DEVELOPMENT OF LEGAL REGULATION OF RELATIONS, ASSOCIATED WITH A COMPUTER PROGRAM

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Summary*. The law enforcement and legislative practice of most states followed the path of protecting computer programs by copyright law. It has happened just because the model of copyright protection of the computer programs is cheaper and faster procedure than the patent protection. Patent protection, on the other hand, requires a fairly expensive and long-term examination of a computer program for global innovation, during which the object itself may become obsolete and unpopular with potential users. Therefore, the copyright method of protecting computer programs has received preferential recognition.*

It is concluded that to the present day, conceptual methodological and legal approaches have not been developed for the protection of computer programs as such using the norms of patent or copyright law. But by themselves, under certain conditions, computer programs and some of their components may be subject to patent protection. That is why many countries are moving towards combining copyright and patent protection of computer programs.

Keywords*: computer program; copyright; patent law; object of protection.*

Introduction. A computer program is a special type of copyright objects that have received legal protection relatively recently. The starting point in the development of computer technology is considered to be 1946, when a patent was issued to the creators of the electronic-numerical integrator ENIAC. Primarily the development and distribution of computer programs were predominantly scientific. However, with the improvement and complication of the technical devices themselves, the importance of computer programs began to increase, and they received a separate opportunity to be a fairly expensive product on the market. With the advent and widespread distribution of personal computers, computer programs gradually became the object of commercial use. They began to be introduced into economic circulation as a product that has its own value. Accordingly, there is a need to protect computer programs as an independent object of civil law.

However, updating and improving the legal framework for the right to a computer program still faces some methodological challenges. Namely, the choice of approach to understanding the legal nature (essence) of the rights to a computer program and the concept of building a system of legal protection in this area of intellectual, creative activity. Accordingly, to address these issues will be used on the existing scientific approaches used at that time. The search for ways for proper legal protection of computer programs is conducted mainly in two directions: copyright protection and patent rights. In turn, the law of the World Trade Organization (WTO) remains ambiguous on this issue. On the one hand, WTO members must establish protection of computer programs similar to the protection of literary works, and on the other - due to the lack of any prohibition on patenting computer programs in WTO law; it is increasingly used in practice in the USA and EU. However, the point of view is beginning to stand out that for the protection of programs it is advisable to use copyright, and algorithms - patent.

Analysis of recent research and publications. Important in the framework of our study are the works of scientists working in the field of intellectual property law, in particular the protection of computer programs such as I.E. Mamiofa, A.B. Gelb, W. Husley, E.P. Gavrilov, B.A. Dozortsev and others. But a number of questions remain unresolved about the possibility of applying a model of patent or copyright protection of a computer program.

Methods. The basis of the methodology of research of the chosen problem is a systematic approach, as well as dialectical, formal-logical and structural-functional methods and other general scientific research methods, as well as special legal methods: comparative law and formal law. The basis of the study is a dialectical method of cognition of legal phenomena. Personal non-property and property relations related to the civil law protection of a computer program are considered in the article as a component of social relations. This circumstance determines the dynamics of regulation of property relations in this area, the search and transformation of legal means aimed at creating a reliable and effective system of legal protection of rights to computer programs.

Results. It is established that the law enforcement and legislative practice of most states has followed

the path of protection of computer programs by copyright. Because the model of copyright protection of the object under study is a cheaper and faster procedure than patent protection. Patent protection requires a rather expensive and long examination of a computer program for world novelty, during which the object itself may become obsolete and unpopular with potential users. Therefore, the copyright method of protection of computer programs has received priority recognition. It is concluded that to date there are no unified approaches to the protection of computer programs as such using the rules of patent or copyright. But in themselves, subject to certain conditions, computer programs and some of their components may be subject to patent protection. That is why many countries are on the path of combining copyright and patent protection of computer programs.

Discussion. For the first time in the world, a computer program was registered as an object of legal protection in 1961 in the United States. In 1964, the U.S. Copyright Registry issued Circular № 61 on the registration of computer programs. As a condition of registration for legal protection, this document required that the elements of layout, selection, and textual expressions have original features [1]. In 1980, in the Copyright Act 1976, the computer program was included in the list of objects of copyright [2].

In the legal literature of the late 60s - early 70s, I.E. Mamiofoy and A.B. Gelb, the main tendencies outlined in the legislation of various states at that time regarding the legal protection of algorithms and computer programs were considered where the main form of legal regulation of relations in this area was the rules on production secrets ("know-how") [3, 4]. The authors argued that specialists from the USA, Germany, Great Britain and other countries paid the greatest attention to studying the possibilities of using patent and copyright norms for the protection of computer programs. At the same time, German lawyers advocated mainly for the protection of these objects by the norms of copyright legislation. US experts have expressed different points of view. Some of them recommended that both patent and copyright be protected for computer programs. Others pointed out that programs that are different in nature require different methods of protection. So, short programs with a priority of content, based on novelty of concept, need only a patent form of protection, long complex programs that require large resources for their creation should be protected only by copyright. In this way, it was assumed not simultaneous protection by different means, but the possibility of choosing between them [5].

At the end of the 60s, the practice of patent protection of algorithms for computer programs began to take shape in the United States, Japan and other countries. This practice was based on new approaches used by patent offices, courts and other competent authorities to interpret the laws in force at the time, as well as the editing of patent claims themselves [6]. The French patent law from the second of January, 1968, directly indicated that systems of an abstract nature, in particular, programs and a list of instructions that apply to the operation of technical devices, are not patentable [5]. However, in 1969-1971, several patents were issued in France for algorithms focused on implementation in technical devices. And they qualified as some way of processing information, sometimes the word "algorithm" directly figured in the names of inventions [7].

In 1971, the WIPO Advisory Group reviewed the feasibility of such protection of computer programs. And it was recommended to protect software products within the framework of copyright.

In the middle of 90s, the first legislative norms on the protection of computer programs appeared in international law. For the first time, the mention of computer programs and databases as a special object of legal protection appeared in the basic document Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) [8]. So, according to art. 10 TRIPS computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971) [9].

Such system of legal protection of computer programs as literary works is a direct reception from the copyright of the United States and Great Britain. In the United States, in 1964, a circular was passed on the registration of copyright for computer programs, according to which a computer program was recognized as a written work of the author. In the UK Copyright, Designs and Patents Act from 1988 [10], all copyrighted items are divided into six groups; at the same time, the content of the copyright holder's rights depends on the assignment of the copyright object to a particular group, since the rights of the copyright holder in English law are determined separately in relation to each of the groups of works.

Since in English copyright literary works are the oldest object, and its protection has the most detailed regulation, based on the formal similarity of the source texts of programs with literary works, the English legislator classified them as literary works to ensure the highest level of legal protection of computer programs [11]. However, scientists note that despite the representative similarity of programs with literary works, programs are not designed to inform thoughts or feelings of people. The program can symbolically exist in a human-readable form and be expressed using binary symbols. The program code only can be read and understood by a specialist. And despite the fact that the result of the programming process is expressed in the symbolic characteristics of the presentation of literary works, the program is a technological, not a literary work [12].

The rules established by the TRIPS Agreement were repeated and detailed in a specially concluded international agreement - WIPO Copyright Treaty (WCT) 1996 [13]. Whose provisions establish le-

gal protection for computer programs are protected as literary works within the meaning of Art. 2 of the Berne Convention. Such protection applies to computer programs, whatever may be the mode or form of their expression [13]. In Art. 6 is established by authors of literary and artistic works shall enjoy the exclusive right of authorizing the making available to the public of the original and copies of their works through sale or other transfer of ownership [13]. In the next, the treaty provides without prejudice to the provisions of Articles 11(1)(ii), 11 bis (1)(i) and (ii), 11 ter (1)(i), 14(1)(i) and 14 bis (1)(i) of the Berne Convention, authors of literary and artistic works shall enjoy the exclusive right of authorizing any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them [13].

Law enforcement and then legislative practice of most countries of the world followed the path of protecting computer programs based on the copyright model of the Berne Convention. Article 10 of the TRIPS Agreement [8] explicitly recommends that member countries of the World Trade Organization (WOT) protect computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971).

Copyright is the most convenient, less expensive model for protecting computer programs. Patent law does not allow it to be implemented quickly, cheaply and conveniently. With the copyright form of protection, it is not required to carry out a long and costly procedure for examining computer programs for absolute (world) novelty, during which time it may become morally obsolete and be unclaimed in the market. That is why the copyright model of protecting computer programs has gained priority recognition. The decisive factor is the fact that the main form of using programs is their replication and distribution of copies. Recognition of the owner of the program of the exclusive right to manufacture and sale of its copies and, accordingly, the prohibition of such actions to all other persons can be given by copyright [14].

Based on the practice of protecting computer programs by copyright norms, states are conditionally divided into three groups: (1) countries in which legislative reforms have not been carried out, and the protection of computer programs is carried out on the basis of general provisions of copyright; (2) countries that have implemented minor copyright reforms where computer programs have been classified as subject to copyright; (3) countries in which copyright laws have been substantially revised to include specific rules for the protection of computer programs [15].

The possibility of legal protection of computer programs by patent law has been the subject of scientific discussion for more than a ten years. However, the idea of protecting computer programs within the framework of patent law has not lost its relevance and has recently been gaining more and more supporters.

On the basis of the possibility of protecting computer programs by patent law, all countries of the world can be divided into 3 groups: (1) countries whose legislation does not directly express direct relation to the patentability of computer programs (USA, Japan, Canada, Ukraine); (2) countries whose legislation does not consider computer programs as inventions only insofar as protection is sought for them as such (Great Britain, France, Germany); (3) countries in whose legislation the non-patentability of computer programs is directly indicated (Belarus, Russia).

Current USA law classifies computer programs as literary works. The law defines computer programs as a set of instructions, steps that are used in a computer, directly or indirectly, to achieve a certain result (§ 101). The program, like any other subject of copyright in the United States, is protected from the moment of its creation, i.e. the first "fixation" of the object of rights in the form of a copy, which allows further perception, reproduction or other transmission of the work, directly or with the help of any devices. In the United States, "government registration" is also available - deposit at the Library of Congress [16].

However, the possibility of copyright protection of the program has been repeatedly questioned. In court decisions, such as decisions as: Apple Computer Inc. v. Franklin [17]; ComputerCorp., LotusDev. Corp. v. BorlandInt'l, Inc. [18], Apple Computer, Inc. V. Microsoft Corp. [19], the court determined that operating systems, application software, source code and object code as literary works, and user interface and screen images as audiovisual works are protected by copyright. At the same time, many other valuable and important aspects of computer programs remain without protection, such as functional technical elements of the program, testing, the service itself or the service provided by the program. These are all tasks of other branches of intellectual property law. And the American legislator directly provides for the possibility of using a computer program as an element or part of an invention part of an invention that is a method, apparatus, technology, computer program product, or system [20].

A turn in the issue of recognizing the patentability of computer programs in the United States occurred in 1969, where a court in the Praterand Wei case found that introducing a new program into a computer converts a general-purpose computer into a specialized one, which, together with the way in which it works, can be patented, subject to the usual requirements novelty, usefulness and non-obviousness [21]. In the same year in the «Lowry» case, the court decided that the data structure embedded in the computer's memory could be patentable as a product - a floppy disk. And in 1997, US patent No. 5664177 was issued, for the invention "Memory for storing data for retrieval by an application program executed in a

data processing system".

Subsequently, the «Freeman test» was developed by the US Patent Court of Appeal to determine the patentability of inventions containing computer program algorithms [15, p.66-68], and upheld by the Supreme Court of the United States in Diamond vs. Diehr, where the court indicated that when deciding whether an object is patentable, one cannot divide the claim into "fame" and "new" parts and make a decision depending on what is new - physical or mathematical operations. The patent claim (object) should be considered as a whole [22].

In the Gary M. Beauregard judgment, the US Patent Court of Appeals went further by recognizing that a computer program can be patentable if it is presented in any tangible form and if that form is directly related to the functioning of the computer [23].

Subsequently, new rules of the Patent Office were developed for the consideration of applications for patenting inventions related to computer programs [24]. Today, the legal protection of computer programs in the United States is carried out by both copyright and patent law.

In Japan, computer programs are protected by copyright [25]. In Japan, the object of copyright is work means a production in which thoughts or sentiments are expressed in a creative way and which falls within the literary, academic, artistic or musical domain (Art. 1 (1) (i)), which also includes refers to works of computer programming (Art. 10 (1)). Computer program means something expressed as a set of instructions written for a computer, which makes the computer function so that a specific result can be obtained (Art. 2 (1) (x (xbis))) [25].

With regard to the possibility of patenting computer programs, Japan follows a similar approach to the United States. The basis for this approach is a fairly general definition of an invention in Japanese patent law. Under the invention means created by the use of natural laws highly advanced technical idea. The technical nature of the invention here can be ensured by the appropriate drafting of the patent claims, properly linking the process with the technical device. The claims are based on a practical application characteristic affecting, for example, the parameters of a device used in conjunction with a computer program associated with useful monitoring functions. As a result, Japan's interpretation of the patentability of computer programs is closer to that of the United States than to the practice of European patent offices.

Japanese patent law explicitly refers to computer programs as "patentable subject matter [26]. The term "work" as used in this Act in respect of an invention means the following actions: (i) If the invention of a product (including a computer program, etc.; the same applies hereinafter), the producing, using, transferring, etc.it (meaning transferring it or lending it out, and this includes providing it through a telecommunications line if it is a computer program, etc.,; the same applies hereinafter), exporting or importing it, or offering to transfer, etc. it (this includes displaying it for the purpose of transferring, etc.it; the same applies hereinafter) (Article 2 (3) (i) Japanese Patent Act). The Japanese Patent Act defines The term "invention" as used in this Act means a highly advanced creation of technical ideas utilizing the laws of nature [26]. This means that patent protection can only be granted to a computer program that is "a product of technical ideas utilizing the laws of nature.

In Germany, the rights to computer programs are protected under the Act on Copyright and Related Rights (Urheberrechtsgesetz - UrhG) of 1965, as amended) [27]. In accordance with § 69a of this Act, computer programs within the meaning of this Act are programs of any form, including drafts and their preparatory design material. The protection granted shall apply to the expression, in any form, of a computer program. Ideas and principles which underlie any element of a computer program, including the ideas and principles which underlie its interfaces, shall not be protected. Computer programs shall be protected if they represent individual works in the sense that they are the result of the author's own intellectual creation. No other criteria, especially qualitative or aesthetic criteria, shall be applied to determine its eligibility for protection. The provisions applicable to literary works shall apply to computer programs, unless otherwise provided in this Division. It is noted that literary works, such as written works, speeches and computer programs [27].

In accordance with paragraph 3 of part 3 of Art. 1 Patentgesetz (PatG) 1980 computer programs are not inventions and therefore are not patentable. Since, in accordance with part 1 of the same article, patents are granted for inventions in all fields of technology, if they are novel, based on inventive activity and have industrial applicability [28].

Computer software is protected in the UK under the Copyright, Designs and Patents Act of 1988 [10]. According to subparagraphs (b) and (c) of paragraph (1) of Art. 3 Laws a computer program, preparatory design material for a computer program are classified as protected literary work [10].

With regard to the protection of rights to a computer program by patent law, following the provisions of the European Patent Convention, the Copyright, Designs and Patents Act provides that computer programs as such are not inventions and cannot obtain patent protection. However, the practice of the UK Patent Office demonstrates a fairly liberal attitude towards inventions, the essence of which is to use a computer under the control of a program in a certain way that gives a new result [15, p.73].

Should be noted, that in those countries where the protection and protection of rights to computer programs is based solely on the copyright model, the authors of the programs do not receive full protection of their property interests. For example, copyright rules protect a computer program from illegal copying and distribution, and independent creation of a program

that performs the same functional actions is not considered a violation of copyright for a pre-existing program, even if the developer of the second program borrows the principles laid down in the basis of the first program. A program that is not the result of creative activity is generally not protected either under copyright or under any other institutions of civil law.

Many countries mitigate the shortcomings of copyright protection of computer programs by simultaneously applying two institutions of intellectual property law - copyright and patent law. This method of protection provides for the possibility of applying to programs and other institutions, such as protection in the regime of trade secrets and the suppression of unfair competition.

Conclusion. Accordingly, there are three possible forms of protection for computer programs: copyright, patent law and trade secret law. There are also alternative software protection regimes, for example, "jusgeneris" protection, i.e. "special kind" protection, or protection based on a combination of trade secret law and antitrust law. Currently, the legal protection of computer programs is provided by more than nine institutes of law [11, p.6].

During the protection of computer programs by patent law, certain problems arose associated with the drafting of the claims, the choice of a prototype for the patented program, with the examination for world novelty. Such problems are associated with the technical nature of the program itself - it cannot be attributed either to devices that are characterized by design features, or to methods characterized by a certain sequence of actions performed on a material object.

Protecting computer programs with undisclosed information protection laws also has disadvantages; If the idea of the algorithm of a computer program as a developer's know-how is fully justified at the stage of program development, then from the moment when the content of the algorithm becomes available to an indefinite circle of persons, such protection is impossible by definition [29, p.11].

So, today, almost all over the world, a copyright model for the protection of computer programs has been adopted, although theoretically the debate about the effectiveness of such protection does not subside. On the other hand, in many countries, computer programs are also recognized as subject to patent protection, provided they meet the conditions of patentability. As a rule, we are talking about those cases when a computer program is part of a technological process (method, technical device, etc., and together with them can be recognized as an object of patent protection.

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