guide to Intellectual Property Worldwide at www.wipo.int/about-ip/en/ipworldwide/country.htm. WIPO provides a good starting point for information on the patent laws of specific countries.

3 It is also possible to file a Patent Cooperation Treaty (PCT) filing in lieu of, or in conjunction with, the non-provisional U.S. application if the desirability of foreign rights is more certain.

4 All cost estimates in this paper are based on small-entity filing fees. U.S. patent filing fees (effective 1 February 2007) can be viewed at www.uspto.gov/web/offices/ac/qs/ope/.

5 See, also in this *Handbook,* chapter 10.7 by AM Schneiderman.

6 See *supra* note 2 for information on exceptions.