Intellectual Property and Patenting Software Period 2012 - 2017

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ABSTRACT
Patenting software is a discussion not addressed in scientific academy regarding its context: aligning registers as copyright or as a patent, provoking standardisation and better understandings for improving production chains in economic sectors. This article analyses how patenting software is discussed in a scientific academy, reviewing article profiles in academic productions about this theme. Considering patenting software is an intellectual property, the article restricted the research to only software rights. The systematic literature review methodology was adapted from other authors’ analysis process in the information technology areas. The results were shown via quantitative and qualitative study, analysing economic sectors innovation issues, regarding patenting software were discussed.

KEYWORDS
Information and Communication Technology, Information Technology, Intellectual Property, Patenting Software, WIPO

INTRODUCTION
Computer technology is vital for modern society and the software makes the hardware operates, although all the innovation applied to minimize the machine used size. In this regard, software and hardware work in tandem and their intellectual property protection is demanded considering transformation technologies undergone by software industry and strategic businesses (WIPO, 2008; Miyamoto, 2017). Innovation improves country’s production chain competitiveness at the national and transnational level; whose products and services in a country are exposed to the world for overcoming barriers to competitiveness (Silva et al., 2017).

Intellectual property rights protect the financial interests and intellectual objects creators’ reputation like inventions (Varelius, 2014). However a software intellectual property protection

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has been highly debated e.g. in the European Union (EU), a draft Directive on the Patentability of Computer-implemented Inventions has been discussed in order to harmonize the national patentability requirements interpretation for computer software-related inventions, including the business methods carried out via the computer: these discussions show divergent views among stakeholders in Europe; furthermore, internet raises complex issues regarding the enforcement of patents, as patent protection is provided on a country-by-country basis, and the patent law of each country only takes effect within its own borders (Miyamoto, 2017). Software has become a critical parameter as regards to innovation, in all technologies fields (Tyagi et al., 2013). The pro-commercialisation partner’s support is the key on steering researchers towards patenting (Lawson, 2013). Regarding increasing in government and industry funding for academic research; that is the reason why for academic patents have been developed (Sohn & Han, 2019).

Analogously, there is a social sustainability concerning intellectual property: both patenting and copyright law culminate in software piracy for using such innovations considering high prices unfeasible for the poorest layers of society achieving such original products. Therefore, licenses are not effective in protecting patenting software where there is difficulty for detecting infringers (Elsom, 1983), whose paradox sustaining a loss between achieving the hardware product with an innovative design and cognitive ergonomics and achieving the software and its license: poorest society layers might try to buy the hardware sophisticated but the software licenses probably not; questioning the law accuracy about patent and copyright.

The revenue damage in middle term provokes a controversy disadvantage in patent protection questioning the legalisation for protecting software in general. It is true that academic patenting and licensing can generate benefits; but these benefits are not always likely to be achieved; attention should be given to paradoxical effects and consequences (Sterckx, 2011).

WIPO (2008) understands intellectual property as legal rights which result from intellectual activity in the industrial, scientific, literary and artistic fields, whose countries have laws to protect intellectual property for statutory expression to creators’ moral and economic rights in their creations and the rights of the public in access to those creations; otherwise intellectual property also is a way to promote, as a deliberate act of government policy, creativity and the dissemination and application of its results and to encourage fair trading which would contribute to economic and social development, generating revenues for the country with sales and taxes.

Considering patenting software in the intellectual property scenario, how was the academic production evolution in Intellectual Property and Patenting Software period 2012 - 2017? What are the main areas involved in software protection?

This paper is structured at five sections: introduction where is contextualized the theme and introduced the research objectives. Second section does a bibliographic review about patenting software. Third section presents methodological procedures research, followed by fourth section where results are analysed and finally there are the final discussions.

THEORETICAL FRAMEWORK

The World Intellectual Property Organization (WIPO) is a United Nations (UN) organizations system specialized agencies. The “Convention Establishing the World Intellectual Property Organization” was signed at Stockholm in 1967 and entered into force in 1970. However, WIPO’s origins go back to 1883 and 1886, with Paris Convention and the Berne Convention’s adoption, respectively: both conventions provided for the international secretariats establishment, and both were placed under the Swiss Federal Government supervision. The few officials who were needed to carry out two conventions’ administration were located in Berne, Switzerland (WIPO, 2008).

On December 17th 1974 an agreement between the United Nations (UN) and WIPO came into effect recognizes that WIPO is subject to the competence of the UN and its organs, responsible for taking appropriate action in accordance with its basic instrument and the treaties and agreements
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