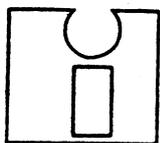


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PATENTING STRATEGIES WHEN, WHAT AND WHY: HOW SHOULD INVENTORS
AND SMEs PLAN FOR OBTAINING PROTECTION FOR THEIR INVENTIONS; USE
OF PUBLIC OR PRIVATE SERVICES; INTELLECTUAL PROPERTY INFORMATION
(INCLUDING THE PATENT COOPERATION TREATY (PCT))

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INTRODUCTION

1. In their development work all inventors and innovative companies have sometimes to face the questions: should we protect our inventions and how? Where should we protect them? Can we do it by ourselves? In this presentation we will try to address these and some other questions related to planning for patent protection for inventions and elaborating patenting strategies.
2. First of all let me underline that filing a patent application is a business decision, not a science and technology or R&D related decision. It can be compared to marking and reserving a piece of land, a claim, where the gold digger will try its luck. The granted patent will give its owner the possibility to exclude any other party from commercially exploiting his invention. This right is granted by the State to the patent owner under the national patent laws and it is usually limited in time (today most countries apply the 20 years protection period, as provided for in the TRIPS Agreement). However, exclusivity is not granted for free, but in exchange for the inventor disclosing the gist of his invention (in the description of his claimed invention). Such disclosure is made public so that everyone interested can be informed what protection has been claimed or granted for a particular invention. Furthermore, most of the laws usually define three criteria that an invention has to meet to qualify for a patent: it must be new, it must not be obvious and it must be industrially applicable.
3. Before applying for a patent, an inventor or a company must have satisfactory answers to the questions: why, what, when and where to patent? These answers would make the basis for the patenting strategy, which will become an inseparable part of the business strategy of any business relying on inventions or innovations.
4. The underlying consideration for seeking patent protection is economical: usually patent protection will be sought at a level where the benefits of such patent protection outweigh, as a minimum, the costs of obtaining and maintaining those patent rights. Patents can secure legal protection for technology that matches business and R&D goals.
5. A solid IP and business strategy is a must not only for companies, but even more for any inventor. Any strategy is based upon a set of concerns. Typical concerns for individual inventors include, cost, protection afforded and strength of protection. In addition, inventors must be concerned with the development and adoption of new products, technologies and services by business and industry and merely the generation of new ideas. These factors interact to provide several distinct strategies.
6. The cost factor is very important in any patent and business strategy. At the end of the day, the inventor or the company will want to see economic value in the bottom line because of the patent rights. However, before reaching the stage where the invention will become an important source of income, a lot of money and resources have to be spent. Some of those resources will be spent on legal protection.

Why should inventions and innovations be protected ___?

7. The answer seems very simple: if your technology or products are unique on the market, you will have an extreme competitive advantage. And hence, your business will be able to extract maximal benefits from applying such technology or manufacturing and selling such innovative products. If an inventor does not have the intention to start

manufacturing and selling his invention, or license it to a company that will manufacture and sell it, he does not then need a patent. He could be happy and satisfied, that he has resolved a difficult technical problem, but not be interested in the economic results of his invention.

8. Some people claim that obtaining protection through the patent system is too costly and not affordable for individual inventors and SMEs. Expenses for legal protection of IP rights should be considered as an investment in the future business, they should be part of the R&D budget and business planing. A well-elaborated patent strategy is a tool to contain the costs related to securing legal protection and will put expenditure in direct relation to business objectives.

9. Among the most important reasons for seeking patent protection are the following:

- Securing the basis for continued development and manufacturing
- Securing a market share (domestic as well as abroad)
- Use of information contained in patent documents in product development and marketing
- Pre-empting competitive market entry
- Pricing flexibility with new products
- Quick payback period for investments
- Strategic IP alliances
- Avoiding patent infringements and disputes
- Using patents and patent applications in business negotiations
- Licensing technology
- Creation of a favorable image

10. Basically, there are two ways of protecting inventions: either by keeping them and all relevant information secret or by applying for patent protection. Keeping an invention or new technology secret is a very risky option. If the secret is disclosed, the competitive advantage will be lost since there are no legal means to prevent competitors of using the same technology or manufacturing and selling the same products. A much more secure option is to apply for patent protection. It is always wise to choose the particular mode of protection with a cost-benefit analysis and advise from a specialized legal counsel.

11. One can use also so-called Non-Disclosure Agreements to protect ideas and developments, however with the following in mind: A Non-Disclosure Agreement can usually be obtained at little to no cost. This tool is used to prevent a "public disclosure." This certainly is the cheapest method of protection, but carries a lot of problems. Some people refuse to sign the agreement. Seeking a signature delays or blocks the marketing process. Copies of the agreement are lost or the inventor forgets to have it signed. Non-Disclosure Agreements are enforced under national laws, and in some countries even under state law, which varies from state-to-state. One mistake has serious consequences, making the tool an unsatisfactory choice in most circumstances.

12. The widely recommended and much more secure way is to seek patent protection. This is the highest quality form of protection. A patent application is the form of IPR protection most people think of first. A national patent application provides a filing date and that date will generally be recognized in foreign countries, members of the Paris Convention for the Protection of Industrial Property, assuming proper procedure is followed.

13. If inventions are to be protected abroad (for future business use) their owners have basically two options: either to file national patent applications, country by country, or to file international patent applications, under the Patent Cooperation Treaty (PCT). The latter ones offer several advantages: the decision as to in which of the contracting countries patents will be sought is delayed and shifted to up to thirty (30) months from the first filing date. The applicant designates all countries to which he or she may later wish to apply. Today over 107 countries around the world are parties to the PCT. The applicant receives an international search report (mandatory) and a report of the international preliminary examination (optional) which permits him to better assess the chances of his application to result in a patent grant. If the reports are negative, he can withdraw (or abandon) his application with no further cost.

What should be protected ?

14. Intangible assets are among the most valuable assets of any company and they should be identified, managed, protected and used in such way that they contribute as much as possible to the success of the company.

15. Creative people have innovative ideas, however ideas cannot be protected. Ideas, knowledge and information can be protected as intellectual property for a limited period of time if they are original and if they meet certain legal requirements. Only few individuals will have the persistence and the will to invest time and resources to develop such ideas into inventions and innovations. However not all inventions and innovations will result in useful and practical products or technologies. And finally, not all useful and practical products or technologies will meet the satisfaction of the user: only a few will generate the so much desired benefits and income.

16. As a first decision an inventor or a company, whether small or large, will have to select those inventions that have the potential to become successful innovations. The selection will be based on an objective assessment of their technical, economic and other merits, and, what is most important, their chances of market success. It should be strongly recommended that a state-of-the-art novelty search be prepared before filing a patent application is filed. This will avoid disappointment and save money, if the novelty search reveals, the existence of similar or identical solutions.

17. When we speak of inventions, today we have to understand a large number of novelties and innovations in any sector of economic activities: new products and processes, software and plant varieties, industrial designs and medications, technological processes and integrated circuits, musical and audio-visual works, business methods and trade secrets, know-how and franchising schemes – all these are intellectual property rights, that will create a competitive advantage if used and applied correctly. They could be protected in one or another way against unauthorized or illegal use.

18. For many inventors, who are researchers and scientists the eternal question: Publish or patent? will have to be answered. Publishing is a must for any researcher who envisages an academic career. Publishing is the basis for being quoted and being quoted means recognition by the academic world. However, the basis of the intellectual property system is absolute novelty of the claimed invention. So an early publication may be detrimental to the grant of a patent, even if the author of both is the same person. The patenting strategy should give an answer to that problem.

19. The answer may be very simple: If there exist business opportunities behind a new development, finding or research result, do not publish before examining the possibility of filing a patent application. As a matter of principle, patent documents should also be considered publications in the academic sense.

When should legal protection be sought ?

20. If we read and know the patent laws, the first reply that comes to one's mind would be: as early as possible, to be the first to reserve the rights. However, the fact that patent protection is limited in time must raise the question: is the invention ready for marketing, or when will the invention be ready for commercial exploitation? Some experts will say: the later you apply for protection, the longer you will have the chance to benefit from the results of your invention. But, the inventor may lose his advantage, if someone else also decides to file a patent application for a similar invention.

21. One very important issue related to the time of filing is that all patent laws have quite strict provisions concerning deadlines in relation to processing the patent applications. Inventors and SMEs should be aware that once the decision is taken to file an application for a patent, one must be ready to go until the end through the process, i.e. until the IP office decides to grant a patent or to refuse it. This often requires a personal involvement of the inventor. And as in any other administrative procedure, it is the applicant who has to watch the deadlines and make sure they are observed.

Where to seek legal protection ?

22. This is also an important decision, since it has a direct impact on the expenditure - the larger the number of countries where protection is sought the higher the costs. The decision where to file for protection is also a pure business decision. The theory teaches us that such a decision is related to the plans of doing business, based on the invention in one or another country, on the technological capacities of one or another country (company) to use and replicate the invention without assistance from the inventor, and what is most important of the possibilities to trace illegal uses of the invention and take action against such illegal use.

23. It should be emphasized that as a matter of principle and for convenience, the first filing of a patent application should always be with the IP office in the home country of the inventor or the country of residence of the company. Such an approach offers several advantages to the applicant: he/she will communicate with the IP office and the IP agent in his/her own language, it will be the best case for seeking protection with IP authorities in other countries. If it appears that the invention is not too competitive or new, the application can be withdrawn or not pursued in other countries and the money spent will be minimal (only the cost related to the national filing of an application (not translation, no fees for foreign agents, etc.))

24. What is most important, the applicant will benefit from the 12-month priority period existing under the Paris Convention for the Protection of Industrial Property, to file the same application in other countries, but maintaining the priority date of the first application (filed with his/her national IP office). During this time applicants have the possibility of verifying the novelty, the business opportunities, etc. and then decide, on the basis of more information, whether or not IP protection should be requested for other countries.

25. In view of the fact that most inventors and companies have financial restraints and cannot afford to protect all developments by filing for patent protection worldwide, it is important to set priorities for patent filing decisions. The factors to be considered when setting priorities for decisions concerning the geographical spread of patent applications include, for example:

1. Countries where a given product is currently manufactured or is planned to be manufactured in future;
2. Countries where the major competitors are located as well as where those competitors have significant investments and manufacturing facilities;
3. Countries that constitute current or future major markets;
4. Countries where there would be significant current or future export markets.

26. Patenting the technology in countries where the manufacturing occurs is a good means to protect the freedom to manufacture and will assist in protecting own investments in the necessary factory setup costs. While obtaining a patent does not guarantee the right to practice the actual invention, i.e., because the patent provides only an exclusionary right, having a patent does prevent others from patenting the technology needed to manufacture a given product.

27. To use IPRs offensively, it is important to file in the country where manufacturing sites of competitors are located as well as in countries where manufacturing can be set up easily and cheaply. For example, if the market for a product is Indonesia and Malaysia, but a competitor can easily manufacture in the Republic of Korea or Japan, it may be more cost effective to apply for a patent in the Republic of Korea and Japan. This may also be a means to protect the technology even when the market shifts to another country (e.g. out of Indonesia or Malaysia). In contrast, where there are numerous competitors located in many countries or if the market for a particular technology is very narrow, it may be more cost effective and efficient to seek patent protection only where the actual market is.

28. Similarly, it may be useful to file for patent protection only where the market is when the cost of the investment needed to make the product is actually quite low and/or very easy for competitors to move their manufacturing facility.

29. Finally, if a new technology is not worth the expense of procuring, maintaining, and enforcing IPRs and otherwise provides no value to the customers, it may be desirable merely to prohibit others from obtaining patent rights on the technology through use of defensive publication. This goal can easily be achieved by having the invention published through filing an application in any of the countries that publish patent applications quickly for a relatively low filing fee.

PATENTING STRATEGIES

30. Patenting strategies (or intellectual property strategies) can be, on one extreme, as simple as deciding never to file for patent protection anywhere and keeping the inventions and innovations secret, on the other extreme, to file for patent protection for every technological development in every country, all over the world. As a practical matter, neither of these strategies will be useful or workable in the long term. There all life strategies must be practical and workable.

31. The following is a review of the some elements of an IP strategy:

General Definitions

32. In its simplest form, an IP strategy is simply a plan. However, it is not a plan that exists in isolation. This plan should reflect a coordinated effort for developing, managing, and using IP rights to accomplish the company's national or international business objectives. Such coordinated patent strategy should be elaborated in view of the uniqueness of a company's research, marketing, and business strategies: there does not exist a ready-to-apply formula, each case needs an individual approach.

33. A good patent strategy is technology based and is dependent on and should support the business strategy. Since the purpose of patent strategy is to serve overall business objectives, ideally it is developed concurrently with research strategies and requires input from business, technical, and legal staff.

34. Another component of a good IP strategy will be to evaluate risk of infringement of third parties' rights, but also the risk of infringement of own developments and to outline appropriate defensive actions to permit the business and technical people to move forward in developing and marketing products.

35. The following questions should be considered when elaborating an IP strategy (whether for one, single invention, or for a company, having an IP portfolio):

- Does the new invention, technology, software, etc. differ from the current products in a way that would warrant investment and would it contribute to increase sales and profits?
- Could someone else use the idea, invention, etc. and be willing to pay for it, for example under a license agreement?
- Who are the users and customers, who are prepared to pay for the innovative products and what would be the distribution method or chain to reach them?

36. These and other factors must be considered in view of each particular business, as well as in view of the knowledge and assessment of competitors' activities, long-term business and research goals, commercialization/licensing alliances, and the actual manner in which technology should be exploited in the marketplace.

The Elements of a IP Strategy Plan

37. Despite the fact that each IP strategic plan must be made to fit individual business and technology objectives, there are basic components that should be present in most IP strategic plans. Some of these basic elements are as follows:

1. To establish and maintain proprietary positions (IPRs) in each business sector that hinder or prevent competitors from using the best technology in the countries of the important commercial interest;
2. To ensure and provide a mechanism to evaluate a company's ability to operate freely for current and new products or processes in the countries of important commercial interest;

3. To facilitate acquisitions and/or developing alliances with other businesses of interest;
4. To define a "licensing -out policy" for patents and know-how as well as means to determine when "licensing -in" is appropriate and cost effective;
5. The IP strategy will include a mechanism for evaluating the costs associated with each of the preceding elements;
6. The IP strategic plans should have a well-reasoned and articulated enforcement policy for exploiting IPRs in countries of the important commercial interest.

Proprietary Positions (Intellectual Property Rights (IPRs))

38. A patent grants the patent owner the right to exclude others from making, using, selling, offering for sale, or importing patented products, products from processes, or from practicing patented methods, etc. The grant is specific to the country issuing the patent. From the point of view of patenting strategies these exclusive rights serve two purposes: offensive; and defensive.

39. Offensive IPRs include those patents that are primarily intended to cover proprietary technology that may or may not be commercialized. Typically, investment in research and development are used to develop the technology in accordance with a plan such that the value of that research can be effectively protected under the IP laws.

40. In order to establish the knowledge base for offensive patent filing decisions, information regarding the current and desired scope of patent coverage (applications and issued patents) vis-à-vis commercial and proposed products must be obtained.

41. In contrast, a defensive patent (or IPR) is defined as one whose primary purpose is to cover technology likely to be needed by or is useful to your competitors. Defensive technologies are typically developed by analyzing competitors' patents as well as the relevant technological literature. Analyzing your competitor's patents and analyzing the relevant literature should reveal trends or gaps in patent coverage. These trends or gaps can then be anticipated or filled by your technology. Thus, you can attempt to exploit the weaknesses in your competitors' patent strategy. Such defensive patent strategy not only creates a drag on your competitor's research, but also creates assets (a good bargaining position) that may be useful in trading should you be blocked by a competitor or a future competitor in an important business area.

42. To the extent that a competitor's technology is very close to your technology, IPR protection will serve both the offensive and the defensive purposes simultaneously. Once information regarding the current and desired state and territorial scope of patent coverage is obtained, offensive and defensive pictures in the technology arena often emerge. Accordingly, a hierarchy of priorities for claim coverage and appropriate technologies can then be made. These priorities can be tested against business and technology objectives. In order to establish a hierarchy of priorities for claim coverage, business and technology factors must be considered and include:

1. The scope of the concept believed to be patentable;

2. The size of the R&D budget versus the number of applications desired to be filed and the filing costs involved;
3. The status of the product in the marketplace;
4. The value of any trade secrets that will have to be disclosed, but left unclaimed in any patent applications;
5. The difficulty in enforcing the IPRs;
6. The ease with which the product or process can be reverse engineered or designed around;
7. The location of the concept in question in the hierarchy of technologies needed to produce an end product;
8. The degree to which a marketing strategy would benefit from having patent coverage on a product, even if such coverage is narrow and not of great value from an exclusionary standpoint;
9. The value of having the patent as a defensive weapon;
10. The usefulness of having a patent when seeking any type of governmental approval.

Freedom of Operation

43. By knowing what technology is in the public domain and what competitors have patented or are doing to obtain patent coverage (e.g., by watching the eighteen-month publications in the countries that publish patent applications), one should be able to determine a likely zone of freedom within which a new technology may operate. This can be determined both with respect to claims scope and geographic territory. Such an analysis is important as one means to manage R&D investment and avoid unexpected and expensive lessons in duplicating research of others and the expenses of litigation. Freedom of operation should be among the objectives of the IP strategy.

Acquisition, Alliance, Licensing -in, and Licensing -out

44. Often research and business objectives cannot be achieved by the technology currently owned by a company or cannot be achieved in a given period of time through own (in-house) R&D. Consequently, it will become necessary to seek to purchase (either outright or in the form of a joint development project with a customer or a supplier), or obtain a license under existing patents owned by others.

45. In addition, licensing technology to others, known as licensing -out, is a useful means to create royalty revenues, may assist in obtaining the technology of others, and may assist in gaining access to future developments and markets. Such licensing -out can have the advantage of permitting a company to leverage its own technological resources. That is, the licensee's resources for a particular business opportunity will be an addition to a company's own resources, particularly, if that company is not able to serve certain market niches. Moreover, if the technology is related to pioneering invention, massive licensing might be one means to make the technology the industry standard and create the market.

46. For example, small companies or young companies often do not have sufficient sales and marketing capacities to serve either national or global markets. By licensing out certain IPRs in certain markets, such companies can gain access to distribution systems and marketing structures that would not be available otherwise. The early partnership of IBM with Microsoft Corp. in developing the MS-DOS operating system software illustrates one example of using technological rights to leverage your market position.

47. Also, all companies, whether SMEs or large corporations, should regularly undertake audits of their IPR portfolios and intangible assets. Such an audit will often reveal underused technological opportunities, proprietary information and know-how, that could easily be transferred for use (against payment) to other companies.

SPECIFIC STRATEGIES

48. Let us have a look in some specific approaches to patenting strategies (or strategies for obtaining patent protection). Perhaps the most common strategy for inventors is to use a non-disclosure agreement until an application can be filed. A patent application is then filed before the first public disclosure/offer for sale. Within one year of the priority date, the decision is made to pursue or not pursue foreign protection. If yes, an international patent application is filed under the PCT.

49. Hereafter are discussed three distinct time periods during which certain actions must take place or rights will be lost. This presentation will permit anyone to determine fairly well the strategy best suited for their needs. Nevertheless, one should not think that strategies should be adopted and applied without competent legal advice in particular in those situations where determining a strategy seems difficult.

Idea Generation and Inventing Phase

50. A non-disclosure agreement is important, but it is best used as little as possible due to its shortcomings. The agreement may be the only tool available during initial development stages of an invention. Perhaps the invention is not developed to the point where the inventor knows whether the invention will even work. The invention should remain a secret either by way of limiting access only to the inventor(s) and/or should be protected by a non-disclosure agreement to avoid a public disclosure or offer for sale. The inventor community and bar substantially agree that a Non-Disclosure Agreement is an unsatisfactory tool to use when looking for a licensee.

Pre-public disclosure or offer for sale

51. The inventor needs to consider whether to file a national or international patent application prior to the first public disclosure or offer for sale. The primary issue is preservation of the rights to obtain patent protection. Cost and protection considerations should usually encourage an inventor to file a national patent application before the first public disclosure or offer for sale. Filing a national patent application allows one to market using a patent pending designation, while obtaining a priority date and remaining prepared for a licensee. Failure to file a patent application at this time may forever waive the right to seek patent protection.

Within one year of the priority date

52. The inventor needs to consider whether to further preserve foreign protection, if still available, before expiration of a one-year period starting from the priority date. (It is assumed that the first public disclosure or offer for sale occurred after the priority date.) Foreign protection can be preserved in two manners. A PCT application extends out the time to file a patent in contracting countries generally up to thirty (30) months after the priority date. Foreign rights can also be preserved by filing applications directly into each country where the inventor or licensee desires protection. This second route is used when filing in very few, e.g., one or two, countries due to cost considerations. Failure to seek protection abroad at this time may preclude one from ever obtaining such protection on the invention.

53. These periods tend to be presented in a last possible moment fashion. Inventors should not wait for the end of these periods before acting, as this will significantly increase the legal fees in most law firms. Many firms will reject the work or charge a rush basis legal fee if time is too short. Typically, at least two months should be allowed. Some forethought can save substantial amounts of money for the inventor.

CONCLUSION

54. Protecting an invention is an important part of inventing and marketing. Failure to do so renders one vulnerable to competition, which may include competitors far more powerful than the inventor. Patents provide an exclusive right to prevent others from making, using, selling, offering for sale or importing infringing products into the country issuing the patent. Accordingly, one should elaborate a proper patent (IP) strategy in view of marketing plans and countries in which they or their ultimate licensee may engage in business.

55. A well-formulated patent strategy can result in measurable rewards to a company's bottom line. Individual inventors and SMEs will have the opportunity to take well-founded business decisions, manage their IPR related expenses and identify new sources of income. Companies with technology positions need to reassure themselves that early decisions remain correct and that future technology decisions are based on a complete understanding of your technology and business objectives.

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