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"SOFTWARE" WITHIN THE CONTEXT OF INTELLECTUAL PROPERTY RIGHTS

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Açar sözlər: proqram təminatı mühafizəsi, əqli mülkiyyət, məlumatların açıqlanmaması müqavilələri, ƏM lisenziyası, ƏM transfer müqaviləsi, obyekt kodu, mənbə kodu

Software refers to the programs, applications, and data that are used to operate and manage computer systems and devices. In essence, it is the set of instructions that tells a computer what to do, how to do it, and when to do it [9, p. 60]. Software has become an integral part of modern society, playing a critical role in everything from communication and entertainment to commerce and education. Overall, software has become an essential component of modern life, enabling us to work smarter, communicate better, and live more connected and fulfilling lives.

But why do we talk about software from the point of view of intellectual property? Thus, what is the connection between these two concepts – Software and Intellectual Property (IP)?

It shall be noted that the notion "Intellectual Property" refers to works of the mind, including literary and artistic creations, inventions, utility models, symbols, industrial designs, and trade secrets [14, p. 3]. Software also is a manifestation of creativity that requires the use of programming languages and tools to produce a useful and valuable product. By safeguarding software as an intellectual property, it incentivizes innovation, acknowledges creativity, and promotes continued advancement of technology. Overall, the protection of software as an intellectual property is important to ensure that the creators of the software are rewarded for their work and that they have the ability to control how their software is used, distributed, and sold.

What are the ways to protect software as an IP?

1. Copyright in software: Software can be protected under copyright law as a form of intellectual property. Copyright law provides protection for the original expression of ideas in a fixed form [3], i.e., safeguards the way ideas are expressed in software, encompassing elements like the source code, object code, and user interface. As a result, copyright protection for software covers the specific manner in which the software is formulated, structured, and displayed, as opposed to the fundamental concepts or functionalities that the software embodies. This means that the creator of the software has exclusive rights to reproduce, distribute, display, and perform the software, as well as to create derivative works based on the software. Copyright protection for software typically includes the following rights:

- *Reproduction:* The right to make copies of the software, such as by installing it on multiple computers or devices.

- *Distribution:* The right to distribute copies

of the software, such as by selling or licensing it to others.

- *Display:* The right to display the software, such as by showing it on a computer screen or in marketing materials.

- *Performance:* The right to perform the software, such as by running it on a computer.

- *Derivative works:* The right to create derivative works based on the software, such as by modifying or adapting it.

Copyright protection for software is automatic and begins upon creation and fixation of the software in a tangible form. Although registration is not mandatory, software creators may choose to register their copyright with the relevant government agency to enjoy additional legal protection.

By enforcing copyright, creators can prevent unauthorized copying, distribution, or usage of their software. This incentivizes software innovation and development as creators are able to profit from their work and control how their software is used and distributed.

2. Patent protection in software: Software can be protected by patents under certain conditions. In general, a patent can be granted for a novel and non-obvious invention that is useful and falls within the scope of patentable subject matter. In the case of software, the invention must typically involve a new and non-obvious solution to a specific technical problem, rather than simply a business or mathematical method. Patents provide exclusive rights to the patent owner to exclude others from making, using, or selling the patented invention for a certain period of time (usually 20 years from the moment of filing).

In some countries, software may also be protected by a specific type of patent called *a software patent*, although the eligibility and scope of these patents can vary widely between jurisdictions. Additionally, some aspects of software, such as algorithms or data structures, may be eligible for patent protection as long as they meet the criteria for patentability [8].

Proponents of software patents argue that they encourage innovation and provide incentives for companies and individuals to invest in research and development of new software technologies. They also provide a means for inventors to protect their creations from being copied or stolen by competitors.

Critics of software patents, on the other hand, argue that they stifle innovation and competition by allowing patent owners to monopolize certain software technologies, which can inhibit the development of new software and technologies. They also argue that the patent system can be abused, with some companies using overly broad or vague patents to sue competitors and stifle innovation.

There are several key reasons why patent protection is important for software, including:

- *Exclusive rights:* Patents grant the owner exclusive rights to control the use, sale, importation, and creation of the patented invention, thus preventing others from using or copying it without permission.

- *Revenue generation:* Software patents can generate revenue for inventors and companies through licensing or selling their patented software inventions for a consideration.

- *Defense against infringement:* Patents also offer a legal basis for defending against infringement lawsuits, which can help protect the inventor's market position and reputation.

- *Encourage innovation:* Patents provide legal protection and financial incentives for innovative software inventions, encouraging software developers and companies to invest in research and development, leading to new and useful software technologies.

3. Trademark protection: Trademarks in software are regulated in a similar manner as trademarks in other industries. A trademark is a word, symbol, or design that identifies and distinguishes the source of goods or services of one enterprise from those of others [10]. In the context of software, a trademark can be used to protect the name, logo, or other branding elements of a particular software product or service.

In order to obtain trademark protection for a software product or service, the owner must apply for registration with the appropriate trade-

mark office in their jurisdiction, such as the Intellectual Property Agency of the Republic of Azerbaijan. Once a trademark is registered, the owner has the sole right to use it in association with their software product or service and can prevent others from using a similar trademark that might cause confusion in the market. Trademark owners can also take legal action against infringing parties to protect their trademark rights. Besides registering their trademark, software companies can also use trademark symbols like "™" or "®" to show that a particular name or logo is being used as a trademark.

Trademark protection is crucial in software for various reasons:

- *Brand Identity:* A trademark safeguards symbols, logos, and other elements to create a distinctive image that customers can recognize and associate with a particular company or product.

- *Competitive Advantage:* A robust trademark can offer a competitive edge in the marketplace by distinguishing a software product or service from those of competitors.

- *Legal Protection:* A registered trademark provides legal protection against those who may attempt to use a similar name or logo in a manner that could cause confusion in the market.

- *Licensing Opportunities:* Trademarks can also be licensed or used for merchandising opportunities, which can generate additional revenue streams for software companies.

The following are merely a few examples of famous software trademarks that have achieved global recognition and popularity:

o "Microsoft Windows": The Microsoft Windows trademark is one of the most renowned software trademarks globally. Since the mid-1980s, the Windows operating system has been in use, and the trademark has helped to establish the product's identity and brand recognition.

o "Apple iOS": The iOS trademark identifies Apple's mobile operating system for iPhones and iPads. The iOS trademark is a vital component of Apple's brand identity and is recognized by millions of users worldwide.

4. Trade Secret Protection: Trade secrets in software are proprietary information, techniques, or processes that provide a competitive advantage to a company and are not generally known to the public. Examples of trade secrets in software may include source code, algorithms, customer lists, and other confidential information.

In order for software information or processes to qualify as a trade secret, they must fulfill certain criteria. This includes being kept secret and not easily accessible by others, having commercial value that benefits the company, taking reasonable measures to maintain secrecy, and being independently developed by the company rather than being readily available to the public [2, p.2].

Protecting trade secrets in software is important for several reasons:

- *Competitive Advantage:* Trade secrets can provide a competitive advantage by giving a company exclusive access to valuable information or techniques that are not widely known.

- *Legal Protection:* Companies can take legal action against individuals or organizations that steal or disclose their trade secrets, which can result in damages and injunctive relief.

- *Confidentiality:* Protecting trade secrets can help to ensure the confidentiality of proprietary information, which is important for maintaining a company's competitive position and reputation.

To protect trade secrets in software, companies can take several measures, such as implementing access controls and monitoring systems to restrict access to sensitive information, using ***non-disclosure agreements (NDAs)*** with employees and contractors, and establishing clear policies and procedures for handling confidential information. NDAs are contractual instruments commonly employed to safeguard confidential information, including software [6, p. 3]. Such agreements set forth the terms that govern the sharing of sensitive information between parties. One party agrees to share confidential information, while the other party commits to keep the information confidential and not to reveal it to third parties. Regarding software protection, NDAs can serve as a tool to protect trade secrets, confidential algorithms, and other proprietary information that is vital to the software's development, distribution, or use. For instance, a soft-

ware firm may demand that its employees, contractors, or partners sign an NDA before accessing its proprietary software code or other confidential information. Failure to properly protect trade secrets can result in significant financial and reputational damage.

5. IP License and Assignment Agreements: One important legal strategy for software companies and developers is to protect their intellectual property rights through IP license and assignment agreements, which can ensure proper compensation for their work and safeguard their rights. These agreements usually involve the license or transfer of intellectual property rights, like patents, copyrights, and trade secrets, from one party to another.

An IP license agreement allows another party to use licensed intellectual property in exchange for payment, such as royalties or a licensing fee. Software developers and companies can use these agreements to give permission for other companies to use their software products or license their technology to third-party developers. Software license agreements typically include several important terms, such as the scope of the license, what the licensee is authorized to do with the software, such as use, modify, or distribute it; license restrictions; fees and payment terms; governing law and dispute resolution; termination etc. [5, p. 6].

An IP assignment agreement involves the transfer of intellectual property rights from one party to another [7, p. 67]. In the context of software, this may involve a software developer assigning the copyright or other intellectual property rights to a software company in exchange for compensation. The essential terms that must be included in a software assignment agreement include the names and contact information of the parties; assignment clause clearly stating that the assigning party is transferring ownership of the software to the receiving party, and that the receiving party will be the sole owner of the software after the assignment is complete; which IP rights are being transferred, such as copyrights, patents, or trade secrets; the consideration that the receiving party will provide to the assigning

party in exchange for the software assignment; governing law and dispute resolution etc.

By implementing IP license and assignment agreements, software developers and companies can establish unambiguous ownership and licensing rights, protect their intellectual property, and guarantee appropriate compensation for their efforts. These agreements can also forestall conflicts over ownership and licensing rights, and offer a legal structure for settling disputes, should they occur.

While there is no single *international convention or treaty* specifically focused on software protection, however, there are several international treaties and agreements that provide some level of protection for software and other forms of intellectual property. These include:

▪ *The Berne Convention for the Protection of Literary and Artistic Works*: This treaty was initially signed in 1886 and has undergone various updates over time. It sets the baseline for the protection of copyright for artistic and literary works. Although the term "software" is not explicitly mentioned, Article 2 of the treaty states that "literary and artistic works" encompass all works in the literary, scientific, and artistic fields, regardless of their mode or form of expression. Examples of these works may include books, pamphlets, lectures, addresses, and other similar works [11].

▪ *The Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement:* The TRIPS Agreement is a set of basic guidelines created by the World Trade Organization to safeguard intellectual property, which covers patents, copyrights, and trademarks. It identifies computer programs as a form of work that can be protected by copyright law. As per Article 10 of TRIPS, computer programs, irrespective of their format (source or object code), are recognized as literary works under the Berne Convention (1971) [12].

▪ *The World Intellectual Property Organization (WIPO) Copyright Treaty* and *the WIPO Performances and Phonograms Treaty:* These international agreements offer extra safeguarding measures for software and other copyright-related rights in the digital sphere. The WIPO

Copyright Treaty (WCT), which is a specific agreement within the Berne Convention, concentrates on protecting digital works and the creators' rights. Along with the rights already established by the Berne Convention, it also provides economic rights. Furthermore, the treaty concerns two kinds of works that are protected by copyright: (i) computer programs, irrespective of their expression method or format, and (ii) compilations of data or other materials, commonly known as "databases" [13].

▪ *The European Union's Software Directive:* EU Software Directive was passed by the European Union in 1991 and subsequently adopted by EU member states. Its main purpose is to provide copyright protection for software and to establish specific regulations for the licensing and distribution of software. The directive defines software as a set of instructions that can cause a computer to perform a specific task when incorporated into a readable medium. The directive recognizes software as a literary work and provides copyright protection for it, with the author having exclusive rights to reproduce, adapt, and distribute the program, subject to certain exceptions such as the right of a user to make a backup copy for personal use [4].

Regarding the IP legislation of the Republic of Azerbaijan on the protection of software, it is worth noting Article 6.2 of *the Law of the Republic of Azerbaijan "On Copyright and Related Rights": "Computer programs (software) are protected as literary works. The protection of computer programs extends to all types of programs expressed in any language and form, including source text and object code, and operating systems" [1].*

In conclusion, it is important to keep up to date with software protection laws and regulations in local and other jurisdictions worldwide to understand the rights and responsibilities of developers, users, and owners. Employing a range of legal mechanisms such as patents, trademarks, trade secrets, and copyrights as mentioned above can be useful in safeguarding software. Furthermore, utilizing IP license and assignment agreements and clarifying the terms of use for customers and partners can provide effective protection. Additionally, safeguarding software from unauthorized use, access, and distribution by utilizing encryption and other security measures, restricting access to confidential information, and monitoring for potential infringement is recommended.

Overall, protecting software through IP is necessary because it helps to encourage innovation, allows software developers and companies to earn a return on their investment, helps to prevent unauthorized copying and distribution of software, maintains the quality and integrity of software, and encourages collaboration and sharing among developers.

References:

1. « Müəlliflik hüququ və əlaqəli hüquqlar » haqqında Azərbaycan Respublikasının Qanunu, https://e-qanun.az/framework/4167
2. B, Zeidman and N, Bear. (2008). What, Exactly, Is Software Trade Secret Theft? The journal of Intellectual Property Today, p 5
3. Copyright Protection of Computer Software, https://www.wipo.int/copyright/en/activities/software.html
4. EU Software Directive, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32009L0024
5. European IP Helpdesk. (2019). IP Licensing. Publication Office of the European Union, Bulletin No.1, p 20.
6. European IP Helpdesk. (2021). Non-Disclosure Agreement: a Business Tool. Luxembourg: Publication Office of the European Union, p 10.

7. Frederic B. Schramm. (1960). Licenses, Contracts and Assignments of Intellectual Property. 9 Clev.-Marshall L. Rev., p 77.

8. Intellectual Property Rights in Software – What They Are and How to Protect Them, https://freibrunlaw.com/intellectual-property-rights-software-protect/

9. Osterweil, L.J. (2008). What is software? The Role of Empirical Methods in Answering the Question. Journal of Automated Software Engineering, Issue 3–4, p 76.

10. Software Intellectual Property: What It Is & How to Protect It, https://cpl.thalesgroup.com/software-monetization/protecting-software-intellectual-property#:~:text=What%20Is%20Software%20IP%3F,to%20that%20code%20or%20software

11. Summary of the Berne Convention for the Protection of Literary and Artistic Works (1886), https://www.wipo.int/treaties/en/ip/berne/summary_berne.html

12. The TRIPS Agreement, https://www.wto.org/english/docs_e/legal_e/27-trips_04_e.htm#:~:text=Article%2010&text=Compilations%20of%20data%20or%20other,shall%20be%20protected%20as%20such

13. WIPO Copyright Treaty (WCT), https://www.wipo.int/treaties/en/ip/wct/

14. World Intellectual Property Organization. (2020). What is intellectual property? Geneva: WIPO Publication No. 450E/20, p 25.

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«Программное обеспечение» в контексте прав интеллектуальной собственности

В настоящее время программное обеспечение играет решающую роль в современном обществе и имеет важное значение для многих аспектов нашей жизни, поддерживая все, от бизнеса и образования до здравоохранения и развлечений. Его значение, вероятно, возрастет в ближайшие годы, поскольку продолжают появляться новые технологии и приложения. В этой исследовательской статье исследуются правовые гарантии, доступные для программного обеспечения в соответствии с законодательством об интеллектуальной собственности (ИС). В нем описываются различные формы защиты ИС, которые можно использовать для защиты программного обеспечения, такие как авторское право, патент, товарный знак и коммерческая тайна, при этом анализируются критерии для каждого типа защиты, а также связанные с ними преимущества и недостатки. Кроме того, в статье исследуется мировая правовая структура защиты программного обеспечения, включая Бернскую конвенцию и Директиву Европейского союза по программному обеспечению. В заключении статьи предлагаются практические советы для разработчиков программного обеспечения и компаний, стремящихся защитить свое программное обеспечение в соответствии с законодательством об интеллектуальной собственности, включая использование лицензионных соглашений и соглашений о переуступке прав, соглашений о неразглашении и других мер по обеспечению защиты. Наконец, в статье подчеркивается важность охраны ИС для программного обеспечения и предлагается всесторонний обзор правовой базы, регулирующей охрану программного обеспечения.

Gunel Nəcəfzadə

"Proqram təminatı" əqli mülkiyyət hüquqları kontekstində

Hazırkı dövrdə proqram təminatı müasir cəmiyyətimizdə həlledici rol oynayır və biznes və təhsildən səhiyyə və əyləncəyə qədər həyatımızın müxtəlif aspektləri üçün əhəmiyyət kəsb edir. Yaxın gələcəkdə yeni texnologiyalar və tətbiqlər davamlı şəkildə inkişaf etdikcə proqram təminatlarının əhəmiyyəti də artmağa davam edəcək. Bu akademik məqalə əqli mülkiyyət (ƏM) hüququ nöqteyi-

nəzərindən proqram təminatı üçün mövcud olan hüquqi təminatları araşdırır. Məqalə hər bir ƏM obyekti üçün meyarları və onlarla bağlı üstünlükləri və çatışmazlıqları təhlil edərkən müəlliflik hüququ, patent, əmtəə nişanı və kommersiya sirri kimi proqram təminatının qorunması üçün vacib olan ƏM mühafizəsinin müxtəlif formalarını müəyyənləşdirir. Bundan əlavə, məqalə Bern Konvensiyası və Avropa Birliyinin Proqram Təminatı Direktivi də daxil olmaqla, proqram təminatının qorunması sahəsində dünya miqyasında mövcud olan hüquqi strukturu araşdırır. Məqalə proqram təminatı tərtibatçıları və proqram təminatlarını ƏM hüququ əsasında qorumaq istəyən şirkətlərə, lisenziya və transfer müqavilələri, kommersiya sirrini qoruma müqavilələri və mühafizəni təmin etmək üçün digər tədbirlərdən istifadə də daxil olmaqla, praktiki məsləhətlər təklif etməklə yekunlaşır. Nəhayət, məqalə proqram təminatı üçün ƏM mühafizəsinin əhəmiyyətini vurğulayır və proqram təminatının mühafizəsini tənzimləyən hüquqi bazanın hərtərəfli icmalını təqdim edir.