

WIPO/IP/DAM/07/1a

ORIGINAL: English

DATE: April 2007



SYRIAN ARAB REPUBLIC



WORLD INTELLECTUAL
PROPERTY ORGANIZATION

WIPO INTER-REGIONAL SEMINAR ON THE ECONOMIC IMPORTANCE OF INDUSTRIAL PROPERTY

Organized by
the World Intellectual Property Organization (WIPO)

In cooperation with

The Ministry of Economy and Trade, Syria
The Federation of Syrian Chamber of Commerce

And

The Federation of Syrian Chamber of Industry

Damascus, May 15 to 17, 2007

□ FROM INTELLECTUAL PROPERTY TO BUSINESS ASSETS

*Prepared by Mr. Kari Sipilä, Director, Future Innovations,
Management Consulting in Innovations and Technology, Espoo, Finland*

□ The views and opinions expressed in this paper are those of the author and not necessarily those of the World Intellectual Property Organization (WIPO) or its Member States.

Innovative enterprises

Successful enterprises know why they should and how to invest in research and development which brings results. Although small and medium-sized companies often suffer from lack of resources, know-how and innovative environment, they also manage to produce inventions and patents. The result is evident in the form of new products, improved competitiveness and success. In a study conducted by Statistics Finland profitability in firms active in research and development was found to be on a clearly higher level than in non-R&D firms.

Innovations and success in an enterprise depend greatly on the ability to develop, acquire and apply new scientific knowledge and know-how. Research and development within the enterprise, along with the existing and developing expertise of its personnel, provide a basis for the propagation, development and exploitation of competitive inventions. Information and know-how turn into a strategic resource for the enterprise.

Also cooperation with universities brings added value to the work. Information and know-how turn into a strategic resource for the enterprise. Often new enterprises are established based on potential and interesting invention, which may become a successful invention.

In an innovative organisation, there should be

- ξ□ An innovation strategy and goals
- ξ□ Team work and networks
- ξ□ Creativity training
- ξ□ A positive and competitive atmosphere
- ξ□ Strength to allow mistakes and reward for achievements
- ξ□ Feedback and information systems.

Innovativeness and creativity are excellent qualities in people and businesses. However, an invention needs a home – in practice a business enterprise – where it will be developed. Corporate management skills often play a key role in the success of products. When evaluating the competitiveness and likelihood of success of a business, especially in a start-up or in SME-businesses, one focuses on factors such as:

- ξ□ Management, entrepreneurship and commitment.
- ξ□ Demand for products, market conditions, and potential for increased production.
- ξ□ Patents on innovative products, development resources, quality and significance of patents, and potential for increased production.
- ξ□ Well-rounded totality.
- ξ□ Finances and business operations.

Knowledge Is a Human Resource

In any organization, the innovations and their success depend greatly on the organization's ability to develop, acquire and apply new scientific knowledge and know-how. Mostly these depend on the human resources, their education, skills and activities. Research and development programs with possible cooperation activities, along with the existing and developing expertise of the personnel, provide a basis to reach research results and to make competitive inventions. Also information sources and know-how have turned into strategic assets for the organizations.

In recent years, financial indicators have begun to be complemented by the concepts of intellectual assets and intellectual capital, even personnel balance sheets. Intellectual capital is part of the organization's intangible assets.

In practise, the intellectual capital may include technical factors such as research results, patents and other IPR, publications, new research or product development or manufacturing technologies and methods, evaluation skills and testing. The commercial factors include the organization's name and possible trademarks, copyrights, as well as marketing strategies and advertising know-how. Other factors include management know-how, financing skills, information technology, databases, training, customer relations, cooperation, networks, quality assurance, and confidentiality and security procedures.

Intellectual Property Strategy and Policy

Technological and economic development worldwide leans heavily on new and competitive products. They can be classified on the basis of their significance at different levels of sophistication and in different sectors of the economy, from high-tech to everyday products. Some reach international success, while others are noted within their home region or country. Technology and inventions promote general welfare and also play an important role in the production of services.

In most industries, intellectual property rights, especially patents and their exploitation, hold key significance in the development and commercialization of new products. Businesses should have an intellectual property strategy as part of their corporate planning and strategy.

An intellectual property strategy defines the principles that intellectual property rights are designed to serve and how patent matters and other intellectual property matters are handled within the enterprise. The purpose of patent policy is to support the business operations of an enterprise. Neglecting patent matters may turn into a threat to development in an internationally expanding business.

The patent and other intellectual property policy of a business should be part of the organization's business strategy and it should include, among others

- ξ□ The types and role of different intellectual property rights in the organization
- ξ□ The specialists or the organization for IPR
- ξ□ The evaluation and decision making system concerning IPR in the organization

- ξ□ The attitude of management towards the inventions and to making and acquisition of inventions
- ξ□ The rewards for inventors from inventions
- ξ□ The instructions on how to secure and maintain adequate IPR protection in the organization
- ξ□ The patent protection and its follow up for each invention, compared to business and competitiveness, the portfolio management
- ξ□ The instructions on utilizing patent information
- ξ□ The corporate patents
- ξ□ The infringements
- ξ□ The licensing behavior (in and out or cross licensing)
- ξ□ Special activities for trademarks, copyright, etc.
- ξ□ The value of IPR in the organization
- ξ□ The publication policies.

Corporate patent policies may be divided, for example, into low and high profile policies, aggressive patent policies of businesses involved in international markets, and patent policies followed by businesses engaged in the commercial exploitation of intellectual property rights or transfer of technology.

The simple patent policy of diversified businesses can be classified as follows:

- ξ□ Get familiar to IPR and have an IPR specialist (in house or outside) in charge
- ξ□ Build a patent portfolio to commensurate with the scope of your operations and technological sophistication and exploit it in your business
- ξ□ Respect and avoid infringing on the patents and intellectual property rights of others
- ξ□ Enforce and protect your own intellectual property rights
- ξ□ Seek to enter into liberal cross-licensing arrangements and/or find an ally.

Even a modest patent policy including IPR management is vital also for smaller companies since their business is often based on only a few key products.

Some Current Trends in the Use of IPR

In the fields of IPR, the following principles or trends can be seen:

1. The role of IPR deepens as an important measure of the level of knowledge of a nation
2. Innovations and IPR are an important source of international business, both in buying and selling
3. IPR will be more and more important in the international trade
4. The importance of IPR is understood and used wider and wider in the world

5. Copyright, trademarks and patents continue as the most important forms of IPR
6. There are continuously changes in the legislation, also related to IPR
7. Geographically, cooperation increases and for instance in Europe, the Community patent for the whole European Union area comes slowly (now EPC, covers most European countries)
8. The fields of patenting become larger (business methods, software, biotechnology), but it is not very suitable to some fields
9. Patentable inventions are smaller and smaller details
10. Patenting is considered to be expensive especially for private persons, university researchers and SME companies but on the other hand side the share of patenting costs in success products is minimal
11. Most of the inventions and patent applications do not lead to products or business and expectations are usually higher than real success
12. There are too high expectations to get earnings even from most inventions
13. The respect increases towards IPR of others.

The Innovation Process

In a company there may be IPR and innovation specialists in the company or outside specialists can be used. Very often the SME companies do not have resources of their own and thus it is a good practice to use the best available outside specialists. Anyway, there should be somebody in the company, who is responsible of the IPR and innovation matters and who represents the company in these matters both inside and outside.

When somebody in the company invents something, there should be in the company somebody who is responsible of the IPR and innovation matters. The inventor makes a written invention document to the company and then the company or its outside specialist (innovation center, patent attorney, consultant etc.) evaluates the invention confidentially.

When developing the inventions from an idea to a marketable product for example the following phases and mean can be used:

- ξ□ Patent, technical and marketing information related to the invention is collected and then the invention is evaluated.
- ξ□ The results of the evaluation are reviewed.
- ξ□ The owner of the invention submits a patent application and pays the fees to the Patent Office possibly with the assistance of a patent attorney, and the appropriate international patenting is dealt with in good time.
- ξ□ A plan for implementing the project is drawn up.

- ξ□ Product development, further research or a prototype is produced for further evaluation, testing and for the commercialization.
- ξ□ The characteristics of the invention are tested (a check is made to see whether it meets, e.g., the quality and safety requirements set for the product) and new prototypes are made if necessary.
- ξ□ A business plan is drawn up with the focus on the commercialization of the invention (market surveys, marketing material etc.) as well as on human and financial resources
- ξ□ The invention can be manufactured and marketed either as the current or new company's own production or a license agreement on its commercialization can be concluded with a company in the sector.
- ξ□ The marketing and manufacturing of the innovative product starts by different means to companies or other customers often first domestically and later on internationally.

It is good to remember that the management of the company as well as the buyers are generally more interested in the competition situation and commercial possibilities or success than in the idea itself.

The Technology Push or the Market Pull

The inventions may come to commercially successful innovations either based on technology push – new products have been invented or by market pull – for instance the consumers have had a problem to solve or they have hoped to get a new solution. Both are valid approaches, but anyway there must be markets for the inventions to become good business. A large number of technology products come to the markets based on the development projects in the companies and many of them sell well. Starting from the markets for instance company Dow has used the following reverse innovation chain for their new fiber products: Listen – Identify – Choose – Develop – Commercialize. Then the products are tested already in the first phase at the markets.

Various Perspectives on the Value of Intellectual Property

The main objective with any invention after patenting is to develop it into a marketable product and an economic success. Computing the value of an invention, and the related patent, is very difficult, especially in advance of marketing, although there are several methods for the calculations or estimates. A patent alone only produces expenses, as does developing an invention into a marketable product. The value of an invention and the technical and commercial risks change greatly during the progress of product development and commercialization. This value frequently goes up, but only a fraction of inventions made in the world turn out to be breakthrough innovations. In many cases, the inventor's expectations for the success of his or her invention come crashing down if a patent is not granted, the product does not function as expected, costs get too high, the product does not sell, or a competitor enters the market with a better new product.

The value of intellectual property rights varies when viewed from different perspectives. These include:

- ξ□ The inventor's perspective (licensor)
- ξ□ The inventing enterprise's perspective (licensor)
- ξ□ Licensee's perspective
- ξ□ Social and perhaps global economic perspectives.

Some objectives related to the value of an invention or intellectual property rights and their exploitation are convergent, while others diverge. These objectives may be

- ξ□ Economic in nature, such as financial gain, growth, profitability, stability and other rewards
- ξ□ Social in nature, such as social esteem, prestige, power, respect, reputation, international expansion and social welfare.
- ξ□ For the society such as economic activity, entrepreneurship, employment, tax revenue, international competitiveness and general public welfare.

Evaluation of the commercial potential of an invention entails several parts and stages, such as:

- ξ□ Marketability, market potential and competitiveness.
- ξ□ Novelty, inventiveness, patentability.
- ξ□ Level of technology involved.
- ξ□ Manufacturing viability.
- ξ□ Operational issues.
- ξ□ Business potential and environment.

There are several approaches to make valuation calculations. The most common methods include

- ξ□ Cost approach, which is based on realised or comparing costs
- ξ□ Market approach, which is based on comparing similar technologies or products in the markets
- ξ□ Income approach, which is commonly used and which is based on future cash flow over time.

Additionally there are other methods. It is good to remember that valuation gives only estimates and that it is recommend to make several valuations with different methods and estimated base values.

IP Needs Active Management

The management of the organisation plays a central role in the development and utilisation of intellectual resources. Cooperation and customer contacts are also important sources of inspiration, product ideas and new approaches to research and business as well as for the management.

The intellectual property in the company must be managed well to get the best use for the competitiveness of the company. In small companies somebody must have the responsibility of IPR matters, in bigger companies there is an IPR specialist and in big companies there is an IPR director and department. Very often the SME companies do not have resources of their own and thus it is a good practice to use the best available outside specialists. When somebody in the company invents something, the inventor makes a written invention document to the company and then the company or its outside specialist (innovation center, patent attorney, consultant etc.) evaluates the invention confidentially. After that the patenting and invention's other development work may start – or the idea is not accepted.

The management for IPR matters means the practical work following the innovation and IPR strategy. It is more than just protecting the inventions, trademarks, designs, or copyright and negotiations with the inventors, consultants and authorities. It also involves a company's ability to commercialize such inventions, market its brands, license its know-how, conclude joint ventures and other contractual agreements involving IP, and effectively monitor and enforce its intellectual property rights.

An organization can view its know-how and quality through outside evaluations or through the eyes of a customer or an outside expert by identifying the key expertise in research and development and in the whole value-added chain where ideas are generated. Additionally, the management must also investigate where the need for development of know-how and training of personnel is the greatest.

The intellectual capital and as a part of them, the intellectual property rights, often form one important basis for the organization's development, quality, growth and international expansion. This applies to all intellectual property rights, but especially to patents and trademarks. A strong patent together with a good trademark play a central role in domestic and international business and trade based on them has grown strongly world-wide.

How to Start to be Active in the Innovation Process and its Management

If you or your company is already active in the field of inventions and in the use of IPR, you know what to do. If not, the following steps can be useful:

- ξ□ Get familiar to the possibilities for your business of using patents, trademarks and other forms of IPR (books, booklets, seminars, internet, experiences of others etc.)
- ξ□ Think by yourself or discuss in your company how the present products and their marketing could be improved and what kind of new ideas would be needed (how can we be competitive during the next years ?)
- ξ□ Arrange the organization of innovation and IPR matters in your company (first somebody to be responsible, later on an IPR specialist to the company). The IPR management in the company will activate the personnel to introduce new ideas, which add the competitiveness and possibilities for success in your company
- ξ□ Arrange information how new ideas and inventions inside your company will be encouraged, handled, evaluated and developed and how compensation is paid to

the inventors (make the rules and a budget – they are the first steps for the patent strategy)

- ξ□ Get familiar to the services of advisory organizations, authorities and financiers in the field of innovations (Patent office, patent attorneys, innovation centers, inventors' associations, universities and research institutes, financing and venture capital organisations or companies etc)
- ξ□ Discuss with confidential specialists
- ξ□ Be active and do not get disappointed with first problems or failures (there are more failures than success stories, but everybody is interested in and proud of success – that is also your goal !)

Commercialization, Licensing, Technology Transfer

In the marketing and commercialization of inventions the right to exploit an invention belongs to its owner. The most common exploitation alternatives include:

- ξ□ Production within current or new enterprise.
- ξ□ Licensing and other forms of technology transfer.
- ξ□ Partnership arrangements.
- ξ□ Acquisitions, trade agreements.
- ξ□ Combinations of above

The inventor may start a company to manufacture and market his or her invention. If the inventor-entrepreneur exploits the invention himself, the patent need not be as strong as when the invention is licensed to someone else. It is not always wise, however, to build a company around one product, and a good inventor will not always make a good entrepreneur. Networking, on the other hand, often produces good results by providing access to the best available innovation, financing, manufacturing and marketing expertise of individuals or smaller companies. Patents also have value as capital, which may be exchanged for equity in a newly formed company.

The industrial and commercial implementation of invention projects is promoted by the various methods of marketing and marketing communication. New products or inventions after a patent application are presented to entrepreneurs by means of direct marketing or at innovation or sector fairs and other business events, via the various media or printed lists of marketable inventions or Internet.

In the case of licensing, initial contacts should lead to negotiations. Thorough preparation before negotiations is essential. A lawyer is recommended in the contractual and legal matters as well as in license negotiations. The likelihood of success in these discussions can be increased by assembling the appropriate negotiating team, along with expert advisors, making sure that the negotiations are carried out at the proper organizational level, and that team members are well informed about the topic and know the backgrounds of their counterparts. A new and fast growing alternative distribution channel for marketing and selling finished products can be found in the Internet and electronic commerce.

Small and medium-sized technology enterprises usually have limited resources at their disposal and therefore focus on the essential that is production and marketing. Their corporate

and product development, therefore, should be based on the acquisition of product ideas, research information and know-how that is as ready as possible to be applied by the enterprise. For instance the technology transfer offices of the universities and research centers may be good contacts and cooperation partners for new products.

A written agreement must be made and it is usually reached when all parties benefit from the deal.

Beneficiaries from Innovation Activities

The importance of the use of IP can be seen everywhere in the world. The intellectual capital – human beings – with modern technologies bring continuously new products and methods, which are essential to the companies and their competitiveness. This is true to all sizes of companies: big, SME:s and small. Creativity, patents, copyright and trademarks are also behind their success. companies.

It is good to notice that different groups or parties can benefit from the innovation. These include the following:

1. A private inventor or researcher, if he starts a successful business or concludes a good license agreement. However, in many cases, the development costs of an invention are in reality higher than the revenues received.
2. An employee inventor in an enterprise or in a corporation gets usually a flat fee for a patented invention plus possibly a bonus for a successful innovation based on the sales of the product. In addition, he normally has his basic salary.
3. The corporation and its shareholders benefit from new innovative products based on the sales and also often benefit when the share prices of the corporation rise.
4. Other companies who co-operate with inventors or with the innovative corporation. These include, for instance, patent agents, lawyers, bookkeepers, companies in communications or transportation and other manufacturing companies which use the innovative product, and / or also wholesale and retail sellers.
5. Government and municipalities who receive tax revenues from inventors and innovative corporations and also receive fees, for instance, from patenting or customs.
6. Consumers, who receive direct or indirect profit or are otherwise happy with the new innovations, such as mobile phones or medicines.

Conclusions

Products stemming from inventions and related intellectual property rights have, despite their many development stages and difficulties, a great impact on businesses and their competitiveness, success, development, and also employment. Businesses must undertake new product idea generation, acquisition and development timely and with a long-term view, not only

after troubles start to mount up. Due to advanced communications services and extensive international cooperation, gathering and effectively utilizing information is more important now than ever before.

[End of document]