

Legal Protection for Software in Serbian Law

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Abstract- It is a great economic importance of software on the global market. Therefore, the need for the appropriate legal norms of software is one of the imperatives not only for our, but also for the globally observed modern society. However, there are still many doubts in the United States, as the representative of the software industry, and in the European Union concerning the legal framework where the legal protection is possible. In the legal practice, at the moment, currently are accepted a copyright and a patent way of protection. The question arises whether in this way is created a legal uncertainty or unequal legal solutions which are the result of different conceptions of the patent ability or the authorship. Therefore, in this work the author has tried to define the concept of software, through the analysis of the relevant sources of our laws and stating the source from the European Union laws, as there is a tendency for belonging to the European concept of software protection, and highlight the current situation regarding the legal .

I. INTRODUCTION

The development of software dated back in the late 20th century when it was launched on the market as an independent good completely separated from the computing device for which it was designed. However, nowadays everybody fully grasps the economic significance of software for without it advanced technological and technical tools do not have any utility.

Software companies, particularly in the United States of America as a cradle of software industry, gained a large profit even in the first years of the designing of software. As the legal protection of software was not provided, one of the main goals was to establish adequate legal framework for the exploitation of software whose market value was very high. It became a worldwide problem so the debate between the advocates of patent law and those of copyright law was lively in the realm of intellectual property law. Although numerous legal acts were passed nationally and internationally, there seemed to be no uniformity of legal protection.

The complexity of software issue caused the debate about the appropriate legal protection of this good to drag out for decades. Since the growing significance of electronic commerce and information technology on society based on the Internet indicates that the real expansion of software designing and use is to come, the

problem of the adequate legal protection on European continent is still regarded as unsettled. Moreover, the economic impact of software industry of the United States of America and its considerable effort that software should have the legal protection as a patent have raised to some extents the doubts about the effectiveness of the concept of copyright protection.

Once source code (when it is written in a programming language) has been available to public, it can be used to design another software program in a simple way without copying it directly resulting in copyright infringement. Furthermore, in this field are technological constraints of intellectual creativity for there is no endless number of ways how to develop the same idea as it is the case in the other creative work. By that fact alone, it is extremely difficult in a certain case to tell apart whether the software is a plagiarism of the other one or the original creation of the author. Besides, thanks to developed computer technology, software program has become an easily accessible product whose copies are made at minimal costs.

On the other hand, the complex characteristics of software raise the question of patent protection. Source and object codes as forms of expressions are under copyright protection. However, software activation gives technical result, which not seldom has its industrial application. With the respect to this fact, legal theory and practice to some extent call into question the concept of copyright protection. There are numerous works which seriously deal with the dilemma between copyright and patent protection both in our and foreign literature. They all provide the starting point for a comprehensive analysis of the problem but in our work we will present only the current normative acts in our law, noting what is the legal protection of software in the European Union, primarily, due to the aspirations of our country towards the European and global integration, and the commitment to the European concept of software protection. Regarding all aspects, we feel it necessary to depict our legislation as *de lege lata* and *de lege ferenda*. In the last part of the paper, we will briefly explain the relation between copyright and patent protection of software co-existing in our practice.

II. LEGAL PROTECTION FOR SOFTWARE IN OUR LAW

A. *The Term and Types of Software*

There is a need for precise definition of the term of software as the object of legal protection that the work will deal with in the following parts. The term "software" denotes "computer program and procedures, associated documentation and data relating to the functioning of the computer system." [1] We have to distinguish this term from the other closely resembling term-computer program- since their meanings are not identical. We will indicate what it means since it is a narrower term. A computer program includes "an arranged sequence of instructions that are attached to the material carrier and with the help of a computer performs a specific function or achieves a particular result." [2] Yet, in legal literature the usage of both terms are equally justified for computer programs are often marketed in the form of software. In practice, however, the term software is prevailing, which has influenced us to choose this term in our work even though there are the cases of solely computer programs. Although we have opted for language consistency, we will necessarily use the term computer program as well in order not to reduce the credibility of an information source.

Otherwise, according to its implementation software is frequently divided into two groups: system and application software but in terms of legal protection, this division has no special significance. Existing differences between them may affect the certain issues in the legal transactions. For example, system software includes a translation program (from programming language into machine one), utility program (including services, help) as well as a protocol and managing program (drivers) [3]. An operating system is the part of system software and it consists of programs that are the basis of application software for it coordinates the work of different operating units: processors, printers, keyboards, and other related devices [4]. In fact, an operating system is a combination of hardware, on the one hand, and a user and application software, on the other hand. The largest number of personal computers today has Windows operating systems of the big software manufacturers Microsoft Corporation, but in addition to it, there are a great number of other operating systems, which cannot be all mentioned here. A particular type of operating software, which has been increasingly popular recently, is free software or open source software of which Linux is the most widely used one. The characteristic of this system is that it is available in its source code to a user, so he can freely use, edit, improve and redistribute it.

On the market the most significant application software is intended for end users "to solve business, scientific and industrial problems," [3] and whose performance depends on the operating system and utility program. This software is extremely versatile since it is adapted to wide use of computers in modern society and diverse needs of end users. It consists of programs for

data processing, word processing and spreadsheet programs. [4] It can be divided into two groups, individual and standard.

B. *Legal Protection for Software in Serbian Law*

Digital technology has become an inevitable part of everyday life globally and in Serbia as well. This statement refers to the large economic importance of software and the key issue of determining its adequate legal protection.

In our legal system, the basic form of protection for software is copyright. According to the provisions of the European Communities Council Directive on the legal protection of computer programs (Directive 91/250) [5] which is the primary act regulating the issue of protection of computer programs in the EU, member states protect computer programs as literary works by copyright within the meaning of Berne Convention for the Protection of Literary and Artistic Works. It is important to note that the term "computer program" according to the Directive "shall include their preparatory design material". The protection applies to the expression in any form of a computer program. Ideas and principles which underlie any element of a computer program, including ideas and principles which underlie its interfaces, are not subject of copyright protection.¹ [6] In fact, the form of software includes source code (when expressed in some of the programming languages), objective code (in the form of binary numbers, i.e. In machine language) and executable code (electronic digital readout on the physical medium: magnetic tape, a chip, CD). [1]

However, neither judicial nor administrative practice in EU member states and the European Patent Office ignores the current trends of American precedents when making decisions. It has been proven by the data which show that the national authorities in the European Patent Office has granted thousands of patents applicable to computer inventions. [7] With this in mind, there is still the question of whether copyright and patent protection exist in a parallel way or complement each other.

In our legal system, the software was firstly recognized copyright protection by the Law on Amendments and Supplements to Copyright of 1990. Copyright and Related Rights Act of 1998 that followed took the same concept explicitly adding software to the list of works of authorship.²

Act of 2004 did not make any substantial changes, but seeking to formally comply with international regulations, the software was classified as a written work.³ It provides for the existing Law on Copyright and Related Rights.⁴ However, given the

¹ Art. 1(1) and Art. (2) Directive 91/250.

² Art. 2(2)(10). Copyright and Related Rights Act in 1998, Official journal n 24/ 98.

³ Art. 2(2)(1). Copyright and Related Rights Act in 2004 Official journal SCG, n. 61/ 2004.

⁴ Copyright and Related Rights Act in 2004 Official journal RS 104/09.

specificity of software as intellectual property, consistent application of the provisions of the copyright in works of literature is not justified. Therefore, our law as well as international legislation has provided a number of provisions, which recognize the need for special regulation of the software, which we will deal with in particular.

According to the current Law on Copyright and Related Rights, the author of the computer program has the exclusive right to permit or prohibit the rental of copies of his work. The term 'rental' means making a copy available for use to the other by a public institutions without direct or indirect commercial advantage.⁵ This legal provision was not the part of Law on Copyright and Related Rights of 1988. In accordance with Article 40 of existing Law on Copyright and Related Rights which has been taken along with the previous Article 24 of the Directive on rental and serve, in the case of the serve of copies of works of authorship by a person whose business is registered, the author has the right to claim compensation. [5] The different legal treatment in terms of this power stems from the highly technical characteristics of software, which makes its reproduction very simple procedu. Therefore, the legislator considered it necessary to provide the author with the exclusive authority to be able to achieve the higher degree of control over the use of his work.

The software copyright suspension is strictly regulated. The legislator has provided that a person who has lawfully obtained a copy of a computer program may, for their own use of the usual special-purpose programs: accommodate a program in computer memory and run it, remove bugs and make other necessary changes to it which are consistent with its purpose, unless otherwise agreed, make a backup copy of the program on a tangible carrier, made compilation of the program exclusively in order to obtain the necessary information to achieve interoperability of the program with other independently created software or specific hardware, if that information is not available in any other way and the decompilation of the program is done in only a portion of which is necessary to achieve interoperability.⁶

Program storage in computer memory and its running are, in fact, acts of reproduction which are exclusively within the power of the author.⁷ However, these actions are necessary to the person who has legally obtained a copy of the software, to use it. Therefore, it was necessary to suspend the specified powers of the author.

The technical nature of software means that the design and use of software requires the use of machines (computers), so software bugs often occur. Any unauthorized intervention would represent a treatment of the work, and thus a violation of the exclusive non-

proprietary rights to make changes. First of all, because of the undisturbed use of the program, the legislature has given the holder the legal authority to remove bugs and to make other necessary changes to the program. However, by the agreement between him and the right holder the application of this provision may be excluded. The similar purpose has legal authority of the holder of the copy of the software to make copies of the software on a durable physical medium, since the working copy during the use can be damaged or destroyed. [1]

The theory states that decompilation, which under these conditions is also included in the suspension, means the conversion of object code into source code, [1]allowing software to work on some computer equipment, or with another program, when necessary. The only requirement is that the data obtained in this way must not be disclosed to others or used for other purposes, except as provided by law.⁸

Given the extraordinary economic importance of software, the legislature has provided specific provisions in the Law of Treaties, and for the copyright work created in employment, which may be waived only if it is provided in the contract.

If the subject matter is the order of the software, the customer acquires the publishing rights and all proprietary rights, which are consistent with the purpose of concluding such an agreement. When creating other works of authorship, in addition to contracting authorities to publish them he only acquires the power to put the works into circulation.⁹

Finally, it must be emphasized that the employer is the permanent holder of all exclusive proprietary powers to the software employed. When it comes to the other works created in employment, the employer is the holder of the proprietary powers for a limited period of five years from the completion of the work.¹⁰

III. THE COEXISTENCE OF COPYRIGHT AND PATENT LAW

If we bear in mind that the basic form of the protection for software is copyright, we should not ignore the fact that copyright protection for software, which has already been widely accepted, includes any form of expression, that is, both source and object code. On the other hand, considering the cases of recognition of patents for software, one of the key issues which has been raised is whether the copyright and patent protection coexist in a parallel way or complement each other. The answer to this question is the subject of the consideration in this section.

As stated above, according to Directive 91/250, TRIPS and the WIPO Copyright Treaty¹¹, software along

⁵ Art. 24. Copyriht and Related Rights Act.

⁶ Art. 47 (1). Copyriht and Related Rights Act.

⁷ Art. 20 (4). Copyriht and Related Rights Act.

⁸ Art. 47(2). Copyriht and Related Rights Act.

⁹ Art. 95. Copyriht and Related Rights Act.

¹⁰ Art . 98. Copyriht and Related Rights Act.

¹¹ 4 WIPO Copyright Treaty.

with its source code and object code is protected as literary work in terms of the Berne Convention.¹² [8] Given the legal significance of these acts, the legislation of European countries is, in this regard, largely harmonized. However, the field of the application of software in the information era spreads and covers those areas that are traditionally protected by industrial property rights, i.e. by patent law. This fact causes differences in software protection.

In this regard, and by the analysis of current legal practice, it can be concluded that the software under certain conditions, may be subject to patent protection. Interpreting the relevant provisions of the European Patent Convention, the standpoint of the European Patent Office is that software, when you start or store it in a computer, produces or has the ability to produce a further technical effect which goes beyond the normal physical interaction between software and computers (hardware) by which the program is run.

This means that the software can be patentable. The basic requirement for the patentability of software is to make a technical contribution. The similar determination of patentability exists in the legal system of the United States, because a patent can be assigned for the procedure, device or product that are new and useful. Patent protection can be given to the promotion of procedures, devices and products, provided that such promotion satisfies required conditions.

We can conclude that the uneven level of the protection for software, in those situations when it can be considered an invention in terms of patent law, brings a different view of patentability. Given the above facts that the United States recognizes inventions patent protection under somewhat different conditions than it is the case in the European Union and most national legislations in Europe, it is possible that certain software is protected under Patent Law in the United States, but under Copyright Law on European continent. In this way, however, it does not call the primacy of the worldwide concept of copyright law into question. In addition, it is necessary to emphasize that despite the increasingly common practice of patenting software, in the legal system of the United States the primary form of protection is copyright.

Doubtlessly, some legal and economic uncertainty on the market of software brings software in some cases, depending on the territory of a country, under the protection of both patented invention and the work of authorship. In this regard, it is not unlikely that in the same country, under certain conditions, software as a work of authorship may also meet the requirements of patentability.

IV. THE RELATIONSHIP BETWEEN COPYRIGHT AND PATENT LAW

Based on previous exposure it is evident that in practice copyright and patent protection of software co-exist. Given this fact, we will present briefly what is their relationship.

On the one hand, the patent provides protection for an invention within the patent claims. On this basis, the legal owner of the patent for computer applicable invention has the right to prohibit any third party the use of a patented invention, within the limits specified in the patent application. [9]

On the other hand, copyright protects the software expressed in any form. Ideas and principles which underlie any element of software, including ideas and principles which underlie its interfaces, are not covered by the protection of copyright.¹³ Therefore, the software will enjoy copyright protection only if it is genuine, if it is the author's own intellectual creation.¹⁴ Thus, copyright protects the right holder against direct copying of source and object code, but this protection does not extend to those cases that represent different ways of expressing the same ideas or principles.

The theory states, however, that the right holders can refer to the patent infringement even when the computer applicable invention, whose source or object code are different, has the same effect, although according to copyright law that created independent program also was the object of protection.

Based on this we can conclude that these two types of protection can complement each other so that copyright protects the **form** in which the software expresses, and the patent protects the **idea** on which it is based, provided it meets the requirements of patentability.

V. CONCLUSION

Digital technology has become an inevitable part of everyday life globally and in Serbia as well. This statement refers to the large economic importance of software and the key issue of determining its adequate legal protection.

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¹² Art.1(1) and (2) Directive 91/250 and 10(1)TRIPS-a.

¹³ Art.1(2) Directive 91/250.

¹⁴ Art.1(3) Directive 91/250.

specificity of software as intellectual property, consistent application of the provisions of the copyright in works of literature is not justified. Therefore, our law as well as international legislation has provided a number of provisions, which recognize the need for special regulation of the software, which we will deal with in particular.

However, the field of the application of software in the information era spreads and covers those areas that are traditionally protected by industrial property rights, i.e. by patent law. This fact causes differences in software protection.

In this regard, and by the analysis of current legal practice, it can be concluded that the software under certain conditions, may be subject to patent protection. The basic requirement for the patentability of software is to make a technical contribution. In this way, however, it does not call the primacy of the worldwide concept of copyright law into question.

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