PROTECTION OF INDUSTRIAL APPLICATION RESULTS
BY PATENT INVENTIONS

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Abstract
The inventive activity of people should be protected for the authors to receive recognition, as well as material and financial rights. The patent is a unique title for protection of results with industrial application, giving to holder the possibility of valorization of his exclusive right of exploitation for entire period of validity. Also, a patent can block the exploitation of the invention to be performed without the consent of author.

Keywords: industrial property, intellectual property right, industrial property, intellectual property law, patent invention

1. INTRODUCTION
In the twenty-first century, creating and maintaining the competitive advantage of companies are mainly based on creativity, innovation and knowledge. Today, less importance is given to factors such as productivity, effectiveness and quality management, corresponding to their limited nature. Businesses, Regardless of their size and field of activity, the companies are forced to adapt quickly to complex changes and to implement and use new knowledge.

Knowledge-based economy is a guaranteed success that explains the existence of a new knowledge-oriented environment, characterized by the talent and motivation to create new ideas, to help the good ideas for making progress and to materialize them into concrete results, leading to the evolution of society.

Knowledge means an information packet obtained as a result of individual or collective human activity, regardless of field. Perhaps that is why the knowledge is the most wanted product in a society where the exchange of data and information occur at a breakneck speed. The intellectual capital of society must be well managed in terms of identifying, selecting and protecting intellectual values. Also, generation of new knowledge in order to identify competitive advantages, full access and dissemination of information for beneficial effect of society are the targets of this management.

The ability to create a sustainable future depends directly on how intellectual abilities are encouraged and developed. The society faced the challenge to preserve and protect what is known. Going beyond simple data collection and manipulation in order to obtain information, the knowledge management refers to the acquisition, creation and application or reuse of knowledge, thus giving the opportunity for society to learn and adapt to constantly changing environment.
The evolution of society in economic, social, cultural, spiritual fields is based on human activity, materialized in the works and property. It is certain that the developed countries are those where the work and creative spirit is valued, promoted and protected effectively.

2. INTELLECTUAL PROPERTY

Intellectual property is a form of legal title that allows to holder to control the use of certain intangible assets, such as ideas or expressions. In the acceptance of the World Intellectual Property Organization (WIPO), the intellectual property is regarded as an exhaustive list of rights related to ‘literary, artistic or scientific works, benefits of performing artists, phonograms and radio or TV transmissions, inventions from all human activities, scientific discoveries, industrial designs or models, trademarks, trade and services, indications and trade names, as well as other rights resulting from intellectual activity in industrial, scientific, literary or artistic domains’.

The intellectual property includes, on the one hand, industrial property and on the other hand, copyright and related rights (see Figure 1).

Figure 1. Scheme of the intellectual property system
After 1990, the Romanian State Office for Inventions and Trademarks in Bucharest has initiated a revision of the overall Romanian protection legislation in the industrial property field with a view to harmonizing it with the law of European legislation. In this context we can appreciate that protection of intellectual property rights is of great importance because its essence and purpose are to protect the product of human intelligence and, at the same time, to ensure consumers benefit from the use of this product.

Intellectual property law refers to the study of protection of intellectual creation, the authors of works and the results of this creative activity under the different forms that it presents itself. Thus, science, technology and innovation are fields that generate steady technological progress and economic competitiveness on a sustainable development perspective of any country. Also, innovation and technology transfer are solutions to economic problems and to continuously upgrade the technology needed in connecting research to the requirements of a free market in development.

The development in intellectual property law takes into account social and economic problems, particularly in connection with the transfer of technology, electronic commerce and information technology. Moreover, it must also take account of technological exchanges and new models of economic management, able to include intellectual property issues as part of economic cohesion between the major manufacturers and small or medium-sized companies, able to face with new challenges.

Intellectual property adapts now the exigencies of globalization. The specific regulations should be harmonized to ensure compliance, and promote free exchange of information and goods, taking into account that these legal rules have to correspond permanently to objective reality. Emerging information technologies accompanied by extremely wealthy luggage represent a challenge to the legal systems which require fundamental principles of intellectual property, protection of all the creations and knowledge of operating rules that must be implemented.

Among the technological development of a country and the protection of original knowledge, there is a direct relationship which manifests itself in both directions. At a level of a company that is nationally or internationally competitive, its competitiveness is expressed equally by the number of titles of protection granted. Thus, industrial property as a branch of intellectual property means that patents on inventions, trademarks, utility models, designs (industrial) are an assumption of a monopoly and ensure technical and professional competence which equals to the best competitor in the industry. Successful businesses are based on professional competence, financial skills and ability to sell and buy. In the modern management, the concepts of intellectual capital, intellectual property and industrial property were introduced. The multitude of information and knowledge, protected under the securities laws of protection can be granted, is a source of income and a means to increase competitive advantage.

In a competitive economy, the results of scientific research must necessarily be protected against potential adversaries on the specific market. Therefore, even their simple presentations at the events or publication as papers in scientific journals attract potential fraudulent activities to the detriment of their original results that may be completed in profitable products to persons other than the actual creators.

3. THE PATENT INVENTION

The patent invention is unique title of protection of results with industrial application, giving the possibility to holder to valorize the exclusive right of exploitation conferred by patent validity, thus blocking the operation of the invention without his consent.
In addition to this primary function, the patent inventions constituted as patent collections represent the richest source of information regarding the technical problems and solutions of interest, as well as the related economic issues.

Basically, the patent is a ‘contract’ between the applicant for patent and the State, made by means of the State Office for Inventions and Trademarks, Romania, which is the single authority in industrial property insurance; this Office delivers, after examination, the patent, i.e. the protection title.

Like any contract, the patent involves obligations on both sides:
- The State is obliged to patent registration and granting, under the conditions laid down by Law No. 64/1991, republished in 2007, and Implementing Regulations of this Act, approved by GD 547/2008, as well as the GO 41/1998 about the protection of industrial property fees and conditions for using their, amended by Law No. 381/2005. Together with the patent granting the State ensures the exclusive exploitation right on the validity period of invention patent (20 years);
- By the law, the State created to the holder a legal instrument by which he can defend the invention and the exclusive right of exploitation. The state can prevent for a third party the exploitation of the invention, creating the possibility of criminal sanction by legal action for those who violate this law, as long as the patent is in force.

In turn:
- The patent applicant is required to disclose the invention in the description, claims and drawings sufficiently clear and complete so that a person skilled in the field to carry out the invention (Article 18 of Law no. 64/1991, republished);
- The patent holder is obliged to publish the patent description so that people can know all the technical information contained herein. Moreover, the patent owner must be aware that patent rights can not be claimed until the patent publication, this publication providing the conditions by which good faith persons may avoid infringement of the invention.

From the above the two main functions of the patent resulted, namely first the protection and secondly the information. It is very important to know how to obtain a patent with real economic value and financial default to benefit its creator or owner. A basic requirement is up-to-date information, hence the knowledge of the state-of-the-art in the patent field. This can be avoided either creating of outdated inventions and therefore worthless or rediscovering the technical solutions already given, without novelty, therefore unpatentable. These circumstances lead to waste of funds.

An accurate update scientific information may be proper performed by consulting all specialized technical publications, of collections of national patents from Europe, USA, Japan, Korea, etc., virtually worldwide.

By holding information we can appreciate the technical level, economic and commercial value of invention and whether it can be patented; alternatively, we can made the option for other titles of protection: the utility model (also called ‘small patent’), design, mark, appellation of origin etc.

Knowledge of industrial property law and intellectual property is essential to establish a strategy both for a more exact knowledge of the prior art (ensuring by publication the widest possible access) and for an adequate protection for holder rights, which may lead to an exploitation right as wide possible.

Exploitation of an invention must have the aim for profit by selling the product, improving an existing product, improving of a technology, avoiding another patent granted or solving technical and financial problems.

Depending on the state-of-the-art knowledge and location of invention in a specific economic and commercial context, the patent owner may take measures taking account
of the territoriality of patent protection, and therefore the exclusive right of exploitation or protection. If the owner considers his invention appropriate for other countries, he benefits of ownership given up by the regular national filing. The choice of countries where appropriate certification is considered must take into account the interests of export and licensing sales through market intelligence, so that the market should be extended to other States, where the right of monopoly is ensured. The titles of protection granted (in all their forms) protect the holders against unfair competition from those who have not taken financial risks. The protection system also provides the most efficient frame for collection, classification and dissemination of the richest source of information currently existing in technology. Along with research and development as the main source of knowledge, the technology transfer intensity defines the degree of development of a country. Within the outward transfer of technology, the rights to use protected knowledge are offered on a contractual basis to third parties. Industrially developed countries are, on the other hand, the most important exporters of technology because of their technological advance. Also, the acquisition of technology by outward transfer can have beneficial consequences in many situations, especially when it comes to recovery in the short term a significant technological gap, in a given field or industry segment.

4. THE INTERNATIONAL PATENT CLASSIFICATION (IPC)
The amount of information contained in patent documents is immense. They contain practically everything that represents an advance in the knowledge of mankind in the field of technology. It is therefore extremely important for this information to be accessible to anyone who needs it. Such accessibility exists in theory because the patent documents are published, that is, are made available to any member of the public. However, in practice, the accessibility presents great difficulties because of the enormous number of published patent documents, and because, as already mentioned, these documents deal with all aspects of technology. The International Patent Classification (IPC) avoids these disadvantages being a system that is divided into the following subdivisions: 8 sections, 21 subsections, 120 classes, 628 subclasses and almost 69,000 groups (of which approximately 10% are "main groups," and the rest "subgroups"). Each of section has a title and a symbol. The title consists in one or more words, and the symbol consists in a capital letter of the Roman alphabet. They are presented in figure 2.

**INTERNATIONAL CLASSIFICATION SYSTEM**

A. HUMAN NECESSITIES  
B. PERFORMING OPERATIONS; TRANSPORTING  
C. CHEMISTRY; METALLURGY  
D. TEXTILES; PAPER  
E. FIXED CONSTRUCTIONS  
F. MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING  
G. PHYSICS  
H. ELECTRICITY

**Figure 2. International classification system**
Conclusions

The patent invention is unique title of protection of results with industrial application, giving the possibility to holder to valorize the exclusive right of exploitation conferred by patent validity, thus blocking the operation of the invention without his consent. Patent systems are devised to encourage innovation. While each country has its own patent system, the same basic principles are applied throughout the world.

Industrial property, as a branch of intellectual property, means that patents on inventions, trademarks, utility models, designs (industrial) are an assumption of a monopoly and ensure technical and professional competence of a company which equals to the best competitor in the industry.

A patent is a state monopoly, lasting for a period of, generally, up to 20 years, which is granted to an inventor in the exchange for a full disclosure of the invention in writing. Inventions are made in all fields of science and technology; the three main fields are the chemical, electrical and mechanical fields.

The International Patent Classification (IPC) is a system, which allows patent documents relating to any particular area of technology to be identified and retrieved.

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