

Why Intellectual Property Matters

The importance of intellectual property for small and medium-sized enterprises

by Esteban Burrone, Consultant, WIPO

This presentation will focus on small and medium-sized enterprises (SMEs) and their use of the intellectual property (IP) system¹. It will begin by looking at the innovative capacity of SMEs and how this is reflected in their use of the IP system. It will then consider the available data on SMEs and IP and point to SMEs' low use of the IP system when compared to large enterprises. The third and fourth sections will look into the main reasons why SMEs should devote greater attention to the IP system highlighting the benefits that may be drawn from the effective protection, monitoring and enforcement of a company's intellectual property assets. The presentation will conclude by outlining the main elements of an effective IP strategy for SMEs.

1. Small and Medium-sized Enterprises (SMEs) and Innovation

SMEs are a heterogeneous group. Their innovative capacity and ability to develop new and innovative products varies significantly based on their sector, size, focus, and resources. Many of the most thriving industries of recent years, including software and biotechnology, are largely based on small and medium-sized enterprises where innovation and technology acquisition is a key feature in business operations. However, this is not the case of all SMEs in all industrial sectors. A recent OECD paper divided SMEs in the European Union into three broad groups:

- Technology developers (representing 1-3% of the total SME population)
- Leading technology users (of varying R&D capacity, which are 10-15% of SMEs)
- Technology followers (totaling between 80-85% of SMEs)²

Other studies examining innovation among SMEs have focused on the mechanisms by which SMEs improve and introduce new products.³ Some authors point to the absence of R&D departments within SMEs in most sectors highlighting the informal and incremental nature of innovations by SMEs which often is characterized by adaptations of existing products to meet market demands (*demand-pull*). Others have pointed out that SME innovations tend to be more concentrated in certain sectors, particularly those requiring low capital investments. Finally, some authors have emphasized the advantages of SMEs vis-à-vis larger firms due to

¹ The intellectual property system is here meant in the broad sense of the word, including not just intellectual property rights (i.e. patents, utility models, trademarks, copyright and related rights and industrial designs) but also the institutions which are in charge of administering the registration/grant of such rights, as well as the information that can be obtained from existing patent and trademark databases.

² OECD *Enhancing the Competitiveness of SMEs through Innovation*, Background report for the OECD Conference on "Enhancing the Competitiveness of SMEs in the Global Economy: Strategies and Policies" (2000)

³ See, for example, Acs and Audretsch, *Innovation and Small Firms* (1990); Archibugi and Evangelista, and Simonetti, "Concentration, firm size and innovation. Evidence from innovation costs" A293-305 *Rivista Internazionale di Scienze Sociali*; Cohen and Klepper, "A Reprise of size and R&D" A 925-951 *The Economic Journal* 106 (1996)

their greater flexibility to take risks and adapt to market demands as they are freer from bureaucratic constraints.

While there may be some common characteristics of innovation within SMEs, the fact remains that SMEs differ remarkably in their capacity to innovate and to incorporate new technology. Such heterogeneity is also reflected in the ways that such enterprises may use and profit from the use of the intellectual property system.

2. Small and Medium-sized Enterprises and Intellectual Property

SMEs of varying sizes and levels of technology may benefit from different aspects of the intellectual property system according to their specific needs and competitive environment. While the most innovative SMEs may, as "technology developers," profit considerably from obtaining patent protection for their inventions, SMEs using leading technology available on the market may monitor the technological information available in patent documents to identify leading technology and negotiate licensing agreements with the patent holders. The large group of "technology followers," may find that they have a lot to gain from the use of other intellectual property rights such as trademarks, utility models and industrial designs as a means to differentiate their products and market their goods and services. In all cases, basic knowledge of the intellectual property system by SME owners and managers will allow them to decide which elements of the IP system to use according to the needs of their enterprise.

Available evidence on the use of the intellectual property system by small and medium-sized enterprises is largely limited to the use of the patent system. This empirical evidence paints a picture in which the propensity to apply for patents is highly related to the size of the company. For example, a recent Derwent study, surveying the use of the IP system by SMEs in the European Union, concludes that a minority of European SMEs file patent applications. According to the survey, the most widespread reasons for not patenting are that (1) patents are not considered relevant to the line of business of the company and (2) that the patent system is perceived as being too costly and complex.⁴ Similar conclusions were reached by the "European Community Innovation Survey" (1993) which indicated that there was a significant gap between SMEs and larger firms in their recognition of the importance of patents. A UK study revealed that small business owners placed most emphasis on informal methods of protection of their intellectual property (i.e. lead-time, relationships based on trust, limited information sharing, etc) rather than on formal registrable rights.⁵

If the literature on the use of the IP system by SMEs in Europe is scarce, it is even more so in other regions of the world, in particular developing countries. One of the key problems is the lack of disaggregated data on patent, trademark and industrial design applications by SMEs or by different types of SMEs. In general terms, both, the overall applications for the protection of industrial property rights and the percentage of applications by SMEs, are significantly lower in developing countries than in the OECD countries. This appears to be the case also with respect to the use of technological information contained in patent documents and the application/registration of other IP rights.

⁴ Derwent, *Dismantling the Barriers: a Pan-European Survey on the Use of Patents and Patent Information by Small and Medium-Sized Enterprises* (London, 2000).

⁵ J. Kitching and R. Blackburn "Intellectual Property Management in the Small and Medium Enterprises" in *Journal of Small Business and Enterprise Development*, Vol. 5, N.4, (London, 1999).

3. Intellectual Property for Business

One of the central questions that may arise from the above conclusions is whether SMEs should devote more attention to the IP system. In other words, why should SMEs take into account intellectual property and in what ways may they benefit from using the IP system? Any attempt to answer such questions must begin with an overview of what are intellectual property rights and how they fit in within the broader goals of an enterprise.

Some of the core concerns for any enterprise, large or small, are how to improve the quality or reduce the costs of production of its products or services as compared with those of others in its competitive arena. If it is able to do so, then a linked concern is how it should maintain the quality consistently and how it should market its products and services to consumers. To make such improvements, to reduce costs, to maintain quality consistently, and to communicate it effectively to the consumers in the market place, an enterprise invariably requires knowledge based on new and/or original ideas. Such useful knowledge has to be created either in-house by its own employees or it has to be obtained from others who may be willing to provide it, generally on payment of royalties or honorarium. One of the primary keys to successful management of such knowledge for business purposes is provided by the modern intellectual property system, which is based on intellectual property rights (IPRs).

The term IPRs refers to legal rights obtained in relation to such innovative or creative output of the human mind. These rights are generally limited to the national jurisdiction and boundaries of the country where they have been obtained. The protection of many of these rights depends on grant or registration, subject to fulfillment of the prescribed conditions under the relevant national IP law, which is administered by an office, set up by the national government. The main types of such intellectual property rights are: (1) patents and utility models, (2) trademarks, (3) industrial designs, (4) valuable undisclosed information or trade secrets, and (5) copyright and related or neighboring rights. Therefore, understanding the importance of the IP system and using it effectively, as an integral part of the business strategy of an SME, is a crucial necessity for success in the market place.

4. IP in Practice

To illustrate the point, let us look at a practical but generic example. A small manufacturing company has developed a new product, which is, in many ways, superior to competing products existing in the market. This product is characterized by a number of new functional features, has its own distinctive design, and is marketed under a new brand name. To advertise the new product, the company creates or uses its own web site, in addition to putting out a radio advertisement with a distinctive jingle. Such a company could protect the new functional features through a patent or a series of patents, the new design through industrial design registration, the associated technical drawings and its web site and radio advertisement through copyright, the associated knowledge through trade secrets, the brand name through trademark registration, etc. In other words, the small company has a great deal of IP, which could be protected and used through a combination of different types of IPRs. Should it do so? If so, what practical considerations should guide it in its decision-making? And which practical steps should it take?

4.1 The Role of Patents

There are a number of advantages that the small manufacturing company could draw from IP protection. Let us take the case of **patent** protection for the innovative features of the new product. Patent protection will give the small company exclusive rights to commercialize the product for the period of protection (usually, twenty years from the date of filing the application) giving it a strong market position and the possibility to recoup the money invested in the development and marketing of the innovative product. In addition, it will have the possibility of negotiating licensing agreements with other companies, particularly if it lacks the financial resources to market the product itself. Finally, patent protection will enhance the company's image and negotiating position vis-à-vis other companies, investors and, if applicable, its shareholders.

Undoubtedly not all SMEs will have patentable inventions. Nevertheless, the commonly held belief that patent protection is only relevant to large high-tech companies investing large sums of money in research and development is to a large extent a misperception. Patents, in fact, may be obtained in any area of technology, from the most sophisticated computer hardware to the simplest manufacturing tool, sports equipment or office stationary and there are many ways in which SMEs operating in low-tech sectors may benefit from patent protection. In cases where the product developed is not considered to be sufficiently inventive to merit a patent, some forty countries worldwide offer utility model protection (often also referred to as "petty patents" or "innovation patents") which applies mainly for adaptations to existing products or less significant innovations primarily in the manufacturing industries.

4.2 Using IP for Marketing Goods and Services

Having an innovative product with a good market potential protected by a patent or utility model is only half the challenge. Successful production, distribution and marketing are an equally large part of the success of any product. Intellectual property protection, in the form of trademark and industrial design protection, also plays an important role in supporting an SME's marketing strategy.

In order to differentiate its products or services from those of its competitors and to make them visually more appealing to the consumers, SMEs have to develop innovative designs, create an appropriate brand name (or trademark) or logo to be used in advertising the products so as to make their products more easily recognizable by consumers. If the same distinctive features were used by other enterprises, consumers would have difficulties in differentiating the products and this would lead to confusion and significant loss of revenue and goodwill for the SME. Trademarks and industrial designs, and the exclusive rights obtained through their protection, are therefore important to differentiate products and services, develop a loyal clientele, and avoid confusion in the market thus supporting a company's marketing strategy.

4.3 IP as a Key Business Asset

For any enterprise, the benefits that may be obtained from seeking IP protection and from monitoring and enforcing IP rights have to be balanced against the costs and efforts required. It is important to point out, however, that the opportunity costs of not patenting may be significant. It is therefore worth reiterating that every entrepreneur or manager of an SME who is to take a decision in this regard should be reasonably well-informed about the costs

and benefits of the IP system or should know whom to contact so that he is able to get the right advice or counseling in this matter. Ignoring the IP system altogether is in itself an IP strategy, and may eventually prove costly for the firm.

Probably the most important reason for devoting time and money to the intellectual property system is that IP protection turns innovative ideas, creative designs, and other intangible assets into valuable business assets that may contribute significantly to enhancing a company's overall position in the market. Most successful entrepreneurs would agree that a proper mixture of know-how, human resources, a loyal clientele, consistent quality of their products or services, capacity to innovate, specific features of their design that appeal to consumers and other similar issues are major contributors to their companies' success. Intellectual property rights capture most of these aspects and turn them into exclusive property rights. A recent PriceWaterhouseCoopers report states that "some three-quarters of the world's corporate market value resides today in intellectual resources." According to the report "that explains why companies are increasingly judged by their knowledge assets and their use of those assets to create value."⁶ Intellectual property rights are one of the most effective ways of creating value from such knowledge.

In a number of key technology areas, enterprises, big and small, have begun to appreciate that their IP assets are often even more valuable than their physical assets. This is particularly the case for highly innovative companies or companies which have over the years managed to build a positive image and reputation based on their trademark and the consistent quality of their products. But it is also a trend that may be noticed across the board as powerful software, innovative ideas, successful management strategies and know-how are increasingly replacing physical assets as the keys to the competitiveness of enterprises in all sectors.

If IP assets are valuable business assets, the protection of intellectual property may be considered an investment. Making the right investments is crucial for enhancing the market value of an SME. Investing in equipment, property, product development, marketing and research can strongly enhance a company's financial situation by expanding its asset base and increasing future productivity. Acquiring intellectual property may have a similar effect. Markets will value companies on the basis of their assets, their current business operations and expectations of future profits. Expectations for future profit may be considerably affected by the acquisition of key patents.

In addition, intellectual property assets may also help to strengthen the case for obtaining business finance from investors/lenders. The investor/lender, be it a bank, a financial institution, a venture capitalist, or a business angel, in undertaking an appraisal of the request for equity assistance or loan, will assess whether the new or innovative product or service offered by the SME is protected by a patent, a utility model, a trademark, an industrial design, or copyright or related rights. Such protection is often a good indicator of the potential of your SME for doing well in the marketplace.

IP ownership is thus important to convince investors/lenders of the market opportunities open to the enterprise for the commercialization of the product or service in question. On occasions, a single powerful patent may open doors to a number of financing opportunities. Similarly, a good trademark with a good reputation among consumers may also enhance a

⁶ PriceWaterhouseCoopers, *Six Forces Shape the Future of Business*, see www.pricewaterhouse.com/sixforces/PwC_html/Force3/force3_main.html October 8, 2001.

company's current value and may decisively contribute to making the company's products and services more attractive to consumers. Investment in developing a good IP portfolio is, therefore, much more than a defensive act against potential competitors. It is a way of increasing an SME's market value and improving future profitability.

5. Managing Intellectual Property Assets

Recognition that IP assets are business assets leads to the need to account for, manage and exploit such assets effectively. How does an SME manage its IP assets effectively? The question is clearly not an easy one and, as previously mentioned, will depend considerably on a number of internal and external factors. A first step by which an SME may acquire a better position to capitalize on the potential benefits of its IP assets and extract their full value is by conducting an IP audit. While most enterprises may conduct a preliminary IP audit internally, companies with significant intellectual assets and high innovative capacity would be advised to do this by consulting professional IP auditors. This entails identifying, monitoring, valuing the SME's IP assets so as to make sure that an appropriate IP strategy is developed.

A basic IP management strategy for an SME would include the following elements:

5.1. A Policy on IP Acquisition

A single product or service may be protected by various forms of IP rights covering different aspects of that product or service. SMEs must consider the best protection package and make sure that all the formal rights are acquired in due time. SMEs should also bear in mind that creating a comprehensive IP portfolio may be a considerable investment. This is particularly the case for patents. SMEs must therefore carefully assess the costs and benefits of patenting on a case by case basis and develop a strategy/policy on patent acquisitions which is appropriate given their budget and market opportunities. Legal advice for drafting patent applications is highly recommended.

5.2. A Policy on IP Exploitation

IP assets may be exploited in a variety of ways. These may include the commercialization of IP-protected products and services; the entering into licensing or franchising agreements; the sale of IP assets to other firms; the creation of joint ventures; the use of IP to obtain access to other companies' technology through cross-licensing agreements; and/or the use of IP to obtain business finance. Enterprises should decide in each case how they may best exploit their IP assets both domestically and internationally.

5.3. A Policy on IP Monitoring

Consulting patent and trademark databases regularly is important in order to find out about recent technical developments and new technologies, identify new licensing partners or suppliers, new market opportunities, monitor activities of competitors, identify possible infringers, and avoid infringing competitors' rights. Some companies rely heavily on patent information. Others may consult it occasionally when filing a patent application or when seeking to obtain a license to use a given technology.

5.4. A Policy on IP Enforcement

A policy on IP enforcement is crucial due to the losses that may be incurred by the existence of counterfeited goods in the market and the high costs involved in some IP disputes. SMEs would generally decide when to fight IP infringement on a case by case basis. Use of arbitration and mediation wherever possible is one way of avoiding litigation costs.

Developing and applying a thorough IP strategy is not an easy task and may require substantial human and material resources. This is particularly the case if it is envisaged to protect a number of intellectual property rights in several countries and to monitor them accurately. Different companies, however, have very different levels of technological capacity and their IP strategy will largely depend on the level of R&D activity within the firms, the sector they operate in, the size of the companies, the financial resources, the extent to which the firms operate in foreign markets, and many other such variables related to the market structure and the general management strategy of the firms. It is crucial that SME entrepreneurs are aware of ways in which they may use the IP system to enhance the competitiveness of their enterprises and include IP within their overall business strategy. In other words, the nature and extent of use of the IP system should be an informed decision, based on a proper understanding of the IP system, and not on vague perceptions and myths or fear of the unknown.

A more comprehensive analysis of some of the issues treated in this paper may be found in WIPO's SME web site at www.wipo.int/sme/

Some Useful Links and Readings

On IP Management:

- IP Australia http://www.ipaustralia.gov.au/strategies/X_home.htm
- Industry Canada: <http://strategis.ic.gc.ca/SSG/ed01716e.html>
- Price WaterhouseCoopers:
<http://www.pwcglobal.com/extweb/ncsurvres.nsf/DocID/873470F26FAAC7C8852568CE004F261D>
- PatentCafe <http://www.patentcafe.com/>

On Licensing and Technology Transfer:

- National Technology Transfer Center (NTTC) <http://www.nttc.edu>
- Technology New Zealand <http://www.technz.co.nz/business/license/praclic.htm>
- Intellectual Property Licensing Seminar of the University of Dayton School of Law
<http://www.udayton.edu/~lawtech/cle99iplic.htm>
- IPR-Helpdesk http://www.ipr-helpdesk.org/t_en/th_001_en.asp
- SurfIP Marketplace: <http://www.surfip.gov.sg>

On IP valuation:

- IP score: http://www.ipscore.dk/default_en.htm
- Japanese Patent Office: <http://www.jpo.go.jp/saikine/tt1302-072.htm>

Case studies on use of IP by SMEs:

- Case Studies on WIPO's SME Web site:
http://www.wipo.int/sme/en/index.html?wipo_content_frame=/sme/en/case_studies/index.htm

On patent information:

- WIPO's Intellectual Property Digital Library: <http://ipdl.wipo.int/en/links/>