

Patent Information

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INTRODUCTION

There is an important information resource that is freely available, the patent information, which is easily accessible across different digital platforms based on the Internet, enabling a stimulus to creativity that can motivate new innovations (Maravilhas, 2009; Maravilhas & Borges, 2009).

Repositories of patent information, in the form of databases and digital libraries, are a major source of scientific and technical information¹. There are about 70 million published patent documents worldwide, most of them containing information not available anywhere else (Albrecht et al., 2010; Bregonje, 2005; Greif, 1987; Marcovitch, 1983). Even the information that can also be found in other documents, such as scientific papers, technical reports, conference proceedings, and dissertations, it is not described with the same degree of detail and they take longer to reach the public.

In addition, approximately 2.2 million new documents are created every year (Mueller & Nyfeler, 2011, p. 384) and their publication allows public consultation even before protection is granted.

Over 30% of patents are in the public domain (they have reached the time limit for protection, or for non-payment of annual fees), or are not being exploited due to lack of funding or technical incapacity of the holder (Godinho, 2003; Idris, 2003; Maia, 1996). Some examples of its use to stimulate creativity and improve innovation will be given, allowing organizations that use it wisely to obtain competitive advantages.

BACKGROUND

Regarding the technical information contained in patent documents, through their consultation, researchers, scientists or entrepreneurs, can withdraw precious ideas about the state of the art in any field of science and technology (Maravilhas & Borges, 2011a, 2011b).

For Idris (2003), the main reason for patent information analysis is related to the updated information contained in patent documents that can help avoid erroneous investments concerning the possibility of duplicating research work already done by others.

The insufficient use of patent information has caused a significant waste of funds invested in R&D programs whose existence is threatened by the return on investment of patented technologies. According to estimates, European industry wastes between 20 to 32 billion Euros annually (Brünger-Weilandt et al., 2011; Ribeiro, 2007), primarily motivated by the lack of patent information, resulting in a duplication with the reinvention of existing inventions, and redeveloping products already available on the market that could easily have been identified if patent information was consulted.

In certain circumstances, it is possible to use patent information to develop new products and processes, as long as the resulting new invention does not infringe the patents that already exist. This is a perfectly legitimate and one of the most important justifications for the existence of the patent system (Idris, 2003, p. 88).

The advantage of consulting the technical information is that it encourages creativity and innovation by turning inventions into innovations (Maravilhas, 2009). Either by using patented technologies that are not being exploited²; by finding ways to integrate these inventions in the business plan of a company for further development; encouraging the creation of companies to exploit these inventions; identifying technologies and finding those who want to produce them; or selling ready-made solutions or compounds to be included in finished products (Maravilhas & Borges, 2009).

PATENT INFORMATION

Patent information is not the only source of information that can stimulate innovation but it is one of the most important. This is mainly due to its detail, depth,

timeliness and coverage, constituents (description, schematics, drawings, charts), analysis of the state of the art, external inputs of experts that complement and enrich the document (patent examiners and their research reports), among others.

This source of information covers all technical and scientific activities of human knowledge and is encoded to allow its easy recovery and utilization. It nurtures insights not only from the scientific area in which we are researching, but also of complementary areas that can increase the value of the solution developed. It can also be used for other applications not initially considered and solve other problems from intermediate crossover areas between scientific disciplines.

It also improves the time necessary to introduce new products to markets, lowers costs associated with R&D and monetize the installed capacity in some industries or scientific activities (Maravilhas, 2009).

Searching this information will allow the finding of certain inventions for free exploration, without the obligation to pay any license if the patent is in the public domain and free to use. Such is the case of generic drugs which are the free use of active substances that have reached their limit of protection and are free to be explored, what has been done successfully by several national and international companies.

Origin and Sources

To obtain patent protection, the applicant must formalize an application with the Patent and Trademark Office (PTO) of his country or other supranational office such as the European Patent Office (EPO) or the World Intellectual Property Organization (WIPO). It is also necessary to reveal a full description of the details of the invention, together with a series of claims that are the core of the invention itself and the matter to which legal protection is required (Ulrich & Eppinger, 2012).

During the process of registration and grant of a patent, the official entities like the United States Patent and Trademark Office (USPTO), EPO or WIPO (if protection via Patent Cooperation Treaty – PCT - is required), will generate one or more legal documents that are called patent literature. These documents contain information that is referred to as patent information.

After the publication of the patent application, typically 12 to 18 months after it has been entered in the

respective office, this information becomes publicly available to those who wish to consult it.

In exchange for the protection by a patent granted for your invention for 20 years, the information concerning the invention will be in the public domain and these inventions may be made by third parties for research purposes. The purpose of this disclosure is intended to catalyze inventive activity, making possible the advancement of technology that would otherwise still be kept secret.

One of the conditions allowing a patent to be assigned is that the information in the patent application is so detailed that a person skilled in the art, the area in question, is capable of running her own invention (product or process) being able to duplicate it. The patent document not only describes the invention necessarily capable of industrial application, but also the scope of protection intended, if the respective patent is obtained.

State-of-the-Art in Science and Technology

Much of the information contained in patent documents is not published anywhere else, making it a source of information essential to meet the needs for new technical information (Bregonje, 2005; Greif, 1987; Marcovitch, 1983).

Patent literature is the major source of technological information available worldwide, thus constituting the largest repository of technical knowledge possessing a huge monetary value.

The revelation of the secrets contained in the technical documentation resulting from a patent application discloses valuable information to the public about the state of the art in a given area, thus promoting, through this knowledge, technological development (Maravilhas & Borges, 2009).

Every time a research program is initiated it is advisable to research all the scientific and technological work already done in the area (Naetebusch, Schoeppel, & Fichtner, 1994; Schoeppel & Naetebusch, 1995). Moreover, it is always worth to go back some years in the search to get to know many of the ideas contained in patent documents whose legal validity has expired. They could contain valuable inventions or technical information which, at the time they were made, were quite ahead of their time and, therefore, had no



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