

Managing Patent Costs: An Overview

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1. Introduction

With greater awareness in the enterprise sector in developing countries of the net benefits of using the intellectual property (IP) system, a small but growing number of small and medium-sized enterprises (SMEs) that rely on new and improved products for driving their competitive strategies, are becoming savvy users of the IP system. At the same time, even in the developed countries, some of the fastest growing private enterprises that own or use a range of IP assets are not taking adequate or any concrete steps to get the best out of their IP assets³. For most SMEs, taking even the first meaningful steps for management of IP assets, especially patent management, gets stuck in issues relating to cost and complexity of the IP system, in general, and of the patent system, in particular. In general, however, most entrepreneurs, start ups and SMEs end up devoting most of their time and energy to obtaining investment capital and building a profitable business model.

Merely because an invention meets the criteria of patentability, one should not rush to file a patent application. As a rule of thumb, an enterprise, big or small, should obtain and maintain patent protection over inventions that are or will be used for developing commercially useful technologies and products. While the cost of acquiring and maintaining patent protection may be significant, it should be noted that patent costs are generally only a small component of the total cost incurred in turning an invention into a commercially useful technology or product, and of marketing and selling it in the domestic or export markets. However, if there is good reason to believe that the profits from an invention will not justify the investment in obtaining patent protection, then, by all means, one should not patent it.

2. Alignment of IP/Patent and Business Strategies

First time users of the patent system often follow an ad hoc patent portfolio strategy or at best a “fence building” approach to the acquisition and maintenance of patent rights, without first having put in place a coherent strategy that effectively links the patent strategy with the strategic needs of the key products of the business that are sold in the domestic or export markets. Such an ad hoc strategy often results in the patent costs spiraling out of control, which leads many such enterprises to believe that the cost of acquiring and maintaining patents is always too high and that the patent system is suitable only for big businesses. Every cost must be seen in the context of the likely return on your investment, and the risks involved in the process of taking an invention to a marketable technology or

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³ Article entitled, “Less than One-Third of Fast-Growth Private Companies Have Formal Process to Identify and Manage their Intellectual Property”, PricewaterhouseCoopers Finds, at [http://www.barometersurveys.com/production/BarSurv.nsf/vwResources/PR_PDF_Files_2006/\\$file/tb060502.pdf](http://www.barometersurveys.com/production/BarSurv.nsf/vwResources/PR_PDF_Files_2006/$file/tb060502.pdf)

product. In general, therefore, a clear and focused IP strategy that has a good fit with the overall strategic objectives of a business is crucially needed before an enterprise begins to devise and implement practical measures to own or ‘license in’ any IP assets, including patents⁴. A robust business plan would have adequately dealt with IP issues⁵. A business plan is based on the chosen business model. To succeed in business, having a business plan and business model is not sufficient. These must be followed too. To measure progress and take corrective actions, therefore, a periodic review or audit of the progress against the planned targets is needed. This review or audit should include an IP audit too.

This article will not deal with the whole range of issues concerning an IP or patent strategy or audit but will only discuss briefly a range of practical strategies that an enterprise may use to minimize the costs associated with creating and managing an effective patent protection program. A major aspect of cost concerning patents, which relates to dispute resolution and enforcement of patent rights, will also not be dealt with in this article.

3. Adequate Financial and Human Resources

Needless to say, controlling cost assumes that an enterprise has an otherwise robust business plan, an IP consistent business model and a sensible budget allocated for the IP/patent program, along with dedicated and, hopefully, suitably trained in-house human resources for creating and implementing its **IP/patent strategy and IP/patent management program**. Mere allocation of funds and human resources is not enough, however. Also needed is a supporting decision-making framework at the management level that would help to align the business strategy with the patent strategy and, amongst other things, would provide appropriate incentives and/or rewards for guiding the efforts and resources of the enterprise for guiding the IP/patent management program towards the desired direction.

4. Different Types of Costs and How to Manage Them

The direct costs associated with use of the patent system may be looked at from a number of distinct perspectives, which are elaborated hereafter.

(a) Information Search Costs, as a Part of Due Diligence

Before filing a patent application, it is generally prudent to do a **prior art search** to determine the patentability of the invention(s), unless filing the patent application first for securing the all-important **priority date** is of utmost importance to you. Otherwise, it makes little sense to argue that a patent examiner at the patent office will, in any case, do a patent search on your patent application after it is filed, as in that case you would end up paying a very substantial sum of money to the patent agent or attorney and also the filing fee, if any, at the patent office to learn later on from the patent examiner what you could have learnt much

⁴ See the article entitled, “Integrating the intellectual property value chain” by Bill Barrett & Dave Crawford at <http://www.nature.com/nbt/journal/v20/n6s/pdf/nbt0602supp-BE43.pdf>

⁵ See the write up on “Practical IP Issues in Developing a Business Plan” at http://www.wipo.int/sme/en/ip_business/managing_ip/business_planning.htm

earlier and much more cheaply by getting an expert's opinion as to whether your invention is indeed patentable.

Keeping in view the risks and cost of marketing new or improved products, it can never be assumed that just because a product is commercially unavailable, it is novel and non-obvious to a person skilled in that field of technology.

A comprehensive prior art search would help you to anticipate possible objections that may be raised by an examiner when your patent application goes to the examination stage. Conducting due diligence on a patent application and extensively searching for potential infringement on issued patents are always important in any serious patent prosecution. You may also wish to know as to how crowded is the field in which you are seeking to patent, how useful would the granted patent be from a commercial angle, and whether you would have to 'license in' patents owned by others to practice your invention. Conducting an extensive search for potential infringement on issued patents could help a patent applicant to decide whether to pursue patents for his/her invention(s), or to modify/improve further the invention to avoid infringement, that is, 'design or invent around' the patented invention.

In other words, a **freedom to operate (FTO) analysis**⁶ may have to be done even before filing a patent application and/or when objections are raised by the patent examiner during the patent prosecution process. Therefore, a viable patent strategy would invariably involve extensive due diligence for avoiding patent land mines and aggressive searches for any potentially valuable partnerships or licensing possibilities.

In fact, it is important that a professional prior art search is done using, amongst other things, patent information. This should be done systematically at various stages from the initial idea generation stage through the various development stages and, in any case, prior to launch of a new or improved product on the market, and periodically thereafter for policing the market for detecting infringers.

To keep the search costs down, begin by using free patent information databases on the Internet. If these do not suffice, which is often the case, then turn to commercial value-added patent information service providers. In both cases, begin by looking for access to such services that may be provided through a government, institutional or industry association support mechanism that provides free advisory services and/or direct or indirect financial support for using commercial patent information services. Invariably, first contact the national or regional patent office for this purpose to either access the free patent information service, or to obtain information about subsidy or grant schemes and services that might be available to enterprises from different sources in or under the government⁷.

(b) Cost Issues Relating to Patent Versus Trade Secret⁸ Versus "Defensive Publication"⁹

⁶ See article entitled, "Launching a New Product: Freedom to Operate" at http://www.wipo.int/sme/en/documents/wipo_magazine/9_2005.pdf

⁷ See page 8 on "Accessing Patent Information; Patent Information Advisors" at <http://www.ryutu.ncipi.go.jp/pldb/en/pdf/guide-e.pdf>

⁸ See article entitled, "Trade Secret versus Patent Protection: Or Both?" at <http://www.kilpatrickstockton.com/publications/downloads/KSACCMStockwell.pdf>

⁹ See the write up on "defensive publication" at http://www.krajec.com/index.php?/weblog/defensive_publication/, an article entitled, "Defensive use of

The choice amongst these options depends not just on the suitability of one or more of the options but also on the chosen IP strategy. In general terms, however, these two alternatives to patenting have either no cost or a much lower cost than that of patenting an invention. However, both the alternatives have serious risks or limitations, and should therefore be used only if patenting is not possible and one of these two other options is likely to serve the desired business objective.

Sometimes, filing a **provisional patent application**¹¹, if that option is available under the relevant national patent law, or filing a **petty patent/utility model** application, if that option is available, may be a sensible interim decision, as these options, at a low cost, help you to delay the decision concerning filing a regular patent application. A provisional patent application is especially suitable for an early stage invention. When available, a provisional patent application is a quick, easy, and cheap way to preserve the patentability of an invention while further technical refinement and commercial development is undertaken.

Both these options buy you valuable extra time to make up your mind about if, when and where to file a regular patent application. However, there are a number of risks or pitfalls in relying on a provisional patent application that must not be lost sight of while considering that option¹². A provisional patent application is preferable where the scope of the claims is likely to change in response to an evolving commercialization strategy. In such a case, a provisional patent application minimizes waste of resources involved in recasting claims during prosecution. But where the scope of desired claims and the likely commercialization scenarios are relatively clear, prior art is well known, and the invention is framed in light of this prior art, a non-provisional patent application is clearly preferable, provided of course there is budget for them.

Normally, only one invention is included in a patent application, unless more than one invention is covered under the concept of ‘unity of invention’ or a group of inventions is so linked as to form a single ‘inventive concept’ that ‘produces a unitary result.’ Doing so would be advantageous from a cost perspective. It is also important to remember that, in general, a patent application may be “divided out”, but a number of different patent applications, as a general rule, cannot be “combined” after filing. An alternative strategy would be to file a series of related provisional patent applications, claiming multiple priorities, and then filing non-provisional patent applications within the due dates to sort out any issues concerning ‘unity of invention’ or ‘single inventive concept.’ In fact, it is a popular tactic to file a series of related provisional patent applications, one after each significant technical or commercial milestone in product development is achieved or after

publications in an intellectual property strategy” at <http://www.nature.com/nbt/journal/v20/n2/pdf/nbt0202-191.pdf> and another article entitled, “Defensive Publishing: A Strategy for Maintaining Intellectual Property as Public Goods” by Stephen Adams and Victoria Henson-Apollonio at <ftp://ftp.cgiar.org/isnar/publicat/bp-53.pdf>

¹⁰ See the write up on “defensive publication” at

http://www.krajec.com/index.php?weblog/defensive_publication/, an article entitled, “Defensive use of publications in an intellectual property strategy” at <http://www.nature.com/nbt/journal/v20/n2/pdf/nbt0202-191.pdf> and another article entitled, “Defensive Publishing: A Strategy for Maintaining Intellectual Property as Public Goods” by Stephen Adams and Victoria Henson-Apollonio at <ftp://ftp.cgiar.org/isnar/publicat/bp-53.pdf>

¹¹ See the article on “Delaying Patent Prosecution Cost” at <http://www.curie.org/extdoc/rmnl200506.pdf>

¹² See article entitled, “Provisional Patent Applications, Their Practical Uses and Potential Pitfalls” by Brian I Marcus at <http://www.vmmhd.com/patents/2003ProvApps.pdf>

predetermined periods (Snapshot filing strategy), and to file a formal patent application that incorporates them all, within one year of filing the first such provisional patent application.

(c) Cost of Drafting a Patent Application:

For a given invention, in the context of the relevant prior art, the quality of drafting counts, as there may be a vast difference between the quality of a patent application prepared and prosecuted at "no, low or minimal cost", which may result in a useless, or low quality patent and a professionally drafted patent application and prosecuted in like manner, which may result in a high quality patent with well crafted claims that cover all the key business applications. In other words, as in many other situations, "You get what you pay for." There is no point in being penny wise and pound foolish when it comes to managing the costs of patents applications covering inventions/technologies that protect your core competencies of your business and its products.

Assuming that an informed decision has been taken to go ahead with filing a patent application, the next step would be to draft a good patent application. If your enterprise has in-house competence to do so then the cost of preparing and filing a patent application may be totally eliminated or considerably reduced. But if you do not have in-house competence for drafting patent applications, then a poorly prepared in-house draft patent application may end up being discarded altogether or it may require putting in an even greater effort by the external patent agent or attorney than doing it afresh from scratch, that is, it may end up costing more instead of less. Invariably, however, help of a patent agent or patent attorney is needed for improving or drafting the claims. Therefore, choosing a good patent agent or attorney is crucial¹³. In any case, it is always helpful to provide the in-house or outside patent agent or attorney not only a good invention disclosure report but also anything and everything that you may have about the invention be it materials, drawings, descriptions, and models that were prepared by the inventor/researcher, and to do so in a computer-readable form, where ever relevant and possible, so that if need be, some parts of the information provided may be used easily to create or improve the patent application. All relevant information should be provided at the beginning itself as once the preparation of a patent application has begun, as integrating a set of subsequently supplied materials into the applications is always more difficult than incorporating it at the outset. Not providing all information at the proper time lowers quality and raises the total cost of preparing a patent application.

The drawings in a patent application require special expertise for which a separate person skilled in that area is often needed. Assuming that the SME does not have an in-house patent agent or attorney, then a suitable external person or team has to be found. First, find out from the national or regional Patent office if a reliable patent agent, patent attorney or an IP law firm in your vicinity provides pro bono (free) services on IP matters, including services for drafting of the first patent application, to a new client or to a first time patent applicant. It may not be necessarily true that a free service is always a useless service. Make sure that the patent agent has not only the relevant legal capabilities but also has the requisite technical background. On the other hand, if you can afford the services of an IP law firm then you do

¹³ See the article on "How To Find A Good Patent Attorney" by Stephen Paul Gnass in the US context at <http://www.inventionconvention.com/ncio/inventing101/029.html>

not rush to the most expensive IP law firm in town as that may not necessarily be the most cost-effective.

Choose a patent agent or patent attorney who has technical competence in the field of the invention, with whom you are comfortable in working, who will find time to discuss all relevant issues, and who provides you a written schedule of services, and has standard charges for those services that enable you to readily assess the cost\benefit advantage of the services offered at the very beginning of the process.

The cost of a patent application and its prosecution costs depends on a number of factors such as:

- Field of technology
- Nature of the invention
- Length of the patent application
- Number of Claims
- Hourly rate of the patent agent or attorney and fees charged by the draftsman for preparing drawings, if any, that form a part of the patent applications
- Total time taken by the patent agent/attorney in preparing and prosecuting it
- Nature and number of objections raised by the patent examiner
- Number of countries to be covered
- Route used for filing abroad
- Translations costs of foreign filings
- Number and nature of objections raised by the patent examiner and whether there are any opposition proceedings or appeals

There are two types of cost associated with a patent opposition: the cost of participating in the opposition and the opportunity costs to the patentee. Participation in an opposition is not cheap but is much less costly than a full blown litigation. Perhaps of greater concern is the opportunity cost to the Patentee. Theoretically, the filing of a post grant opposition, if this option is available, should not affect the ability to enforce the patent. In reality, however, Courts are reluctant to duplicate the efforts of the patent office and often stay an action in some countries. A prolonged opposition and subsequent appeal may deprive the patentee of his market niche and of revenues he might otherwise have received during the course of the opposition. For newly set up enterprises, this loss of revenue may prove to be fatal a delay of several years while the patent rights are determined is unacceptable. It provides too much potential for mischief and too little downside for the opponent. Therefore, it is advisable to try to prevent the problem, to the extent it may be possible to do so, by doing an appropriate search of the relevant prior art, which is a lower cost and faster option.

(d) Subsidies, Grants or Other Free or Less Costly Sources of R & D/Innovation Funds or Funds Supporting Patenting-related Costs.

In an increasing number of countries, worldwide, governments and other funding agencies that provide grants or subsidies for R & D/Innovation activities to research institutes, universities, and enterprises have begun to allow a portion of the funds to be utilized for meeting patenting costs. In a few of such support schemes, the costs also cover enforcement costs and international filing costs. Such R & D/innovation/patent funds may come from the

budget of the national government¹⁴, through one of its Ministries¹⁵¹⁶, Departments¹⁷, agencies¹⁸ or other institutions¹⁹²⁰, or from a state²¹/regional²²/provincial²³/municipal²⁴

¹⁴ http://www.kantei.go.jp/foreign/policy/titeki/kettei/050610_e.pdf (see especially pages 96 and 97 about Japanese support to SMEs on IPRs at home and abroad)

¹⁵ See section 7.0 entitled, “Patent registration” on cash subsidy for filing patent application in India and abroad by the State government of Gujarat in India at http://www.indextb.com/pdf/gr_4.pdf

¹⁶ See information about the Patent Application Fund Plus (PAF Plus) of the Government of Singapore at http://www.business.gov.sg/EN/Government/GovernmentAssistance/TypeOfAssistance/Grants/IntellectualProperty/gp_edb_patent.htm; similarly the State government of Andhra Pradesh in India provides 50% subsidy on the expenses incurred for patent registration limited to Rs. 5.00 Lakhs; see .

http://www.apind.gov.in/incentives_aboutap.html

¹⁷ Enterprise Ireland has a role to assist in the development of inventions and can give assistance with Patent expenses in some cases; see section entitled “Financial Assistance for Patent Applications” on page 5 of the document at

http://www.tomkins.ie/downloads/Patents_for_Inventions_in_Ireland_Europe_and_International.pdf and also the scheme at <http://www.enterprise-ireland.com/NR/rdonlyres/B7E21281-53D3-4C67-8925-1D051705965C/0/IPAssistanceSchemeBrochurenewcorporate226045Apr05.doc>

¹⁸ Through the Atlantic Innovation Fund (AIF), the Atlantic Canada Opportunities Agency (ACOA), a federal government agency in Canada, provides prospective stakeholders, including universities, colleges, research organizations, private sector firms and individuals, financial assistance for R & D and related initiatives for joint ventures/collaboration under the AIF program. ANNEX G - Statement of Work (SOW) Guide of the AIF states under paragraph 7 (c) (iv) E - Professional Fees and Consultants that legal fees for patent searches and patent filing fees are acceptable. (Patent filing fees will only be allowed for countries that are identified as necessary for the success of the Project.) Patent costs will be charged at actual cost. Maintenance fees and all expenses incurred protecting a patent are not acceptable.

¹⁹ Patent Application Grant Scheme administered by the Innovation and Technology Commission with Hong Kong Productivity Council; see information about it at <http://www.itc.gov.hk/en/funding/pag.htm>

²⁰ The strategic objectives of the Science and Technology Center in Ukraine include Patent and licensing support of intellectual property, including guidance and financial assistance for patent applications; see <http://www.stcu.int/weare/MissionStatement/Mission/index.php>

²¹ In Scotland, the SMART, SPUR or SPUR^{PLUS} grants help businesses to meet essential project costs such as: labour, overheads, materials, sub-contracting, consultancy and intellectual property; see <http://www.scotland.gov.uk/Publications/2004/05/19368/37327>.

²² See information about Wallonia: subsidy for patent registration (Depot de brevet)” at http://trendchart.cordis.lu/tc_datasheet.cfm?id=7739 .

Also at <http://www.jcu.edu.au/div2/rido/qlddir.doc> there is a “Directory of technology commercialization grants and assistance currently available to Queensland innovators in Australia.” In the latter, for example, the Innovation Start Up Scheme of the Department of Innovation and Information Economy provides funds that may be used for early corporate development, IP protection or prototype development/validation. The maximum amount of financial assistance will be \$82,500 (including GST) and applicants will be expected to match funding on an 80:20 (government : private) basis: <http://www.iie.qld.gov.au/innovation/start-up/>

²³ The Changsha Intellectual Property Office of the Changsha provincial government established a Special Patent Fund for Changsha which provides that the funds will be mainly used for patent applications, the costs associated with implementing a patent, patent rewards as well as projects associated with cooperation and the communication of patent technology. In Changsha, an enterprise, organization, scientific research institute, university or individual, seeking to apply for patent, may now apply for financial support, subject to the technical contents, prospect of success and conformity of the application with the city's relevant industrial development regulations. Moreover, they may apply for a subsidy of up to RMB 500,000 (USD 60,000), for the implementation of a patent (once it has been granted) into a variety of products, and if the patent consists of technologies that have a high-tech content, novel innovation, and are considered to be useful to the technical and industrial development of Changsha; see news item at

http://www.iprights.com/publications/chinapatentexpress/cpex_32.asp#2. Also see news item at http://english.people.com.cn/english/200008/02/eng20000802_47096.html concerning Patent Application Fund of the Beijing Intellectual Property Rights Bureau; according to the regulations, technologies suitable for patent right application must be those of the key industries, such as information technology, technology for the integration of photoelectric machinery, bioengineering, new medicine, new materials, and technologies for

governments²⁵, a regional/local development agency²⁶, a private non-profit organization²⁷, a university^{28,29}, etc³⁰. Unfortunately, in most countries this type of information is not available from a single source, although the Ministries responsible for providing such type of funds are the initial places to make enquiries in this regard. As part of your due diligence, it is important to make intelligent enquiries to find out about such support schemes for which you may be eligible either directly or have indirect access through an R & D partner.

(e) Managing Patent Office Fees

energy saving and environmental protection. It also includes technologies or products of high-tech and of good market potential.

²⁴ The Chongqing Scientific and Technological Committee of the municipal government of Chongqing in China established a RMB 1 million (USD0.12 million) special patent fund to finance the project which is hoped will cover the patent filing fees, substantive examination fees, and maintenance fees as well as the first annuity due by each applicant, in the year after their patent has been granted. See news item at http://www.iprights.com/publications/chinapatentexpress/cpex_51.asp

²⁵ See section 3 on “Intellectual property right” under “Enterprise service” in Shenzhen government’s industrial policies at <http://english.sz.gov.cn/iis/200509/t520.htm>

²⁶ The York Innovation Fund was established in early 2004 with the intention of addressing the early stage funding gap that exists for technology entrepreneurs, who often face significant costs before a concept can reach market. The fund provides micro business awards of up to £10,000 as part loan, part equity, to contribute to pre-trading activities such as patent costs, market research, and prototype trials, and helps new ventures reach a position where they are attractive to investors; <http://www.sciencecityyork.org.uk/cgi-bin/item.cgi?id=622&d=143&h=24&f=148>

²⁷ The Kentucky Enterprise Fund provides seed and early-stage capital to small and medium-sized Kentucky-based companies with high-growth potential. The Kentucky Enterprise Fund is managed by Kentucky Science and Technology Corporation (KSTC), a private non-profit organization. Kentucky Enterprise Funds include: The Kentucky Commercialization Fund, Rural Innovation Fund (Level 1 and 2), R&D Voucher Fund, the ICC Concept Pool Fund, and the Kentucky Gap Fund. The Rural Innovation Fund is intended to nurture high-tech companies and develop an entrepreneurial culture in the rural areas of Kentucky. Kentucky companies with fewer than 150 employees, in good standing, can seek a maximum, funding of up to \$25,000. Companies must have a unique and competitive product, technology, or process that can be protected in the commercial marketplace. This technology must be protected (patent, trademark, copyright, etc.) in the commercial marketplace. Applicants must demonstrate the commercial viability of their technology and must demonstrate their ability to develop and lead a commercially successful venture. Companies retain ownership of the technology developed before the start of the project as well as any new technology developed during the project. KSTC does require acknowledgement for its assistance in patents, publications, or reports. See <http://www.startupkentucky.com/?114>

²⁸ Scottish Institute for Enterprise has an Intellectual Property Protection Fund of £200,000, which was created for students in 2002. The fund is the first commercialization support project of its kind to be deployed across the university base in Scotland and is expected to help more than 100 student companies, to file initial patent applications; http://www.sie.ac.uk/student/ip_fund.php

²⁹ The Maine Patent Program is administered by the University of Maine System, Center for Advanced Technology Law and Management. It provides assistance to companies, inventors and entrepreneurs in the State, which includes C. Conduct innovation screening of 50 to 100 preliminary potential patent applications and patent searches on 25 to 50 potential patent applications each year; and D. Prepare 10 to 20 patent applications per year;

<http://janus.state.me.us/legis/ros/lom/LOM119th/5Pub701-750/5Pub701-750-105.htm>

³⁰ See the news item on page 2, entitled, “Special Fund for the Development of IP Established in Shuangliu at http://www.chinantd.com/pdf/2006-02_en.pdf

A few patent offices do not charge a filing fee for patents (for example, the UK) and at least one national patent office (that of Italy) has, in 2006, stopped charging any fee for any activity concerning grant or maintenance of the patent. A few countries charge a reduced fee to SMEs or small entities (notable USA and Canada). In general, however, the patent office fees are payable in installments over the legal life of a patent, often increasing substantially towards the end of the 20 year period. Of course, one must not forget that, in general, the costs of a patent that are linked to patent office actions/fees are generally a very small part of the total costs, as the cost of drafting and prosecuting a patent requires a much higher outlay to cover agent/attorney fees, and translation costs in foreign filings. Therefore, a periodic review should be undertaken of any patent application or granted patent to decide whether to continue with it or stop losses, as it were, by letting the patent application to lapse or to abandon a granted payment or even a whole portfolio of patents. Such a decision may require an evaluation of the value of the invention or technology incorporating the patented invention, and, therefore, is taken keeping in view all other relevant factors such as the following:

- (a) whether the patent application is likely to proceed to a worthwhile patent or not;
- (b) whether the granted patent has direct or indirect value for the business;
- (c) whether the patent can be sold, gifted, licensed to others;
- (d) whether the existence of a patent portfolio or just a number of pending patent applications is good marketing tactic in relation to funding agencies, venture capitalists, business angels or the ultimate users/consumers of the new or improved technology; etc.

Generally, obtaining patent protection by filing and prosecuting a patent application is the only or the best route for securing access to patent rights. However, when one finds a very close patent reference during a preliminary patent search or on receipt of an ‘office action’ from the patent office, then instead of asking your patent agent/attorney to spend a great deal of time in trying to write a set of claims to distinguish the application subject matter from the reference, and to spend expensive time arguing with an examiner, only to obtain a rather narrow patent, it may be better to approach the owners of similar prior art to negotiate a licensing deal. Negotiating a licensing deal and managing a licensing agreements also has costs but this may prove to be less expensive in the long run, and, of course, results in almost as good and generally much faster patent protection.

The decision to continue or abandon a patent application is determined on a case-by-case basis. Typical considerations include, but are not limited to:

- (i) breadth of allowed claims versus their ability to prevent “design around” or get a license,
- (ii) changes in the market landscape, and
- (iii) indications or absence of any *bona fide* company interest³¹.

(f) Role of IP Audit in Managing Costs

Sometimes, it is only during an event driven or periodic IP audit that it is revealed that a patent or portfolio of patents, which are in the process of being acquired, are no longer relevant to the business needs of the enterprise, or the acquisition process is likely to be too slow or more costly than the potential revenue that it may generate, or the protected product may be obsolete by the time the patent rights are acquired as by that time other new competing products will be in the marketplace. In all such cases, the enterprise may decide not to begin the process of acquiring the patent rights, for example, by not filing a patent

³¹ See the section on “Cost of patenting” at <http://www.hopkinsmedicine.org/webnotes/licensing/0306.cfm>

application or by not taking any further steps to continue to pay the periodic maintenance fee at the patent office, or take any further steps for buying or licensing a patent from a third party. In other cases, in particular in a fast changing technology, e.g., software, the enterprise may find that protection of software by trade secrets and/or copyright may suffice, instead of relying also on patents. Sometimes, a branding strategy may substitute a patenting strategy, instead of complementing it during the life of the patent or extend the life of the exclusivity after the expiry of the patent. This review of patenting costs may be done as a part of an annual IP audit or it may be done every time before a major decision is to be taken about a pending patent application or a granted patent. It goes without saying that all such decisions must be taken in consultation with all concerned persons in different parts of the business, such as those in R & D, design, manufacturing, marketing, finance, and not just by the staff or manager of the IP unit or the in-house or external IP agent/attorney. Where ever possible, the senior management, or the key managers in the business should be fully involved in these types of decisions. It would also be taken in the frame work of clear, objective and written guidelines that are tuned periodically to improve their alignment to business objectives.

(g) International Patenting Costs

Patent costs multiply with the increase in number of countries covered by it. Making prudent choice of countries is the first key step in minimizing costs. Further, using the Patent Cooperation Treaty route for international filing strategies may not only buy time, at a small cost, but may also provides cost savings in the future if it is finally decided to pursue patent protection in a smaller number of countries than was originally envisaged. The use of PCT helps to postpone all expenses at the national level by an addition 18 months, beyond the 12 months available under the Paris Convention. This additional time may be crucially needed to decide which markets he/she should seek protection in so as to enable the applicant to avoid unnecessary costs. The PCT process is very popular with small firms looking to protect their inventions abroad in three or more countries. Using it helps you not only to keep your options open longer but also it provides you with additional information that allows you to manage much better your patenting and business at a later date. The PCT system allows an applicant to file national or regional phase patent applications within 30 months, or in some cases 31 months, after the filing date of the first patent application even if the applicant does not request an examination from a PCT examining authority. This permits you, as the applicant, an opportunity for tailoring a patent specification according to the results of the international search and the international preliminary examination.

Nevertheless, basically, the costs of a PCT patent application are additional to the final costs of obtaining the national or regional patents. The cash flow advantages, however, can make a PCT patent application well worthwhile as it enables you to postpone the decision concerning the countries to be covered - to be delayed by a further 18 (or 19) months over and above the normal 12 months convention period under the Paris Convention.

A national resident in certain countries may take advantage of a reduction in the filing fees and examination fees under the PCT system, provided the application is filed in the name of that national or, where there is more than one applicant, that all such applicants are nationals of that or another eligible country. Such an applicant has to be a natural person, who is a national of and resides in a State whose per capita national income is below 3,000 US dollars is entitled to a reduction of 75% of certain fees, including the international filing fee. This same 75% reduction applies to any person, whether a natural person or not, who is a

national of and resides in a country classified by the United Nations as a “least developed country”. If there are several applicants, each must satisfy those criteria³².

It is also important to note that the PCT Assembly, in its meeting in September 2003, unanimously adopted a new fee schedule that entered into force on January 1, 2004. The international filing fee is reduced by the following amount if the international application is, in accordance with and to the extent provided for in the Administrative Instructions, filed:

- on paper together with a copy in electronic form of the request form data and abstract (PCT-EASY type application): 100 CHF (or equivalent),
- in electronic form where the text of the description, claims and abstract is not in character coded format (e.g. in PDF or TIFF): 200 CHF (or equivalent),
- in electronic form where the text of the description, claims and abstract is in character coded format (XML, prepared e.g. with the PCT-SAFE Editor): 300 CHF (or equivalent)³³.

(h) Managing Translation Costs

When an applicant intends to apply for protection in foreign countries he/she must consider whether he/she will have to incur translation costs. The use of PCT does not shield the applicant from these costs for ever as such costs are to be incurred at the national level. One condition for a PCT application to enter the regional phase before the EPO - thereby becoming a Euro-PCT application - is that the application must be submitted in an official language of the EPO (Article 158(2) EPC). International applications published in another language must, therefore, be translated into English, French or German before entering the European regional phase³⁴.

Therefore, it would be useful if the applicant would also consider use of a regional system directly or through the PCT, to use a single language to begin with. For example, the European Patent Office (EPO) initially permits the filing of an application in one of its three official languages (English, French or German) and if the granted patent is to be effective in all or designated countries covered by the European Patent Convention (EPC)³⁵ then, at that stage, translations into national languages would be needed, as shortly before the grant of a patent, the applicant is asked to file translations of the claims in the other two official languages of the EPO (Rule 51(4) EPC). Further, within three months from the grant of a patent, virtually all Contracting States of the EPC currently require that the applicant to

³² See question 8 Are there any fee reductions available under the PCT? in the document entitled “Protecting your Inventions Abroad: Frequently Asked Questions about the Patent Cooperation Treaty, “ at http://wipo.int/pct/en/basic_facts/faqs_about_the_pct.pdf

³³ See <http://wipo.int/pct-safe/en/support/help/faq.htm>

³⁴ See <http://www.atrip.org/upload/files/activities/montreal2005/Gillian%20Davies.doc>

³⁵ See http://www.european-patent-office.org/legal/epc/e/ar165.html#A165_1

submit a translation of the whole patent specification. This current disadvantage of the European Patent system that translations into several languages are to be prepared when a patent is granted, if the patent is to have effect across a number of different states, is sought to be overcome by the so-called London Agreement that 11 contracting states (Denmark, France, Germany, Lichtenstein, Luxembourg, Monaco, the Netherlands, Sweden, Slovenia, Switzerland and the UK) of the European Patent Convention (EPC) sign in October 2000. The Agreement was designed to decrease translation costs for European Patents at grant by requiring signatories to submit a translation of the claims only, rather than the full text of the patent, at the grant stage. The Parties to the Agreement have undertaken to waive, entirely or largely, the requirement for translations of European patents to be filed in their national language. This means in practice that European patent proprietors will no longer have to file a translation of the specification for patents granted for an EPC Contracting State Party to the London Agreement and having one of the three EPO languages as an official language. Where this is not the case, they will still be required to submit a full translation of the specification in the national language only if the patent is not available in the EPO language designated by the country concerned. The Agreement allows states to insist that the patentee provide a translation in case of a dispute. For more details, see Articles 1 and 2 of the Agreement³⁶. To date, Denmark, Slovenia, Monaco have ratified. Germany has adopted amendments to patent law in line with the London Agreement which will come into force three months after the Agreement has been ratified. However, the London Agreement will only enter into force after ratification by eight Contracting States, including the United Kingdom, France and Germany. Once this happens, it will significantly reduce translation costs, in particular, if the applicant needs to patent protection in non-English speaking member states of EPC.

For natural or legal persons having their residence or principal place of business within the territory of a Contracting State of the EPC and having a language other than English, French or German as an official language, and nationals of that State resident abroad, could file European patent applications in an official language of that State (Article 14(2) EPC). However, such applicants must provide a translation of their applications in one of the three official languages of the EPO within a set time limit. As compensation for the inconvenience and the extra cost incurred, these applicants are entitled to a 20% reduction of the filing fee, examination fee, opposition fee and appeal fee (Rule 6(3) EPC and Rfees 12(1))³⁷.

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(i) Costs of Managing a Patent Portfolio

If your enterprise has a large and growing patent portfolio then there would be a critical need to manage it efficiently. A mere inventory of patents will not suffice. A good docketing system, in electronic form, that automatically sends reminders should be used. A wide range of commercial software based solutions are available. Either use these in-house or rely on a patent agent/attorney or IP firm that uses such a system for managing your patent portfolio. Missed deadlines for payments may result in loss of rights or additional, avoidable expense.

Further, sound management of decisions concerning patents will also help you to avoid getting into situations that require emergency actions by the patent agent or attorney, which are another source of generally avoidable increase in patent costs.

³⁶ See http://patlaw-reform.european-patent-office.org/london_agreement/index.en.php

³⁷ See <http://www.atrip.org/upload/files/activities/montreal2005/Gillian%20Davies.doc>

(f) Finding Partners to Share Costs, Risks and Improve Profits:

Depending on the nature of the invention, the way the claims are drafted or granted, and your business strategy, yet another way to reduce costs is to find a partner for licensing the patent application or granted patent, or a portfolio of patents. Licensing may be done at arms length or it may form a part of a larger package that results in creating a wide variety of business partnerships ranging from a loose strategic alliance to co-development or co-marketing agreements, outsourcing contracts for manufacture of the new or improved product in new markets that you cannot or do not want to enter on your own, and so on. In many of these situations the partner or licensee may take or partial or total responsibility for prosecuting, maintaining and enforcing the patents that form part of the package in the home country or abroad. Doing so, however, requires much greater care especially in international business partnerships.

5. Conclusions

Managing acquisition and maintenance costs of patents is not just a cost reduction exercise. It has to be done without unduly increasing risks or lowering the quality of patent grants or monitoring the granted patents to manage costs during the life of a patent. Curtailing the life of a patent, licensing it, selling it, or just donating it are other options that have cost implications. A gift of patents to a non-profit institution or to a university may provide tax relief in certain countries. Thus, patents assets are just one part of an overall IP management process aimed at leveraging and profiting from IP assets. Money saved can be used for other patents that could be now filed or maintained, for other IP management purposes, or, perhaps, for other key needs of the enterprise.

Further reading

1. An article entitled, "Culling Your Patent Portfolio" on pages 16 to 18 at <http://www.aplf.org/ThePatentLawyer/ThePatentLawyer-02.pdf>
2. An article entitled, "Can I Afford a Patent" at http://www.muslaw.com/newsViewsCases.asp?ContentID=55&frame=06_02&ID_No=180&subject=591973
3. An article entitled, "Seven Ways to Control the Cost and Quality of Your Patent Docket" at http://www.maineandasmus.com/publications/mise_articles/CostcontainIPprog.htm
4. See the section on "II. PATENT COST ALLOWABILITY FOR SMALL BUSINESSES" at http://www.webpatent.com/news/news7_00.htm#II
5. Report of the study entitled, "Study on the Cost of Patenting" carried out by the Roland Berger Market Research for the EPO at http://www.european-patent-office.org/epo/new/cost_anaylsis_2005_study_en.pdf
6. "Debunking the Myth that Patents Are Expensive" at http://www.krajec.com/index.php?/weblog/comments/debunking_the_myth_that_patents_are_expensive/

7. Article entitled, “Strategies to Defer Costs of Patenting—Use Provisional, 'PCT' Applications” by R. Lewis Gable and Mark Montague at <http://www.cll.com/articles/article.cfm?articleid=79>