

# Intellectual property rights protection of computer programs, information systems and related services

## Thesis Abstract

- 1) Dissertation thesis titled *Intellectual property rights protection of computer programs, information systems and related services* deals with the main legal approaches and their selected alternatives to the legal protection of computer programs, information systems and related software services.
- 2) The goal of the thesis is to analyse and provide the reader with consistent up-to-date information in particular on the two main forms of legal protection – copyright protection and industrial property protection of computer programs, to concisely describe their development, current status and key legal norms (international, EU and national) and that establish them.
- 3) The dissertation consists of an introduction, nine chapters and a conclusion. The thesis is divided into four units – introductory explanation, part of copyright law, part of industrial property (IP) law and final comparative part.
- 4) In the Introduction, the reader will get acquainted with the key concepts and issues elaborated in the thesis, as well as with the basic theoretical background of the thesis, its objectives, the methods used and its structure. Chapter 1 defines basic terminology of the thesis and its subject matter (data, information, computer program, software and information system).
- 5) Chapter 2 which commences the copyright related part of the dissertation provides an introduction to copyright protection for software. The chapter explains conceptual differences between the two most important contemporary copyright systems – continental copyright (*droit d'auteur*) and (Anglo-American) copyright – and briefly outlines their historical development. In Chapter 3, the development and contractual foundations of the international copyright law, the key norms of European legislation (including its recent revisions and developments), as well as the current state of the copyright system in the United States of America are explored.

- 6) The analysis of Czech copyright and protection of computer programs is included in the Chapter 4 of the dissertation. This chapter, besides the basic instruments and relations in the copyright system, deals with the legal concepts that are used in industrial software production, namely employee and collective works, and licensing of computer programs (including taking into account the situation before and after the recodification of Czech private law in 2014). The following chapter 5 describes the protection of software by other legal standards in domestic law (protection against unfair competition, criminal law and other instruments) and briefly summarizes the current state of computer piracy in the Czech Republic.
- 7) The part of the dissertation covering the industrial property protection (in particular the issues of the patenting) of computer programs commences within the Chapter 6, which contains the introductory explanation, definition of the patent, the characteristics of the patentable subject matter and a brief excursion into the international normative contracts. Chapter 7 describes the state of the art industrial property protection of computer programs (especially by patents) in the world, especially in the United States of America, the European Union (including both recent attempts to revise US IP laws and introduce a European Uniform Patent System) and selected other jurisdictions, such as Japan, South Korea, China, India, Australia and so on.
- 8) In the next (8<sup>th</sup>) chapter, the advantages and disadvantages of computer programs patenting are analysed and critically evaluated, as well as the economic aspects of strong industrial software protection, and, upon the example of so-called *mobile patent wars* between Apple and Samsung Group, the possibility to systematic abuse of patents, designs and utility models to reduce competition in the industry is commented.
- 9) Chapter 9 which along with the Conclusion form the comparative part of the dissertation critically evaluates the two main forms of legal protection of software, deals with their effectiveness and usability in the dynamically developing software industry and briefly compares them with some alternative concepts of legal software protection. Last but not least, the chapter provides the author's view of the possibility of a third form of protection of computer programs as a subject of legal relations *sui generis* and summarizes the current challenges that the legal system pursuing to protect the computer programs effectively and properly will have to face sooner or later (e.g. artificial intelligence or blockchain).

- 10) At the Conclusion of the thesis, the outcomes of the author's research on the copyright and industrial property protection of software as the dominant forms of ensuring the rights of producers of computer programs are summarized. The Conclusion also comprises the rationale of author's belief that the most efficient form of software protection would be the *sui generis* legal regulation of the software and that sooner or later, as result of current challenges, that inevitably shift the perception of software as such, the existing two-tier system of legal protection of software must undergo a substantial revision.

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### Keywords (5)

software, computer program, copyright, patent, protection