

Chimia 54 (2000) 278–280
© Neue Schweizerische Chemische Gesellschaft
ISSN 0009–4293

The Swiss Federal Institute of Intellectual Property



André J. Escher* and Thomas P. Stauffer

Abstract: The Swiss Federal Institute of Intellectual Property is the granting authority for all intellectual property rights in Switzerland. These include national patents, trademarks and designs. Apart from these official duties, it offers a broad spectrum of services, like assistance for patent applicants, training courses about intellectual property as well as a series of patent and technical information services. By these means the Institute supports the protection of the research results as well as the progress of the Swiss industry and science.

Keywords: IGE · Intellectual property · Knowledge management · Patents · Trademarks

The Institute (IGE)

The Swiss Federal Institute of Intellectual Property was founded as the National Patent Office of Switzerland in 1888, in the same year that the Swiss patent law was enacted. The idea of protecting an invention actually dates back as far as 1421, when a Florentine architect was granted a three-year monopoly for the manufacture of a specially equipped barge. From Italy the intention of protecting new achievements spread to other European countries. With the start of industrialisation towards the end of the 19th century most countries had their own patent laws. Already in 1883 the first important treaty for intellectual property harmonisation was founded: the Paris Convention for the Protection of Industrial Property.

In the early days patent applications comprised mainly mechanical inventions. Typically for that time (and for Switzerland), the first Swiss patent, granted 1888 to Mr. Paul Perret of La Chaux-de-Fonds, was in the field of watchmaking. As technology evolved, the inventions became more complex and patents were filed in all areas of modern

industry like engineering, computing or chemistry, but in Switzerland the product protection of chemicals came into effect only in 1978.

Over the years far more than half a million national patents (690 000) were granted in Switzerland. Today a total of approximately 90 000 patents are in force for Switzerland. However, the greater part of them (75 000) were granted by the European Patent Office in Munich. This was made possible by signing the European Patent Convention (EPC) in 1973. Another important treaty is the PCT (Patent Cooperation Treaty), under which worldwide patent applications can be filed. The PCT has been ratified by more than one hundred countries and is administered by the WIPO, the World Intellectual Property Organization based in Geneva. The various types of patent granting procedures are discussed further below.

The Federal Patent Office was the first governmental authority in Switzerland that became financially and structurally autonomous within the federal administration and is considered as the pioneer of New Public Management of the Swiss government. It received its present status of an 'Institute' as an autonomous organisation incorporated under public law on January 1, 1996. As a legal entity in its own right, the Institute is financially and operatively autonomous, and is registered in Switzerland's Commercial Register. Usually it is called simply *IGE* which stands for Institut für Geistiges Ei-

gentum (or *IPI* for Institut de la Propriété Intellectuelle)

The IGE has two main tasks. First, the Institute represents the Swiss government in all matters relating to Intellectual Property (IP): This includes (after the examination of the application) the granting of all IP rights (*i.e.* patents, trademarks, designs and the protection of microchips) and the supervision of the so-called collecting societies for copyrights. Additionally, the Institute carries out the preparatory work preceding legislation and represents Switzerland at international conferences and organisations in particular regarding the above-mentioned EPC and WIPO.

The second main activity is IP information. The information services comprise all questions about intellectual property, *e.g.* the assistance for patent applicants concerning the filing procedure of a patent. Another part of IP information are the database searches. Typical examples are investigations about the current state of the art in a specific field or the information about the legal status of a patent. These services are part of the IGE's technology and patent information service (TEPAT).

Intellectual Property Rights

Various types of IP rights are used depending on what has to be protected:

A *trademark* protects the designation of a product or a service. This designation

*Correspondence: Dr. A.J. Escher
Institut für Geistiges Eigentum IGE
Einsteinstrasse 2
CH-3003 Bern
Tel.: +41 31 324 47 52
Fax: +41 31 350 06 51
E-Mail: andre.escher@ipi.ch

can be two-dimensional (a word, a picture or a combination thereof) or three-dimensional. The protection term of a trademark is ten years, but the term can always be extended by another ten years. For the chemical industry, too, trademarks are important: The name of most chemical products like drugs (*e.g.* aspirin) or pesticides (*e.g.* round-up) are protected by a trademark.

Also the outward appearance of an object can be protected. This IP right is called *design*. The initial five year protection period can be renewed twice. Similar to a trademark, a design can be two- or three-dimensional. Although of lesser importance than trademarks, there are some chemistry-related items for which a design protection is used: the pattern on textiles (*e.g.* clothes) or the shape of a packaging container (*e.g.* for cosmetics) are typical examples.

The creations in the field of literature and art fall under the *copyright*. In contrast to trademarks and designs, there are no formalities for copyright protection. This protection begins by the mere creation of the work and ends 70 years after the creator's death. The IGE supervises the collecting societies. They are in charge of the administration of the author's rights, namely in the field of music, cinematographic and literary works. Computer programs are also protected by copyright, but this protection expires 50 years after the creator's death.

The most important IP rights for a scientist are *patents*. Therefore it is worth to look at them in more detail.

Patents

What is a patent? A patent is granted for a technical invention. It provides the patent owner with the exclusive right to use his invention within a specific territory (*i.e.* country) during the validity of the patent. A patent is in force as long as the annual fees are paid. If not, the patent lapses and the claimed invention can be used by everybody. The maximum protection period for a patent is 20 years. For the active compound of drugs and pesticides, an additional protection term of up to five years can be obtained by a supplementary protection certificate (SPC).

It is important to note that the invention is only protected in those countries where a corresponding patent is granted. In all other countries the invention may be used without infringement. In general, products (*i.e.* devices, chemical substances), processes (*i.e.* preparation) or use of products can be patented, if the three major requirements are fulfilled: They have

to be novel, inventive and industrially applicable. 'Novel' means that an invention must not form part of the state of the art. The state of the art comprises everything made available to the public in any way, in particular by a written or oral description. An invention is considered as inventive if, having regard of the state of the art, it is not obvious to a person skilled in the art. As an exception, methods for treatment of the human or animal body by surgery, therapy or by diagnostic methods are excluded from patentability.

Granting Authorities of Patents

The Swiss Federal Institute of Intellectual Property is in charge of the examination and granting of the national Swiss patents. Such patents are valid for Switzerland and Liechtenstein. Apart from the national patent offices, the European Patent Office (EPO) in Munich also examines patent applications. After being granted by the EPO, these patents are equivalent to national patents in those countries which are (like Switzerland) members of the EPC and which are designated by the applicant. The administration of these so-called European Patents (for example collecting the annual fees) falls under the responsibility of each national patent authority, *i.e.* of the IGE for Switzerland. As a consequence of the globalisation of the markets, an increasing number of patents with validity in Switzerland are granted by the EPO.

A third way to get a patent is by the so-called PCT route: Under the PCT, a single application can be filed in order to obtain patents in a large number of countries on every continent. It is important to know, however, that there are no 'world patents' since the WIPO is not a granting authority. The PCT applications are examined and granted by the individual national patent authorities (*e.g.* the IGE) or by regional patent organisations (*e.g.* the EPO).

Services of the IGE

Assistance for Inventors and Applicants

The foregoing sections show that Intellectual Property and in particular the world of patents are quite complicated. The IGE offers its support to anyone associated with intellectual property. With regard to patents, these may be private persons who made an invention, scientists in industry or at university. But also lawyers, managers or consultants occasionally have questions about patents.

These questions could be about the filing procedure of a trademark, a design or a patent or about the patent literature: There are different possibilities to get our help. Visitors are welcome in our Infocenter at the Einsteinstrasse 2 in Bern. IP experts are at their disposal between 8 and 5 o'clock every day. Of course we also give information by phone (+41 31 325 25 25) or e-mail (info@ipi.ch). A number of information brochures about various aspects of IP as well as free patent copies as examples can be ordered from the Institute. Another Infocenter in Zürich is open on Monday, Wednesday and Friday (+41 1 632 65 97). For formulating the claims of a patent or for a patent application in other countries it is highly recommended to seek the help of a patent attorney. Normally patent attorneys have a technical education and therefore they understand the scientist's language.

Training on Intellectual Property

The IGE offers a variety of training courses and workshops especially designed for universities, technical schools or companies. These courses have the goal to deliver the basics about Intellectual Property and to increase the patent awareness. The Institute also offers in-house courses and workshops. The courses cover, for example, the retrieval of free patent information from the Internet, while the interactive workshops are designed to show to the participants all aspects of Intellectual Property. The courses as well as the workshops are customised to fit the specific needs of the participants.

The Significance of Patent Literature

The importance of the patent literature is very often underrated. Usually IP is not included in the education of young scientists and also in small and medium size enterprises the patent awareness is rather poor. Nearly 30% of patent applications describe inventions in a chemical field like organic compounds for pharmaceutical or agrochemical uses, polymers, cosmetics, dyestuffs, new materials or a biotechnical invention.

Today more than 30 million published patent documents exist worldwide, and this number is increasing every year by more than half a million publications. This number shows that the patent literature comprises a tremendous treasure of scientific knowledge. It is interesting to know that about 80% of new research results are published in the patent literature

The Technology and Patent Information of the Swiss Federal Institute of Intellectual Property

The IGE's technology and patent information services offer a broad range of different types of searches. We can supply you with up-to-date information, focused precisely on the needs of your company and your projects.

Patents and patent applications contain not only technical but also bibliographic and legal information. Our experts can tell you very quickly whether, for a given application, priority or publication number, a patent application has been published or a patent granted. These **legal status searches** help you to find out where you stand.

Are there any internationally published patents or patent applications corresponding to a given national application, priority or publication number? What can you do if a patent document is drafted in a language you do not understand? With our **patent family searches** we may identify parallel applications for more than 60 countries worldwide, including all the major industrialised countries.

Do you want to be ahead of the competition? Based on the name of an applicant, patent holder or inventor, the **name searches** allow you to trace the technological activities of one or more competitors. This information discloses market niches. It also helps you identify the areas in which cooperative agreements could be fruitful.

Our **subject searches** identify the current level of technical development in your special field. We will supply you with the patent information that tells you how the specific questions have been answered and the related problems solved. Subject searches also help you assess the risk of infringing on a third-party patent.

Technology searches reveal the state of the art in its full scientific/technical scope, because - unlike subject searches - they yield not only patent documents but also the scientific/technical and business literature. This is especially valuable when you need to assess the novelty of an invention. However, you can also use technology searches if you want to know whether a competitor's invention was truly new at the time of filing.

Changes are continuous and happening faster than ever before! To recognise changes early and react quickly, you need a reliable monitoring system which helps you identify developments in technology. Our **technology monitoring** service, also known as 'competitive intelligence', does precisely that. With the help of our continuous monitoring of technological changes, you can update your knowledge at regular intervals.

first. A significant part of these results never get published in a scientific article. That is to say, if you want to apply for a patent or if you want to know the state of the art in your specific field of research, knowing the scientific literature is not enough. An increasing quantity of patent literature can be found on the Internet (see separate article in this journal). A more reliable way is a search in a commercial database by a professional information specialist.

The Technology and Patent Information (TEPAT)

It has been mentioned earlier that the novelty of an invention is a condition for its patentability. But how can an inventor be sure that his invention has not already been described elsewhere? How can he get an overview of the state of the art? Or, on the other hand, how can somebody be sure not to infringe a patent by commercialising his product? Although a lot of information can be found on the Web, this might not be sufficient in many cases. Very often the knowledge of a patent and information specialist is necessary. The Institute has created TEPAT, a service which offers a wide range of investigations in online databases. These searches may be directed to the legal status of a patent or may concern a specific

scientific subject. The TEPAT team consists of experienced patent experts, including specialists in chemistry, biotechnology and pharmacy.

As a result of our investigation, we supply our customer with the references found and, in most cases, with an overview of the results. The database services are not based solely on the patent literature. Whenever advisable, we extend the search to the scientific literature.

It is often not easy to draw the right conclusions from these results. If desired we capture the results of the search in a written report and give our view concerning the patentability of an invention or future steps of a project. By using statistical tools, we can show the technical trend or perform an analysis about the competitors in a specific area.

The importance of a professional literature search can be demonstrated by the following example: A research group is working on the question how to prevent osteoporosis in elderly people. They identified a possible drug target, the molecule Cathepsin K. Inhibiting this molecule will lead to a reduced resorption of osteocytes which is said to be the major cause for osteoporosis. First, the researcher searched in the 'Medline' database and found seven references. In none of these articles was their inhibitor drug

described. An additional search with one of the Institute's information specialist uncovered ten patents and 20 articles or conference reports which were not known by the researcher. Six of the patents were not related to any article in the scientific literature. Luckily none of these additional patents or articles described their new inhibitor drug. They were able to use the search result later to convince a potential investor that their invention was truly new.

Received: March 7, 2000