

## Chapter 6

# Patent Information Quality to Stimulate Innovations

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### ABSTRACT

*Information, a tool to reduce uncertainty and develop knowledge in organizations, is an important aid in the decision-making process. There are several characteristics that describe the quality of information that will allow the analysis of its value. Quality information warrants us best results when competing with other organizations. Its value is related to the results that it will allow us to obtain, and it depends on the context. Patent information must be of high quality to permit the search and retrieval of the documents needed to solve a problem or stimulate new ideas and solutions. Old inventions can generate new ideas; technologies for one application can be introduced for a new domain and can be applied in ecologically sustainable solutions. The current high number of patent applications reduces the quality of patent information due to the time needed to filter and search for all the prior art available. Some standards, together with machine translation, have been set up to avoid this situation and improve the quality of the patent information retrieved by the interested public. A comprehensive survey of the relevant literature available made us aware that commercial databases supply some value-added information to help the researchers and improve the efficiency of the search queries. Some of these features could be applied by the national and international intellectual property offices.*

### INTRODUCTION

We are experiencing some important changes in our era, and the truth is that information plays an important role in it. Information has become the basis of the production system instead of the materials produced in factories and this has changed our way of life at all levels. We witnessed the beginning

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of the production of information and knowledge in massive proportions with financial and economic interests (Drucker, 2000).

Some authors (Brown & Duguid, 2000; Castells, 2000; 2004; Webster, 2000) often talk about the knowledge and information based transformation of the world economy we are living in, with flux and flows of information gaining advantage to the exchange of goods (Godeluck, 2000).

Information, as a tool to reduce uncertainty and to develop knowledge in organizations (Best, 1996b; Kahaner, 1997; Porter & Millar, 1985) is an important aid in the decision-making process and must be of quality to improve its value (Best, 1996b; Beuren, 1998; Choo, 2003; Davenport, Marchand, & Dickson, 2004; Marchand & Horton Jr., 1986; Tapscott, 1999; Wilson, 1985; Wilson, 1987).

There are several characteristics that describe the quality of information that will allow the analysis of the value of the information used.

Quality information warrants us better results when competing with other organizations (Brophy & Coulling, 1996; Redman, 1996; Wormell, 1990) enabling the chance to get a competitive advantage.

Its value is related to the results that it will allow to obtain and it depends on the context (Best, 1996b; Davenport, 1997; Marchand & Horton Jr., 1986; Orna, 1999; Penzias, 1989; Tapscott, 1995).

Patent information, contained in patent documents, must be of high quality to permit the search and retrieval of the documents needed to solve a problem or stimulate new ideas and solutions (Albrecht, Bosma, van Dinter, Ernst, van Ginkel, & Versloot-Spoelstra, 2010; Brünger-Weilandt, Geiß, Herlan, & Stuike-Prill, 2011; Chakroun, 2012; Mueller & Nyfeler, 2011; Philipp, 2005; 2006; Scott, 2010).

Old inventions can generate new ideas (Adair, 2011; Jolly, 2003; Michalko, 1991; Petroski, 2008), inventions never marketed can become real products and satisfy needs and desires (Maia, 1996), inventions for one application can be introduced in a new domain (Buchanan, 2008; Ernst, 2003; Haberman, 2001; Koch, 1991) and technologies can be applied in ecological sustainable solutions to develop 'green' products (Dresner, 2008; Esty & Winston, 2008; Krupp & Horn, 2009).

Patent offices are acting to improve the quality of the patent applications and the patent information retrieved by the search queries performed by examiners, attorneys, inventors, scientists and entrepreneurs will have higher value-added.

Patent information value will be evaluated by the level of acceptance of those innovations by the customers in a given market where they are introduced (Kotler, Armstrong, Saunders, & Wong, 1999; Mohr, Sengupta, & Slater, 2010; Rogers, 1995; Trott, 2008; Utterback, 1994).

## **INFORMATION QUALITY**

Quality is a difficult concept to define because what is quality for one person may be different for another. Wagner reminds us that, *the term 'quality of information' is scarce in the literature* (1990, p. 69).

As Ginman puts it there is no *generally accepted definition of quality information*. (...) Both

*quality and information are in themselves difficult concepts to grasp and to evaluate, and the whole process is further coloured by the subjective views of the person making the evaluation* (1990, p. 18).

Therefore, several different definitions of quality arise, *however, they all accept the notion that quality is defined by the customer* (Cortada, 1996, p. 6) and Redman suggests the need to *understand what customers want in their terms* (1996, p. 141). Other authors state that *quality is achieved when customer*

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