

## To Copyright or to Patent a computer program in Vietnam - 04 important considerations

Computer programs are increasingly utilized and play a crucial role in numerous fields in order to effectively serve and fulfill a variety of needs and objectives. Like other intellectual property (IP) assets, computer program rights holders seek to optimize all protection measures for the computer programs they develop to ensure exclusivity, effective enforcement against piracy and IPR infringement, and commercialization of intellectual property assets.

Article 4.12 of the Intellectual Property Law 2005, as amended in 2009 and 2019 (IP Law) defines an invention as "a technical solution in the form of a product or process intended to solve a specified problem by applying natural laws."

According to the preceding definition, many non-experts in IP will believe that a computer program that is also a technical solution developed by a programmer to assist in solving specific problems encountered in daily life should be patentable by default. However, it is not always the case. Consequently, the eligibility of a computer program for patent protection in Vietnam and the requirements that must be met for a computer program to be patented are two frequently asked questions among IPR holders who wish to protect their computer programs in Vietnam.

### How are computer programs protected under Vietnam's intellectual property law?

Article 22.1 of the Intellectual Property Law defines a computer program as "a set of instructions expressed in the form of commands, codes, diagrams, and other forms that, when incorporated in a device readable by a computer, are capable of enabling that computer to perform a task or achieve a particular result." In addition, Article 22.1 of the Intellectual Property Law states: "Computer programs shall be protected in the same manner as literary works, regardless of whether they are expressed as source codes or machine codes." Article 59 of the Intellectual Property Law specifies 07 (seven) types of objects that cannot be protected as inventions, including computer programs.

Therefore, computer programs are only protected as copyrights under Articles 22 and 59 of the Intellectual Property Law.

### Are computer programs protected as patents in Vietnam?

In 2010, the Intellectual Property Office of Vietnam (IP VIETNAM) published the Regulation on examination of patent applications (attached to Decision No. 487/QĐ-SHTT dated March 31, 2010 of the Director of IP VIETNAM) which established more detailed regulations on the examination of patent applications whose subject matter is a "computer program". Specifically, **"Although a computer program is on the list of objects that are not protected in the name of invention, if the object of protection has technical characteristics and is actually a technical solution, in order to solve a technical problem by a technical means to produce a technical effect, it can be protected as a patent."** (Rule 5.8.2.5).

Does the aforementioned provision conflict with Article 59 of the Intellectual Property Law prohibiting patent protection for "computer programs"? The answer is no, as the conditions outlined in this regulation are consistent with the IP Law's Article 4.12 definition of invention. As such, a computer program can be patented under Vietnam's IP Law.

The example below helps clarify for programmers and patent holders when a computer program can be protected as a patent in Vietnam and when protection will be denied.

Non patentable	Patentable
Methods of data processing performed by computer programs that in theory may be performed equivalently by special circuits, and performing the programs always results in physical effects, for example electrical circuits, such conventional physical effects themselves are not enough to render the programs technical, thus, not patentable.	A computer program, when run on a computer, creates technical efficiency other than conventional physical effects, it will be eligible for patent protection. Nonconventional technical efficiencies may have been known in the state of the art. These technical efficiencies may be present, for example, in the control of an industrial process, in the data processing representing physical entities or in the performance of the functions of the computer or its interface under influence of the program, and may, for example, affect the efficiency or safety of the process, the management of computer resources or data transmission speed.

Thus, it can be understood that: (i) computer programs are not automatically protected in form of invention, (ii) not all computer programs are protected in form of invention, and (iii) Computer programs are patentable when it meets certain requirements for protection.

## Four essential considerations to optimize the protection of computer programs

### 1. A computer program can be patented in Vietnam if it is truly a technical solution that produces a technical effect.

A computer program may be considered patentable if, when executed on a computer, it produces a technical effect distinct from the program's normal interactions with the computer. Generally speaking, a computer program may be patented if it produces a technical effect that goes beyond the conventional physical interactions between the program (software) and the computer (hardware) on which it is run. Otherwise, the computer program's patent application will be denied because the subject matter is not considered to be patentable.

### 2. Claims in the patent specification concerning computer programs in Vietnam

Even in the cases where a computer program may be patentable, subject matter referred to in claims using terms such as "*computer program*", "*computer software*", "*computer software/program product*", or "*program carrying signals*" is not acceptable. Computer programs may be patented under subject matters such as methods for operating a conventional device, devices programmed to perform functions, and mediums for storing programs that perform functions.

### 3. Principles of evaluating technical features for computer programs for patent protection in Vietnam

In order to patent a computer program, IP VIETNAM's examiners will evaluate whether a computer program has technical features that can produce a technical effect beyond the normal interactions between the program and the computer. Legal provisions on other technical effects, some common signs that contribute to the technical features of the invention in order to produce other technical effects, procedures to deal with computer-related patent applications detailed in Appendix I – Guidelines for determining the subject matter covered by computer-related patents issued by IP VIETNAM and attached to Decision No. 6193/QĐ-SHTT dated December 31, 2021.

Notably, Appendix I has provided quite detailed instructions and examples to assist examiners and rights holders in understanding the principles of evaluating patentability of a computer program. Based on this appendix, the following sections can be used to determine whether a computer program meets the requirements for patent protection in Vietnam.

- (i) Evaluation of the technical features in the formality and substantive examination stages;
- (ii) Other examples of technical efficiency;
- (iii) Some types of objects related to computer programs, including the following 10 types:
  - (1) Implement the mathematical method.
  - (2) Artificial intelligence and machine learning.
  - (3) Simulation, design or modeling.
  - (4) Implementation of scheme, rules and methods of game.
  - (5) Implementation of the business method.
  - (6) Information modeling, programming operations and programming languages.
  - (7) Retrieve data, formats and structures.
  - (8) Database management and information retrieval system.
  - (9) Display information.
  - (10) User Interface.

### 4. Computer programs should be protected under both mechanisms: copyright and patent if possible

Basically, copyrights protect the expression of an idea, not the idea itself, whereas patents safeguard inventions (*any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof*). They are distinct forms of protection, but they are not mutually exclusive. For example, a software invention could be safeguarded by copyrights (*how human expression authored computer-readable code*), patents (*a useful, novel, and non-obvious method, device, or system*), or both.

The intellectual property law of Vietnam does not prohibit the registration of an IP object under two or three distinct protection regimes. In other words, if the object meets the legal requirements for protection, it can be safeguarded through a variety of mechanisms.

Registering a computer program under both copyright and patent can be costly for the owner at the beginning, but from a long-term economic and legal perspective, especially when the problem of IPR infringement is as pervasive and difficult to control as it is today, it can bring more benefits in terms of optimizing the strategy for establishing and enforcing intellectual property rights. Copyright certificates and Computer Program Patents can be complementary tools for enforcing intellectual property rights (IPR) more effectively, with both sanctions (under copyright and patent sanctions) being stronger deterrents.

Copyright arises and is established whenever a work is protected in a particular material form, regardless of whether it is published or unpublished, registered or unregistered. This does not, however, negate the necessity of registering a work in general and a computer program in particular. In contrast, registration of copyright in Vietnam is crucial. A certificate of copyright issued by the Copyright Office is an effective legal instrument and a prerequisite for requesting intervention from the enforcement agency to address infringement. To enjoy the exclusive right to exploit, commercialize, and prevent infringement, the filing of a patent application is mandatory.

If both schemes of protection are chosen for a computer program, the application for copyright should not be filed first. To avoid the risk of a computer program being deemed to have lost its novelty – a requirement that must be met for technical solutions to be protected as patents in Vietnam – they should instead prioritize filing a patent application before or simultaneously with a copyright application.

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