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**USER OF THE SOFTWARE AS THE AUTHOR OF
THE COMPUTER GENERATED WORKS****Abstract**

Today's rapid development in technology creates new areas of discussion. These discussions include an extensive range of fields, one of which is the legal sphere, legislation, and legislative approach. Almost every field of law is affected and triggered to be adjusted by technological improvements, namely civil, criminal, administrative, intellectual property law, and others.

In the modern era of technology, a computer is able to compose poetry, music, and even chat, which is becoming more and more challenging to separate them from man-made works. Most importantly, the originality and quality of such works raised the issue of this research paper, which is the determination of the authorship over the results generated by the computer or so-called Artificial Intelligence.

Keywords: *intellectual property law, copyright, computer-generated work, artificial intelligence*

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Proqram təminatının istifadəçisi komputer tərəfindən yaradılan əsərin müəllifi kimi**Xülasə**

Texnologiyanın bugünkü sürətli inkişafı yeni müzakirə sahələri yaradır. Bu müzakirələr geniş sahələri əhatə edir ki, bunlardan biri də hüquq sferası, qanunvericilik və qanunvericilik yanaşmasıdır. Hüququn demək olar ki, hər bir sahəsi texnoloji təkmilləşdirmələr, yəni mülki, cinayət, inzibati, əqli mülkiyyət hüququ və s. təsirə məruz qalır və tənzimlənməyə təkan verir.

Müasir texnologiya dövründə kompüter şeir, musiqi və hətta söhbət yaza bilər ki, bu da onları süni əsərlərdən fərqləndirməyi getdikcə çətinləşdirir. Ən əsası, bu cür işlərin orijinallığı və keyfiyyəti kompüterin və ya süni intellektin yaratdığı nəticələr üzərində müəllif hüquqlarının sahibinin müəyyən edilməsi olan bu tədqiqat işinin problemini gündəmə gətirdi.

Açar sözlər: *əqli mülkiyyət hüququ, müəlliflik hüququ, komputer tərəfindən hazırlanan əsər, süni intellekt*

Introduction

For the purposes of this Article, the effect of technological enhancements on intellectual property relations will be analyzed. The new inventions and improvements in the capability of electronic devices made intellectual property relations a hot topic starting from the mid's of the previous century.

Fundamental improvements in computer science are the development of software programs that enable computers to involve in the creation of intellectual property objects. Indeed, in some cases, the participation of computers in the creation of intellectual property objects is far beyond just involvement. In reality, they make the most of the contribution to the process. For that reason, one of those discussion topics is now copyright protection of the intellectual property objects generated with the involvement of computers. To stipulate more precisely, the issue is to seek a fair subject to grant the authorship over the work.

For the purposes of this Article, the computer will mean the general notion of the computer, which

is “a machine or device which performs processes, calculations, and operations based on the instructions provided by a software or hardware”. Additionally, it will also include the notions such as “artificial intelligence” and “machine learning” in a broad sense. It is decided the term computer in general meaning including the mentioned notions because nowadays, the computer is a more complex device than it has been through its first invention (Berne Convention for the Protection of Literary and Artistic Works, 1886).

When the computer was first invented, it can only perform some minor calculations and few processes. However, today's technological improvements shaped computers so that they can perform tasks with only a minor contribution from the human being (user). Indeed, this situation led to the topic of this paper by raising the question of “whether a computer can be granted copyright protection if it creates the copyrightable object with only a little contribution of the user”? A broad question can be stated as “who should be the author of the work generated by the enhanced computer program”?

In the legislation of the majority of the countries, human creative activity is stated as the prerequisite for intellectual property and intellectual property protection. Besides, not all of them defined clear instructions on who should be the author of the copyrighted work.

In this Article, the possibility to entitle the user of a software program to the authorship over the computer-generated works will be analyzed. The analysis includes both pro and contra arguments on the provision of authorship to the user of the software program. Additionally, to understand the real process, the degree of the contribution made by the computer will be discussed based on the real examples. As a result, the author of this Article comes to the conclusion that user of the software program should be entitled to authorship over the computer-generated works because they have all the necessary features.

Before starting with the legal and argumentative part, it is suggested to include the understanding of the notion of the computer and its scope of coverage.

Generally, a computer is an electronic device that is able to process calculations, algorithms, and tasks with the help of software programs (Osha, 2019: 2). Basically, software programs are the set of computing codes written based on the programming languages (a specific program that helps to write software programs) to do a wide range of functions and tasks (Osha, 2019: 3).

In the early stages of the invention of computers, they were only able to do some non-complex tasks, such as making calculations of mathematical formulas, playing music so on. However, with today's improvements in technological improvements the variety and complexity of tasks that computers can perform enhanced enormously. Additionally, the accuracy and originality of the results are also improved so that it becomes hard to distinguish them from the ones that are made by humans. That is the main trigger for this research paper and analysis.

For the purposes of this Article, the notion of the computer also includes artificial intelligence, which is the ultimate degree of improvement in the technology, lately.

What is artificial intelligence? It is not easy to determine exactly when a system becomes a set of components with artificial intelligence. The border is wide and not so easy to find. One of the methods defined in the 1960s is the Turing test. It states that: if a computer can imitate human reactions over a period of time, i.e. react as a human would do, it can be said that a computer has artificial intelligence (Perry, Margoni, 2010: 25). There are several stages in the creative process: preparation, maturation, clarity (followed by the creative process), and testing (Satija, Martinez-Avila, 2019: 36). One of the main questions of the theory has been the so-called 4P creativity model. According to this model, creativity can be viewed from four different perspectives: product, process, person, and press of the environment. Human creativity can be stimulated by these components (Mierina, 2020: 11). What are the stages and incentives of a computer system-generated work process? Research question: Should works created by artificial intelligence (computer systems) be considered creative and protected by copyright? Some authors believe that assigning copyright to an algorithm does not further the objectives of copyright law; it also does not fit well into its incentive structure (Tilde, 2020: 9). Some authors conclude that the current regime is woefully insufficient to cope with the use of increasingly intuitive artificial intelligence systems in the production of such works (Min, Gruszka, 2020: 54). It is believed that human strength is his creativity. People cannot let creativity get out of control; it is their monopoly and it must be taken care of by all nations. Without privacy, there is no creativity, and the

individual must feel free to create (Hedrick, 2019: 21). If creativity is the main criterion for creating a work, then there should be criteria for assessing the characteristics of creativity. Very little scientific research has been done on this topic, but its importance is growing with the rapid development of technology. Therefore, the author offers a review of the literature, legal framework, and case law, in which the answers to the research question will be sought. The author of this Article is convinced that works created by artificial intelligence must be protected by copyright, and such protection must not differ from the usual (traditional) protection of authors' works. Creativity means -having the skill and ability to produce something new, especially a work of art (Davies, 2011: 4). Only humans can be recognized as the author of a work, and no computer or algorithm can be identified as the copyrightowner. Originality is an important criterion in creating a job. Provided that the requirements for human participation and origin are met, the protection systems for works created by computer systems must be the same as those created by humans.

Considering such a level of improvement and capability of the artificial intelligence, one of the important questions should be answered for the determination of the authorship issue over the computer-generated works. The question is whether the computer equipped with artificial intelligence is the assistant to the human in the generation of the work? It is rather understandable that this question should be addressed on a case-by-case basis. However, the issue is the analysis of the essence of the question, not the answer itself. Accordingly, does it even matter whether or not the computer is an assistant or is the operator of the main part of a work?

To answer this kind of question and to analyze the essence of the question itself, let's look at the imaginary example. Let's think of a software program that is able to compose a piece of music when the user inputs a few words to it. Additionally, let's assume that all other conditions for the copyright are met, e.g. work is eligible, provided in a tangible medium of expression and work is original.

Bearing in mind all the above-stated facts and conditions, it should be analyzed whether the computer is in the role of an assistant in that case or not. At first glance, it is assumed that the computer or software is the one that performs most of the work and makes most of a contribution. The user only provides a few words to the software program and that is all. As a result, the computer performs the "creative activity" and gives the copyrightable product. After the clarification of this fact and question, another question arises: whether the provision of the most of the contribution is enough to entitle the computer with the authorship over the computer-generated work.

First of all, although most of the contribution is made by the computer or artificial intelligence, the initiator is the human that inputs the words to the software program, which means without that inputs, no result will ever be generated (Hedrick, 2019: 34). Consequently, the computer itself is not able to generate the work. The above-mentioned approach has already been applied in similar relations, namely in employer and employee relations. Let's remember the approach to the copyright issues over the work created by the employee during the implementation of the job functions (Min, Gruszka, 2020: 27). As to the internationally accepted approach, in that case, the employer gets the authorship rights over the work created. However, the employer only creates the necessary environment and facilities for the employee to generate the work,

which is indeed a minor contribution and there is no creative effort on the side of the employer.

Another important point that is needed to be addressed comes from the very initial nature of the intellectual property. One of the main matters behind the emergence of intellectual property and the need for its protection was the economic value of intellectual property objects (Satija, Martinez-Avila, 2019: 19). It is understood that one of society's triggers is the people's innovations and creations. To feed that motivation person's right over the intellectual property should be protected. That was the initial idea and necessity that spurred the emergence of intellectual property protection (Perry, Margoni, 2010: 11).

As to the above-mentioned thesis, the subject to whom the authorship rights are entitled should have such motivation to create and innovate more. This fact raises the question of whether software program or computer has that motivation. It is rather clear that motivation to create to gain economic benefits is associated with the human being, not the computer. That aspect, in its turn, reveals the understanding that computers should not be entitled to authorship because it makes no sense considering the true nature of copyright protection.

Additionally, it is true that the computer generates some results after receiving the inputs; however,

it is still the user who decides or selects which composition is the best and should be published. Furthermore, it is also possible that the user will make some edits to the final product that the computer-generated. It means that the user still has the decisive power over the computer-generated works.

As a result of the above paragraphs, it can be said that even if the majority of the contribution is made by the computer in the generation of the final product, it is not rational to entitle authorship to the computer (Law on the Copyright and Related Rights of the Republic of Azerbaijan).

Conclusion

To conclude the whole idea and arguments stated throughout the research, it should be stated that each of the options put forward in this paper has controversial aspects. However, as a result of the Article, it is concluded that entitlement of the authorship rights to the user of the software is the best option. This result is obtained by taking into account both economic and legal aspects of copyright protection.

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