

Regulation of Patent Protection of Computer Programs as Inventions in Indonesia

Asri Sarif¹, IGM Yogiswara Winatha^{2*}

¹Fakultas Hukum, Universitas Halu Oleo, Kendari

²Fakultas Hukum, Universitas Ngurah Rai, Denpasar

*Corresponding: yogiswara.winatha@unr.ac.id

Abstract

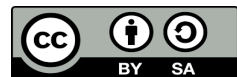
The protection of computer programs in Indonesia has been strictly regulated in the Copyright Law, but the patent obtained by Eddy Tuhirman for his program in 2017 shows that the protection of computer programs in Indonesia is not impossible. This study aims to find out how the regulation of patent protection for computer programs in Indonesia. Using normative juridical research methods, with an emphasis on analysis on applicable legal regulations and other legal sources relevant to the legal issues studied. The results of this study indicate that based on the explanation of Article 4 letter d of Law no. 13 of 2016 concerning Patents, patent protection for computer programs can still be granted on a limited basis. Patent protection is not granted to computer programs which contain only a set of instructions expressed in the form of language, code, schematic or in any other form without having a technical effect. Patents can only be granted for computer programs that have characteristics in the form of instructions, technical effects, and problem solving in the field of technology. In order to provide more legal certainty, it is suggested that the government make stricter and clearer regulations, particularly regarding the types and specifications of computer programs that can be granted patents.

Keywords: Patent; Computer; Programs; Copyrights; Regulation.

Abstrak

Perlindungan atas program komputer di Indonesia telah diatur secara tegas dalam Undang-Undang tentang Hak Cipta, namun Paten yang didapat oleh Eddy Tuhirman atas program ciptaannya pada tahun 2017 menunjukkan, bahwa perlindungan atas program komputer di Indonesia bukan sesuatu yang tidak mungkin. Penelitian ini bertujuan untuk mengetahui bagaimana pengaturan perlindungan paten terhadap program komputer di Indonesia. Menggunakan metode penelitian yuridis normatif, dengan menitikberatkan analisis pada peraturan-peraturan hukum yang berlaku dan sumber hukum lainnya yang relevan dengan isu hukum yang diteliti. Hasil penelitian ini menunjukkan bahwa berdasarkan penjelasan Pasal 4 huruf d Undang-Undang No. 13 Tahun 2016 tentang Paten, perlindungan paten atas program komputer masih dapat diberikan secara terbatas. Perlindungan Paten tidak diberikan kepada program komputer yang hanya berisi seperangkat instruksi yang diekspresikan dalam bentuk bahasa, kode, skema, atau dalam bentuk apapun tanpa memiliki efek teknis. Paten hanya dapat diberikan untuk program komputer yang memiliki karakteristik berupa instruksi, efek teknis, dan pemecahan masalah di bidang teknologi. Untuk lebih memberikan kepastian hukum, disarankan agar pemerintah dapat membuat peraturan yang lebih tegas dan jelas, khususnya mengenai jenis dan spesifikasi program komputer yang dapat diberikan hak paten.

Keywords: Paten; Komputer; Program; Hak Cipta; Peraturan.



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A. INTRODUCTION

Technological development is directed at improving the quality of mastery and utilization of technology in order to support the transformation of the national economy towards an economy based on competitive advantage¹. Existing technological developments must be maximally utilized in all fields in order to provide added value and national competitiveness in the world arena (Explanation of Law Number 13/2016). In order for the support of technological developments to national development to take place consistently and sustainably, it needs to be encouraged by a strong guarantee of legal protection. Such legal protection is needed in order to encourage creators and/or inventors to continue to innovate to create new technologies that are beneficial to the development of society².

As a member of the Paris Convention for the Protection of Industrial Property (Paris Convention), Indonesia provides legal protection for industrial property rights which include patents, models and designs, industrial designs, and trademarks in order to prevent unfair business competition (Paris Convention, Summary, 1883). In addition, based on the Agreement Establishing the World Trade Organization which also includes the Agreement on Trade Related Aspects of Intellectual Property Rights, Indonesia guarantees the protection of intellectual property by ratifying the international agreement through Law No. 7 of 1994. Indonesia has also ratified the Berne Convention for the Protection of Artistic and Literary Works through Presidential Decree No. 18 of 1997 and the World Intellectual Property Organization Copyrights Treaty (WIPO Copyright Treaty), here in after abbreviated as WCT, through Presidential Decree No. 19 of 1997³.

Patents, as exclusive rights, are granted by the state to inventors for their inventions in the field of technology for a certain period of time to implement the invention themselves or give approval to other parties to implement it (Article 1 paragraph (1) of Law 13 of 2016). However, although computer programs are understood as one of the intellectual property in the field of

¹ Tri Hidayati, "Paten Dan Kosmopolitanisme Islam: Problematika Di Perguruan Tinggi Islam," *Nurani: Jurnal Kajian Syari'ah Dan Masyarakat* 19, no. 1 (June 2019): 127–46, <https://doi.org/10.19109/nurani.v19i1.3162>; Raden Ani Eko Wahyuni and Muhammad Zainuddin, "Politik Hukum Pembentukan Pasal 20 Undang-Undang Tentang Paten Di Indonesia Dalam Perspektif Hak Kekayaan Intelektual," *Journal of Judicial Review* 23, no. 2 (December 2021): 171, <https://doi.org/10.37253/jjr.v23i2.4958>.

² Hari Sutra Disemadi, Raihan Radinka Yusuf, and Novi Wira Sartika Zebua, "Perlindungan Hak Eksklusif Atas Ciptaan Digital Painting Dalam Tatanan Hak Kekayaan Intelektual Di Indoensia," *Widya Yuridika: Jurnal Hukum* 4, no. 1 (2021): 41–52, <https://doi.org/10.31328/wy.v4i1.1834>.

³ Taufik H. Simatupang, "Sistem Hukum Perlindungan Kekayaan Intelektual Dalam Rangka Meningkatkan Kesejahteraan Masyarakat," *Jurnal Penelitian Hukum De Jure* 17, no. 2 (June 2017): 195, <https://doi.org/10.30641/dejure.2017.V17.195-208>.

technology⁴, their protection is expressly regulated in Law Number 28 of 2014 concerning Copyright (Copyright Law)⁵. A computer program in the Copyright Law is defined as a set of instructions expressed in the form of language, code, scheme, or in any form intended to make a computer work to perform certain functions or to achieve certain results. Furthermore, the protection of computer programs is stated more explicitly in Article 40 paragraph (1) letter s as a creation in the field of science protected by copyright⁶.

In the last five years, there have been many studies conducted related to the legal protection of intellectual property of computer programs, among others, research by Abdul Rauf, Annah, and Hardi entitled Legal Protection of Computer Programs in Indonesia. The results of the study focused on the legal protection of computer programs through copyright⁷. In addition, Gabrie Chriesta Agusthie Kansil has also conducted research related to the legal protection of computer programs related to criminal acts of piracy through the perspective of copyright law. Other research conducted by I Gede Ari Krisnanta Permana, Ratna Artha Windari, and Dewa Gede Sudika Mangku also discussed the legal protection of computers through copyright⁸. These studies strengthen the understanding that computer programs in Indonesia are only protected by copyright.

To the best of the author's knowledge, research that focuses on the issue of regulating the Legal Protection of Patent Rights on Computer Programs as Invention has never been conducted. Although there have been similar previous studies, namely those conducted by Faik Rahimi in his thesis entitled Patent Protection of Computer Programs Related to Invention in Indonesia.

In several previous studies, there were several innovations, including mentioning that, in Indonesia, computer programs are protected by intellectual property rights, namely patents in accordance with the words of article 1 paragraph (1) of Law no. 13 of 2016, which states that patents as exclusive rights are granted by the state to inventors for their inventions in the field of technology for a certain period of time to carry out the invention themselves or to give approval to other parties to carry it out. However, among the innovations that exist, there are some differences between the studies that have been carried out. Among them is research conducted by Abdul Rauf, 2021 where the research results are focused on legal protection of computer programs through copyright. Apart from that, Gabrie Chriesta Agusthie Kansil has also conducted research related to the legal protection of computer programs related to the criminal act of piracy through the perspective of copyright law. Another study conducted by I

⁴ anik Marfistasari, Ennys Kurniawati, And Badzlina Putri Indraswati, "Paten Terhadap Aplikasi Program Komputer Berbasis Financial And Technology Di Indonesia," *Jurnal Hukum Bisnis* 3, no. 1 (May 2019): 71–87, <https://doi.org/10.31090/hukumbisnis.v3i1.834>.

⁵ Faik Rahimi, "Perlindungan Paten Atas Program Komputer Yang Berhubungan Dengan Invenisi Di Indonesia" (Universitas Islam Indonesia, 2014).

⁶ Maya Jannah, "Perlindungan Hukum Hak Kekayaan Intelektual (Haki) Dalam Hak Cipta Di Indonesia," *Jurnal Ilmiah Advokasi* 6, no. 2 (October 2018): 55–72, <https://doi.org/10.36987/jiad.v6i2.250>.

⁷ Abdul Rauf, Annah Annah, and Hardi Hardi, "Perlindungan Hukum Terhadap Program Komputer Di Indonesia," in *SISITI: Seminar Ilmiah Sistem Informasi Dan Teknologi Informasi*, vol. 10, 2021, 31–40.

⁸ I Gede Ari Krisnanta Permana, Ratna Artha Windari, and Dewa Gede Sudika Mangku, "Implementasi Undang-Undang Nomor. 28 Tahun 2014 Tentang Hak Cipta Terhadap Perlindungan Karya Cipta Program Komputer (Software) Di Pertokoan Rimo Denpasar," *Jurnal Komunitas Yustisia* 1, no. 1 (September 2020): 55, <https://doi.org/10.23887/jatayu.v1i1.28660>.

Gede Ari Krisnanta Permana, Ratna Artha Windari, and Dewa Gede Sudika Mangku also discussed computer legal protection through copyright.

The research still uses the old legal basis, namely, Law Number 14 of 2001. Meanwhile, this research uses the latest legal basis, namely Law Number 13 of 2016 concerning Patent Rights. This research is conducted to find out how computer programs can be protected by patents in Indonesia based on Law Number 13 of 2016. It is hoped that the results of this research can academically provide new legal knowledge for the world of education and practically support the development of national technology.

B. METHOD

This study employs a normative juridical method, which is one of the approaches that focuses the analysis on the applicable legal regulations relevant to the researched legal issues⁹. The objective of this method in the study is to ascertain how the regulation on patent protection for computer programs in Indonesia is formulated, and subsequently analyze the findings descriptively while considering the shortcomings present in the said regulations.

C. RESULTS AND DISCUSSIONS

Based on the Paris Convention, Patent is recognized as industrial property that must be protected by each member state. The State of Indonesia has regulated legal protection of patent rights since 1989 through Law Number 6 of 1989 and has been amended several times to date with the latest Law, namely Law Number 13 of 2016 concerning Patents (Patent Law)¹¹. It is stated that a patent is an exclusive right granted by the state to inventors for the results of their inventions in the field of technology for a certain period of time to carry out the invention itself or give approval to other parties to carry it out (Article 1 paragraph (1) of the Patent Law). With the existence of patent protection, the community will appreciate the invention more¹². Invention is defined as an inventor's idea that is poured into a specific problem-solving activity in the field of technology in the form of a product or process, or the refinement and development of a product or process¹³.

To be granted Patent protection, the invention must have novelty, contain inventive steps and be applicable in the industry¹⁴. The legal protection system for Patent rights adheres to the

⁹ Kornelius Benuf and Muhammad Azhar, "Metodologi Penelitian Hukum Sebagai Instrumen Mengurai Permasalahan Hukum Kontemporer," *Gema Keadilan* 7, no. 1 (2020): 20–33, <https://doi.org/10.24246/jrh.2019.v3.i2.p145-160>.

¹⁰ Nur Putri Hidayah, Quincy R Cloet, and David Pradhan, "The Implementation of Labor Development Principles According to Job Creation Law as a Reason to Protect Wages Rights," *Bestuur* 9, no. 1 (2021): 68–76, <https://doi.org/https://dx.doi.org/10.20961/bestuur.v9i1.49252>.

¹¹ Sutarman Yodo, "Perlindungan Hak Paten (Studi Komparatif Lingkup Perlindungan Di Berbagai Negara)," *FIAT JUSTISIA: Jurnal Ilmu Hukum* 10, no. 4 (May 2017): 697, <https://doi.org/10.25041/flatjustisia.v10no4.821>.

¹² Lu Sudirman and Hari Sutra Disemadi, "Comparing Patent Protection in Indonesia with That in Singapore and Hong Kong," *Legality: Jurnal Ilmiah Hukum* 29, no. 2 (2021): 200–222, <https://doi.org/10.22219/ljih.v29i2.15680>.

¹³ Yayuk Whindari, "Pengaturan Invensi Pegawai (Employee Invention) dalam Hukum Paten Indonesia," *El-Mashlahah* 8, no. 1 (May 2019), <https://doi.org/10.23971/el-mas.v8i2.1317>.

¹⁴ Mastur Mastur, "Perlindungan Hukum Hak Kekayaan Intelektual Dibidang Paten," *Qistie* 6, no. 1 (January 2012), <https://doi.org/10.31942/jqi.v6i1.545>; Jerry I.-H. Hsiao, "Patent Protection for Chinese Herbal Medicine Product Invention in Taiwan," *The Journal of World Intellectual Property* 10, no. 1 (January 2007): 1–21, <https://doi.org/10.1111/j.1422-2213.2007.00311.x>; David Encaoua, Dominique Guellec, and Catalina Martínez,

constitutive system or first to file system¹⁵. Patent rights are only obtained if the invention has been registered and has met the administrative requirements through examination by the Directorate General of Intellectual Property Rights¹⁶. An invention is considered new, if at the Filing Date, it is not the same as previously disclosed technology. The meaning of the word not the same, is not just different, but must have a difference from the function of the technical characteristics of the Invention when compared to the function of the technical characteristics of the Invention that has existed before.

The invention does not include aesthetic creations; schemes; rules and methods for performing activities that involve mental activity, games, business, rules and methods that only contain computer programs, presentations of information. It also does not include inventions in the form of new uses for existing and/or known products and/or new forms of existing compounds that do not result in a significant increase in efficacy and there are differences in the related chemical structures of known compounds.

An Invention is considered to contain an inventive step if the Invention would be unforeseeable to a person skilled in the field of engineering. In addition, an invention must be applicable to industry, meaning that an invention in the form of a product must be capable of being made in a mass-produced manner with the same quality, while if the invention is in the form of a process, the process must be capable of being carried out or used in practice. It should be understood that there are several inventions that are not granted patent protection, namely inventions in the form of processes or products whose announcement and use or implementation are contrary to applicable laws and regulations, religious morality, public order, or decency. Furthermore, inventions in the form of methods of examination, treatment, medication and/or surgery applied to humans and/or animals. Third, theories and methods in the fields of science and mathematics; or (i) all living things, except microorganisms (ii) biological processes essential for producing plants or animals, except non-biological processes or microbiological processes.

Patent protection in Indonesia includes ordinary patents and simple patents. While ordinary patents are granted for inventions that contain novelty and inventive steps, simple patents are granted for inventions that are developments of existing inventions¹⁷. However, the simple patent must have a function that is more effective than the prior art. Based on Article 22 and Article 23 of the 1945 Patent Law, the term of protection granted to ordinary patents is 20 years from the date of grant, while that of simple patents is 10 years. Different from other intellectual property rights, the term of patent protection cannot be extended¹⁸. If the term of

“Patent Systems for Encouraging Innovation: Lessons from Economic Analysis,” *Research Policy* 35, no. 9 (November 2006): 1423–40, <https://doi.org/10.1016/j.respol.2006.07.004>.

¹⁵ R. Murjiyanto, “Konsep Kepemilikan Hak Atas Merek Di Indonesia (Studi Pergeseran Sistem ‘Deklaratif’ Ke Dalam Sistem ‘Konstitutif’),” *Jurnal Hukum Ius Quia Iustum* 24, no. 1 (January 2017): 52–72, <https://doi.org/10.20885/iustum.vol24.iss1.art3>.

¹⁶ Ni Kadek Wedayanti Ari Suputri and Ida Ayu Sukihana, “PRINSIP NEW AND NOVELTY DALAM PERLINDUNGAN PATEN DI INDONESIA,” *Kertha Semaya : Journal Ilmu Hukum* 8, no. 8 (August 2020): 1240, <https://doi.org/10.24843/KS.2020.v08.i08.p11>.

¹⁷ Annisaa Rahmadinia Adi Rizqita, U. Sudjana, and Helitha Novianthy Muchtar, “Kriteria Unsur Kebaruan Pada Pendaftaran Paten Sederhana Berdasarkan Undang-Undang Nomor 13 Tahun 2016 Tentang Paten,” *Jurnal Sains Sosio Humaniora* 6, no. 1 (June 2022): 597–605, <https://doi.org/10.22437/jssh.v6i1.19727>.

¹⁸ Sudirman and Disemadi, “Comparing Patent Protection in Indonesia with That in Singapore and Hong Kong.”

protection of patent rights has expired, the invention will become public property. This is intended so that every invention can be useful for the public interest and technological development.

Copyright Law defines a computer programs as a set of instructions expressed in the form of language, code, scheme, or in any form intended to make the computer work perform certain functions or to achieve certain results. in Article 40 Paragraph (1) letter s expressly states that the computer program as a creation in the field of science granted copyright protection. Based on the nature of the declarative automatic protection of copyright, then any computer program that has been realized in real and announced, then at that time copyright protection applies¹⁹.

The results of studies conducted by Muhammad Taufik Rusydi²⁰ showed that the State of Indonesia provides protection to computer programs through Act No. 28 Year 2014 on Copyright with a term of protection for 50 years since the computer program is realized and announced. Holders of rights to computer programs (software) have several exclusive rights including²¹:

- a. The right to reproduce a computer program (software) in material form. This right includes copying the computer program (software) on a computer hard disk or flash drive, writing or recording the source code of the computer program (software).
- b. The right to publish a computer program (software), this means making the computer program (software) public in Indonesia.
- c. Creating an adaptation of the program, this means creating another version of the program, such as creating another language, code or notation of the computer program (software).

The debate on how a computer program should be protected as an invention in the field of technology still occurs frequently. The legal protection provided by copyright and patent has a different character. Copyright does not give monopoly rights to the copyright holder of a computer program on how the computer program works, but protection is given to prohibit other parties from copying the expression of instructions on computer programs that can be applied in computer devices²². In contrast to the protection of Patent rights that give the inventor the right to monopolize the invention within a certain period of time, namely implementing his own invention or giving permission to other parties to implement it.

Copyright only covers expressions, and not ideas, procedures, methods of operation or mathematical concepts. whereas patents are exclusive rights granted for inventions, which are products or processes that provide a new way of doing something, or offer a new technical solution to a problem (www.wipo.int). Article 4 letter d of Law 13 of 2016 on Patents in Indonesia states that one of the inventions that are not granted patent protection is a rule or

¹⁹ Neni Sri Imaniyati, "Perlindungan HKI sebagai Upaya Pemenuhan Hak Atas IPTEK, Budaya Dan Seni," *Jurnal Media Hukum* 17, no. 1 (2010).

²⁰ Muhammad Taufik Rusydi, "Perlindungan Hukum Terhadap Pencipta Perangkat Lunak Komputer," *Jurnal Fundamental Justice*, October 2022, 113–24, <https://doi.org/10.30812/fundamental.v3i2.2244>.

²¹ Krisnanta Permana, Artha Windari, and Sudika Mangku, "Implementasi Undang-Undang Nomor. 28 Tahun 2014 Tentang Hak Cipta Terhadap Perlindungan Karya Cipta Program Komputer (Software) Di Pertokoan Rimo Denpasar."

²² Krisnanta Permana, Artha Windari, and Sudika Mangku.

method that only contains a computer program. This strengthens the notion that computer programs cannot be protected by patents.

However, if we read the explanation of the article, we can see that a computer program that is not granted a patent is a computer program that only contains a program without any character, technical effect, and problem solving. If the computer program has characters (instructions) that have technical effects and functions to produce tangible or intangible solutions to problems, it is patentable.

The explanation of Article 4 letter d of Law 13 of 2016 concerning Patents, it also provides examples of the types of computer programs that can be granted patents, namely:

- a. An algorithm is effectively a method expressed as a finite sequence of well-defined instructions for computing a function. Starting from an initial state and an initial (possibly empty) input, the instructions describe a computation that, when executed, proceeds through a finite number of well-defined sequences of states, eventually producing "output" and stopping at the final state. The transition from one state to the next is not necessarily deterministic; some algorithms, known as randomization algorithms, use random inputs. Based on the foregoing, it can be understood that computer programs in Indonesia can still get patent protection, it's just that the requirements are more difficult than copyright.
- b. Encrypting information by encoding and decoding to scramble it so that the information cannot be read by other parties.

The title of the invention in a patent application, according to Article 5 of the Minister of Law and Human Rights Regulation No. 38/2018 on Patent Applications, is not a title that contains promotional words or trademarks. The title of the invention must describe the invention broadly and represent the topic of the invention or the core of the invention with reference to the technical field of the invention as the subject matter of the invention. Here is an example of a computer program that has been granted patent protection:

Table 1. Examples of computer program inventions

Patent Num.	IDP000047740
Date of Patent Grant	2017-09-12
Patent Holder	Edy Tuhirman
Patent Title	<i>Sistem dan Metode Keseimbangan Dinamis untuk Mengkombinasikan dan Menjalankan Strategi Investasi secara Otomatis</i> (Dynamic Equilibrium System and Method for Automatically Combining and Executing Investment Strategies)
Abstract	The dynamic rebalancing method is a method for combining investment strategies automatically performed by a host computer, comprising asset rebalancing asset trading, and reinvesting (Automatic Asset Rebalancing, Automatic Trading Plan, and Automatic Re-reentry). In addition, the present invention also creates a mechanism for automation by the host computer of the three investment strategies, comprising: automatic asset rebalancing, automatic asset trading, and automatically determining the momentum to reinvest. The host computer will monitor and maintain the movement of the investment fund portfolio in real time so that it is always

within the desired portfolio boundaries consistently and systematically. This invention is used as an early warning for investors in maintaining the balance of their portfolios and also provides convenience for investors to make the desired investment transactions automatically and consistently to maintain the balance of the customer's portfolio in accordance with the chosen risk.

Based on the example of a computer program that has been granted Patent Protection Number: IDP000047740, it can be seen that the title of the requested computer program describes the character and technical effects as well as the purpose of solving the problem. In drafting the patent abstract, the applicant must also be able to explain the technical effects of the computer program. From the analysis above, computer programs in Indonesia are entitled to patent protection, by fulfilling the conditions listed in the table above. Computer programs which are creations that must be protected. As a result of technological development and the intellectual abilities of its creators, computer programs often function to make it easier for humans to carry out certain activities.

D. CONCLUSION

Based on the results of this study, it can be concluded that patent protection for computer programs in Indonesia has not been expressly regulated in Law 13 of 2016 concerning Patents. However, based on the explanation of Article 4 letter d of Law No. 13 of 2016 on Patents, it can be understood that Patent Protection on computer programs can be granted on a limited basis for computer programs that have characteristics in the form of instructions, technical effects, and problem solving in the field of technology. It is suggested that the government can make firmer and clearer regulations, especially regarding the types and specifications of computer programs that can be granted patents.

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