LEGAL IMPLICATIONS OF AI-GENERATED WORKS ON INTELLECTUAL PROPERTY SUBJECTS AND EXCLUSIVE RIGHTS IN INDONESIA

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Abstract

This study aims to understand how Artificial Intelligence (AI) is regulated in various laws and regulations concerning Intellectual Property (IP) as a legal subject in Indonesia, as well as to examine the implications of AI on the exclusive rights of IP works. This article applies a normative juridical research approach. The findings reveal that current Indonesian legislation has not yet accommodated AI as a legal subject. As a consequence, the exclusive rights to IP works produced by AI programs are held by the users of the respective AI programs, in line with the 'Terms and Conditions' of each AI program. The impact of this research contributes to the conceptual understanding of AI's legal position in Indonesia's IP. It highlights the urgency of responsive legal policies, particularly regulatory updates, to address AI-related challenges in IP creation, ensuring legal certainty, protecting exclusive rights, and promoting fairness for all parties involved.

Keywords: Intellectual property; Copyright law; Patent law.

Abstrak

Penelitian ini bertujuan untuk mengetahui bagaimana pengaturan Artificial Intelligence (AI) dalam berbagai peraturan perundang-undangan mengenai Kekayaan Intelektual (KI) sebagai subjek hukum di Indonesia, serta mengetahui implikasi AI terhadap hak eksklusif karya KI. Menggunakan pendekatan penelitian yuridis normatif, hasil penelitian menunjukkan bahwa dewasa ini peraturan perundang-undangan di indonesia belum mengakomodasi AI sebagai subjek hukum. Konsekuensinya, hasil karya KI yang dihasilkan oleh program AI hak eksklusifnya dimiliki oleh pengguna dari program AI yang bersangkutan sesuai dengan 'Term and Conditions' masing-masing program AI. Dampak dari penelitian ini memberikan kontribusi pemahaman konseptual mengenai posisi hukum AI dalam KI di Indonesia, serta memberikan gambaran mengenai urgensi perumusan kebijakan hukum yang responsif dengan perkembangan teknologi, terutama perihal pentingnya pembaruan regulasi yang mampu menjawab tantangan keberadaan AI dalam proses penciptaan sebuah karya KI untuk menjamin kepastian hukum, perlindungan hak eksklusif, dan keadilan bagi para pihak yang terlibat.

Kata Kunci: Kekayaan intelektual; Hukum hak cipta; Hukum paten.

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INTRODUCTION

The development of technology has implications for changes, from the smallest to the largest, in various spheres of life. Technological developments are not discriminatory, meaning that they can occur in small, large, developed, or developing countries. Technological development begins with the desire to make human activities easier, even though the results can be good or bad. In the last few decades, the development of technology has created a disruptive change with the emergence of *Artificial Intelligence* (AI) (Mahardhika, Astuti, and Mustafa, 2023, 1). AI is not a term that has been around lately. Based on the literature, we can find that the term "AI" has been around since the 1950s (Dwivedi et al., 2023, 2). The birth of AI was marked by John McCarthy coining the term "*Artificial Intelligence"* at a conference at Dartmouth University in 1956 (Xu et al., 2021, 2).

Like other technologies, AI can be used as a tool that helps humans carry out their activities. This can be seen from the early days of research on AI, which focused on the function of robots in manufacturing and the automation of industrial development (Xu et al., 2021, 2). The existence of AI allows humans to solve complex problems consistently and more easily, which will help increase human productivity (Chairani, Pradhana, and Purnama, 2022, 39). In its development, AI produces a type of AI called *Generative AI* (GAI). GAI is not only used as a tool for humans to carry out their activities but is also used to produce a product, especially an artistic one, independently by imitating the way the human brain works (Mayana et al., 2024, 55). GAI consists of *generative modelling,* an AI technique that produces artificial products based on analysis of existing examples. *Deep learning* (DL) and *generative modeling* produce content by utilizing existing media, such as text, images, audio, and video (Jovanovic and Campbell, 2022, 107).

GAI, which is conceived as a sub-discipline of AI, can produce new content by using the previously mentioned media. The existence of this GAI creates a new way of making and consuming content. A musician, for example, can produce unique new content by utilizing other content as analytical material with the help of GAI (Mondal, Das, and Vrana 2023, 1-4). Popularized by ChatGPT, this GAI technology developed by OpenAI since its appearance in November 2022 gained 1 million users in the first 5 days and 100 million after 2 months (Lim et al., 2023, 2). Although ChatGPT has received a lot of attention, it is not the first text-based AI. Previously, there was Google's BERT and OpenAI's GPT-3, which was released a few years earlier. In addition, in the same year ChatGPT was released, several GAI platforms were also released, such as DALL-E, Midjourney, and Stable Diffusion (Mondal, Das, and Vrana, 2023, 3).

The ability of AI, or more specifically, GAI, has a significant influence on content creation. By way of illustration, AI can create an artistic product, such as music, effortlessly with just a text-based command, where the results are indistinguishable from those made by humans (Mayana et al., 2024, 55). It will certainly intersect with the scope of intellectual property (IP), as machines have become intelligent and increasingly capable of making creative and innovative choices based on random algorithms, making the "intellectual" aspect of IP more confusing (Lee, Hilty, and Liu, 2021, 1). This intersection between AI and IP has sparked many great academic discussions and debates (Picht, Brunner, and Schmid, 2022, 2). One of the discussions was about whether AI can be the legal subject of an IP creation, meaning that AI can have rights and obligations from the creation of an IP work. The increasingly sophisticated AI technology is the reason why discussions were held.

The issue of AI as a legal subject in a case can be exemplified by the registration of DABUS's application as the inventor of a patent by Dr. Thaler. In 2018, Dr. Thaler registered DABUS as the

inventor of his invention in several countries, including the United Kingdom, the US, Germany, Australia, South Korea, Japan, Canada, New Zealand, Taiwan, and others. The majority of the countries in which the application was registered rejected it. The reason for the rejection is based on the rule that AI cannot be an inventor; only humans can be registered as inventors. South Africa and Australia are two countries that accept applications for registration as inventors of a patent (Matulionyte, 2022, 3). Further developments: In 2020, the United States took steps to regulate AI. The first federal legislation on AI has been enacted over the past few Congresses, either as stand-alone legislation or as AI-related provisions and clauses in the *National Artificial Intelligence Initiative Act of* 2020 (European Parliament, 2024).

In the following year, 2021, Singapore amended its copyright law by adding a computational data analysis (CDA) exception, which allows the use of copyrighted material for data analysis and machine learning with certain conditions. These provisions are designed to support data-driven innovation and to respond to technological and market developments in the digital economy. They also serve as useful tools to address some of the legal issues of AI (Red Smith, 2024). On March 13, 2024, the European Parliament adopted *the AI Act*. This rule will comprehensively introduce the regulation of the use of AI in Europe, making it the first major economic bloc to regulate this technology (Hunton, 2024). Parliament's priority is to ensure that the AI systems used in the EU are safe, transparent, traceable, non-discriminatory, and environmentally friendly. AI systems must be supervised by humans, not by automation, to prevent adverse impacts (European Parliament, 2025).

Indonesia does not yet have a formulation of legal regulations regarding AI in general, let alone AI as a legal subject. There is a legal vacuum in the realm of AI in the Indonesian legal system that must be considered (Mahardhika, Astuti, and Mustafa, 2023, 4). In fact, in 2023 alone, Indonesia will become the third largest contributor to visits to AI applications with 1.5 billion visits (Databoks, 2025). In addition to patents, the use of application-based AI, in its development, has also entered the realm of music design and creation.

Vizcom is an artificial intelligence (AI)-based software designed to support graphic designers and artists in producing high-quality, high-efficiency images. The app, which is browser-based and requires no downloads, is capable of converting basic sketches into HD images in seconds. In addition, Vizcom can interpret text, digital sketches, and scanned images to produce realistic artwork. With its ability to automate various design processes, Vizcom is a relevant tool in the world of graphic design, both for personal and professional purposes (Softonic, 2023).

Suno AI, commonly known as Suno, is a GAI program for music creation designed to produce realistic songs that combine vocals and instruments, or just instruments. The program operates by creating songs based on text commands provided by the user. Suno has been widely available since December 20, 2023, following the launch of a web app and a partnership with Microsoft, which included Suno as a plugin in Microsoft Copilot (Wikipedia, 2025).

The massive use of AI should become a major concern for the government and legislators to make regulations regulating AI. The ability of AI to carry out an IP creation process is another reason why regulations regarding AI are needed. There is a crossroads between AI and IP, as previously explained. The interaction of AI and IP results in at least two questions: how to regulate AI in various IP laws and regulations as a legal subject in Indonesia, and what are the exclusive rights to IP works produced by AI? Based on that, this study aims to analyze and answer these two questions, as there is still a legal vacuum regarding AI as a subject of IP that is specifically regulated.

METHOD

The method used in this study is normative juridical. E. Saefullah Wiradipradja defines normative juridical as legal research that examines positive legal norms as its object of study. This method is typically employed for studying documents that utilise legal sources, including laws, court decisions, contracts/agreements, legal theory, and doctrine. This method is also referred to as library research, since this type of research primarily relies on secondary data found in libraries (Wiwik Sri Widiarty, 2024, 27).

This study employs the statute approach, which is carried out by examining all laws and regulations related to the legal issue being researched. The statute approach views law as a closed system characterized by being comprehensive, all-inclusive, and systematic (Wiwik Sri Widiarty, 2024, 119).

RESULT AND DISCUSSION

1. AI as a Subject in the IP Legal System in Indonesia

Currently, IP plays an important role in supporting economic development, especially in the process of creating innovation. IP gives rewards to creators, which have an impact on economic growth and the progress of human civilization (Sudjana, 2017, 75). Especially with the global recognition contained in the Universal Declaration of Human Rights, the International Covenant on Economic, Social, and Cultural Rights, as well as recognition by the state through the 1945 Constitution. This further strengthens the understanding that a creation has benefits for human life (*life worthy*) and has economic value, which in turn gives birth to the concept of wealth, rights, and legal protection. These three concepts are inseparable from the term “IP,” where “property” refers to the right of ownership of legally protected objects (Edy Damian, 2009, 16).

Based on this, other parties are prohibited from exercising these rights without permission from the owner. Meanwhile, the term "intellectual" refers to human cognitive activities that involve the ability to think and create, which are manifested in the form of literary works, art, science, and the discovery of physical objects. Thus, the individual who created it is naturally entitled to the property (Sudjana 2017, 60). It is because the creation of such intellectual properties involves the sacrifice of time, effort, and cost, which makes them have economic value. Therefore, IP is a new form and development of conventional property rights to objects that are not physically visible (Muhammad Amirulloh and Helitha Novianty, 2016, 4).

Thus, the existence of IP cannot be separated from a party that is legally recognized as an entity that "produces" or has rights to the work or innovation. In this context, IP is closely related to who has the right to claim and own the rights to the invention or invention, as well as who is authorized to take legal action related to these rights, such as granting licenses, transferring rights, or filing a lawsuit against infringement of rights. The legal concept behind it asserts that without legal recognition of the subject who has the rights, a work or invention will not get legal protection or status. Likewise, in law in general, the concept of legal subjects has a fundamental role.

With regard to entities that can produce intellectual works, AI has evolved from something that was once considered just science fiction to scientific reality because it now has capabilities that were previously only imaginable, as seen in movies or fictional stories. Marshal S. Willick states that "AI can be defined as the ability of a device to perform functions normally associated with human intelligence, such as reasoning, learning, and self-improvement" (Willick 1983, 6). Based on this statement, it can be concluded that AI now has the ability to move and produce, predict and choose,

learn, understand, and interpret information, analyze and determine the best moves, and is able to perceive and feel emotions.

Peter Norvig and Stuart Russell provide 4 divisions to the definition of AI: *thinking humanly, thinking rationally, acting humanly,* and *acting rationally* (Russell and Norvig, 2019, 2-4). *Thinking humanly* means AI is an effort to make computers think or have a human-like mind with the ability to decide, solve problems, and learn. *Thinking rationally* defines AI as the study of mental abilities through computer models so that they can perceive, reason, and act. *Acting humanly* defines AI as an art to make machines/computers can act like humans. Meanwhile, *Acting rationally* means AI is a study of the design of intelligence agencies (Russel and Norvig, 2019, 2-4).

Currently, there are 3 types of AI: *Artificial Narrow Intelligence* (ANI), *Artificial General Intelligence* (AGI), and *Artificial Super Intelligence* (ASI). ANI, commonly called weak AI, is a form of AI that shows intelligence capabilities in certain domains such as playing chess, language translation, and weather prediction. AGI, also called AI with a strong level, is an AI that has the same level of intelligence as humans. ASI is the highest level of AI that focuses more on building a machine that exceeds human capabilities in several areas (Abioye et al., 2021, 2).

Thus, AI increasingly exhibits similarities to its creators, the humans. As a result, it is challenging to distinguish between products produced by human-made technology and those made by AI, as AI has been shown to possess capacities that are sometimes similar, both mentally and physically, to those found in humans. Many people also believe that AI has this ability. The increasing similarities between humans and AI will eventually raise the need for recognition that AI is a legal subject.

Duguit argues that "the meaning of the subject of law generally refers to those who can be the holders of subjective rights, and only individuals with a conscious will in this world are subjects of law." Kelson defines a legal subject as "the subject of a legal obligation or right" (Wen and Tong 2023, 77). The subject of law in carrying out legal acts has authority that is divided into two. First, the authority to have rights (*rechts-bevoegdheid*). Second, the authority to carry out legal acts and the factors that affect them (Prananingrum, n.d., 74). The subject of law, as the party with legal authority, is a key element in the legal system, including in civil law (Rosnidar Sembiring, 2016, 7). The classification of legal subjects in legal *concepts* is divided into two, namely human beings, or often referred to as *natuurlijk persoon,* i.e., people in the form of personal human beings, and legal entities, or often called *rechts persoon,* i.e., something that is considered as a person, or a person who is created by the law in fiction (*persona ficta*).

In the context of human beings as subjects of law, Kant views rationality as the ability of human beings to understand objective laws and the natural world, as well as the ability to recognize moral norms and legal rules that direct their behavior. In Kant's view, man has two natures: first, as a biological being with flesh, blood, and desire, man is a part of nature, subject to the laws of nature, and lives in a state of unfreedom due to the influence of natural laws; second, as a being of higher thinking ability, man is a rational being who can understand and change the world so that he can break free from the constraints of the laws of nature and follow the norms of rational law to become a free and disciplined ethical subject, and man himself is the goal of this process (Wen and Tong 2023, 78-79).

This also makes human beings subject to law in two senses: they are lawmakers, but also executors of moral laws that are subject to the laws they make. Based on rational guidance, humans can make decisions based on various situations and reason so that they can become legal subjects who hold legal rights. The subject of law is not only a rational one but also has free will. Puchta states that "man

is a subject of law because he is entitled to the possibility of determining his own destiny, and because he has a certain will" (Wen and Tong, 2023, 78-79).

Meanwhile, a legal entity, according to Molengraaff, is essentially the rights and obligations of its members together, and they have a common property that cannot be divided. Each member is not only the owner of his or her share in an indivisible entity but also the joint owner of the entire property, which means that each member is also the owner of the property organized in that legal entity (Neni Sri Imaniyati, 2009, 124). Legal entities (*rechtspersoon*) emerge as a legal necessity in social interactions, where human beings have personal and common interests that need to be fought for collectively. They form organizations, elect administrators, unite wealth, and set internal rules. In the legal context, this group is considered a new entity that has rights and obligations and can act legally on its own behalf.

In this case, the subject of law is a party who can have rights and obligations protected by law, including the right to IP. Therefore, recognition of legal subjects in IP is crucial, as it provides a clear basis for who the creator or the innovator is and how these rights can be maintained and protected through the legal system that applies in Indonesia. Opinions regarding the status of the legal subject of AI generally fall into the following categories (Wen and Tong, 2023, 75-76):

First is the negative theory. This theory argues that AI is only an object of legal relations and should not be given status as a legal subject. Since the development of AI does not profoundly challenge traditional legal subject theories, we should stick to traditional theories in the short term and not define them as legal subjects.

Second is the positive theory. This theory argues that AI should have qualifications as a legal subject, including agent theory, fictitious personality theory, electronic personality theory, and other specific types. Scholars who support the positive theory believe that with the rapid development of AI, it will be widely used in all areas of society and can independently influence the rights and obligations of others. As society has evolved, the subject has passed the boundaries of the natural person, and many non-natural entities have been gradually qualified as "human" in law based on the needs of lawmakers, as well as gaining the status of legal subjects. The trend of "non-humans being seen as human beings in law" is further strengthened, which explains why *humanoid robots* have qualified as legal subjects. It is similar to a legal entity. Since legal entities can have legal personalities, AI must also have legal personalities. This is not only a law inherent in the development of rights but also an inevitable trend in the development of society to recognize and grant subject status to robots. Giving legal personality to non-human writers/inventors will give humanity a new impetus to harness animal creativity and AI.

Third is the theory of compromise. This theory is also known as the limited legal personality theory of AI. This theory argues that AI has a legal personality, but its personality is specific, and the scope of its rights and obligations is limited compared to other legal subjects. The "limited legal personality theory" argues that the essence of AI is a tool, and its attributes that serve the development of human society are immutable. However, AI has independent and autonomous behavioral capabilities, which must be given legal personality. Because the consequences of AI's accountable behavioral capabilities are limited, it is considered to have a limited legal personality, and is applied to specific laws.

Currently, Indonesia does not have regulations that generally regulate AI, especially regarding the status of AI as a legal subject in an IP work. The position of AI is still not specifically regulated. To understand the rules of AI as a legal subject of IP owners, it must refer to the provisions that apply in the current IP legal system that regulate entities that can produce IP, either as creators, inventors, and *designers* in various types of IP, which are explained as follows:

Table 1. Comparison of Regulations on the Subject of *Inventors*, *Creators*, and *Designers* in Indonesia

Types of Intellectual Property	Governing Laws	Contents of the Rules
Patent	Article 1, Number 3 of Law Number 65 of 2024 concerning the Third Amendment to Law Number 13 of 2016 concerning Patents	An inventor is a person or persons who jointly implement the ideas poured into the activities that produce the invention.
	Article 1, number 13 of Law Number 13 of 2016 concerning Patents	A person is a natural person or a legal entity.
Copyright	Article 1, number 2 of Law Number 28 of 2014 concerning Copyright.	A creator is a person or people who individually or jointly produce a creation that is distinctive and personal.
	Article 1, number 27 of Law Number 28 of 2014 concerning Copyright	A person is a natural person or a legal entity
Industrial Design and Integrated Circuit Layout Design	Article 1, number 2 of Law Number 31 of 2000 concerning Industrial Design	A designer is a person or people who produce industrial designs.
	Article 1, number 3 of Law Number 32 of 2000 concerning Integrated Circuit Layout Design	A designer is a person or people who produce an Integrated Circuit Layout Design.

Source: Author's compilation from Law Number 32 of 2000 concerning Integrated Circuit Layout Design, Law Number 28 of 2014 concerning Copyright, Law Number 13 of 2016 concerning Patents, and Law Number 65 of 2024 concerning the Third Amendment to Law Number 13 of 2016 concerning Patents.

Based on the table, it is evident that Indonesia's natural positive legal system, specifically the status of Inventor, Creator, and Designer, explicitly refers to an individual or group of people. The Patent and Copyright Act limits the meaning of "person" to only two categories, namely natural persons and legal entities. Although the industrial design law and the integrated circuit layout design law do not provide an explicit definition of "person," the use of the phrase in their formulation still refers to an individual or legal entity that has the capacity as a lawful subject of law. Indonesia's IP legal system is oriented towards the principle of legal personality in the traditional view, which asserts that only human beings or legal entities can be recognized as legal subjects with inherent rights and responsibilities. Consequently, non-human entities, such as systems, applications, or AI intelligence, cannot gain legal status as *inventors*, *creators,* and *designers*. It is based on the conventional legal paradigm, which emphasizes the capacity of will and legal responsibility that can only be possessed by recognized legal subjects. With the non-recognition of AI as a subject of IP law in Indonesia, AI can be seen as a tool or instrument that supports creative and innovative processes, without having legal status as a rights holder.

AI develops software using algorithms, which allows computers to make decisions as well as create various objects, including creative works. The decisions generated by AI depend on the data and instructions provided by the programmer. In the process, programmers play more of a role in providing information and setting parameters than creating something directly. Algorithms AI works by studying data and feedback provided by programmers so that it can produce new decisions or objects that are creative. The innovations produced by AI come from the process of learning the patterns contained in

the inputs entered by the programmer. In managing the input data, programmers use a parameter known as an artificial neural network, a system that mimics how the human brain processes information and makes decisions. Computer programs are seen as instruments or tools that will support creators in carrying out and producing their creative works. Computer programs will create innovative objects, depending on whether or not the creativity of the creator is present and depending on pInvent (Theresia Anita Christiani, Muhammad Imran Qureshi, and Johannes Ibrahim Kosasih, 2022).

2. Exclusive Rights to AI-Generated Works

There are several general principles in IP, one of which is exclusive rights. Exclusive rights give the right holder the power to monopolize the use of IP objects, which results in other parties being unable to use, make, or do something about the IP object without the permission of the holder (Sufiarina 2012, 270). Exclusive rights can also be interpreted as a defense mechanism or as a form of protection against IP, in which there is self-actualization of the creator (Puspasari 2022, 141). Protection of exclusive rights is divided into two types: moral rights and economic rights. Moral rights, also known as *the author's right,* are an inherent right of the *creator, inventor, and client.* According to Article 6 of the 1928 Bern Convention, the substance of moral rights includes:

a. *The right to claim authorship,* i.e., the right to be recognized as the creator
b. *The right to object to any distortion, mutilation, or other modification of the work,* which is the right to prohibit another party from altering or modifying the work that is detrimental to the creator
c. *The right to object to other derogatory actions concerning the said work,* namely the right to object to actions that degrade the dignity of the creator.

Economic rights refer to the rights of copyright holders to obtain economic benefits for the IP object they own. Economic rights protect the copyright to obtain economic benefits from other parties who use the creation for commercial purposes. In the copyright regime, moral rights cannot be removed for any reason, so if the copyright is transferred to a party other than the person who made the work, then only part of the exclusive rights are transferred, namely, economic rights. Under Article 8 of Law Number 28 of 2014 concerning Copyright (UUHC), economic rights are the exclusive rights of the holder or copyright holder to obtain economic benefits for their creations. The creator or copyright holder has the economic right to do the following:

a. Publication of creations;
b. Duplication of creation in all its forms;
c. The translation of the creations;
d. The manipulation, arranging, or transformation of the creation;
e. Distribution of the work or copies thereof;
f. Creation performances;
g. Announcement of creation;
h. Creation of communications; and
i. Creation rental.

Copyright is also known as a *related right*. Article 20 states that related rights are exclusive rights granted to performers, phonogram producers, and broadcasting institutions. *Related rights* are

rights related to copyright, such as *performing rights,* which are rights given to performers, phonogram producers, or broadcasting institutions to display the copyright in visual form. An example is a music composer as the creator of music; he does a musical performance, so that the musician has exclusive rights to that performance.

In addition to copyright, there are also exclusive rights arrangements for other types of IP, such as patents regulated in the Patent Law. Referring to the Patent Law, exclusive rights are rights granted to the patent holder for a certain time to carry them out commercially or to give more rights for them to others. Thus, others are prohibited from exercising the patent without the consent of the patent holder. The exclusive rights of the patent holder are further regulated in the provisions of Article 19, paragraph (1) of Law 65/2024, which is the third amendment to the Patent Law. The provision stipulates that the patent holder has the exclusive right to exercise the patent he owns, to permit another party to exercise the patent he owns, and to prohibit another party from exercising the patent without his consent in the event of the following:

a. Use, rent, provide for sale or lease, or deliver patented products;
b. In the case of patent processes: using the patented production process to make goods or other actions as in point 1; and
c. In terms of patents, methods, and uses: using patented methods, systems, and uses to create goods or other actions as referred to in point 1.

On the other hand, Law Number 31 of 2000 concerning Industrial Design (the Industrial Design Law) provides a legal umbrella for the protection of the exclusive rights of industrial design. Referring to the Explanation of Article 9 paragraph (1) of the Industrial Design Law, what is meant by exclusive rights is the right that is only given to the holder of industrial design rights to carry out themselves for a certain time or to permit other parties. Thus, other parties are prohibited from exercising industrial design rights without the consent of the holder. The granting of rights to another party can be done through inheritance, grants, wills, agreements, or other means. Concerning industrial design, the owner of the exclusive right is the holder of the industrial design right; this exclusive right gives the holder of the industrial design right the right to exercise his industrial design rights and to prohibit others without his consent from making, using, selling, importing, exporting, and/or distributing goods that are granted industrial design rights. However, it should be remembered that there is an exception to the exclusive rights of industrial design rights holders, i.e., it is excluded in the case of the use of industrial design for research and educational purposes, as long as it does not harm the reasonable interests of industrial design rights holders.

Meanwhile, for the type of integrated circuit layout design IP, the regulation of exclusive rights can be found in Article 8 paragraph (1) of Law Number 32 of 2000 concerning Integrated Circuit Layout Design (the DTLS Law), which regulates that the right holder has the exclusive right to exercise the right to design the integrated circuit layout that he owns and to prohibit other people who, without his consent, make, use, sell, import, export, and/or distribute goods in which all or part of the design has been granted the right to design an integrated circuit layout. Just like industrial design, the exclusive rights owned by the rights holder can also be excluded during the use of the integrated circuit layout design for research and educational purposes, as long as it does not prejudice the reasonable interests of the integrated circuit layout design holder.

According to the World Intellectual Property Organization (WIPO), the ownership of works produced by GAI remains uncertain because the IP laws of each country have not comprehensively

regulated GAI and the work it produces (World Intellectual Property Organization, n.d.). The absence of this rule raises the question of whether the work of GAI can be recognized as IP; if it is, then who has the right to hold exclusive rights to it? Although it is not recognized, it may still be against the contractual provisions that govern the use of the AI work (World Intellectual Property Organization, n.d.).

Artificial Intelligence (AI) is a tool to support creative and innovative processes. The creator of AI is a computer program designed to perform tasks that require human intellectual abilities to accomplish (Khaleel, Jebrel, and Shwehdy, n.d., 1). The basic component of a computer program is code, source code created according to a specific programming language (Wardhana, 2017, 254). The code is set to act as instructed. Computer programs are one of the objects that are granted copyright as regulated in UUHC. Protection of computer programs stems from the idea that a series of code written by a programmer through a programming language reflects the creator's ability or expression of the creator to provide instructions to the computer program. In this regard, AI, as a computer program, can be categorized as one of the copyright objects.

Based on the regulation of exclusive rights in the IP legal system in Indonesia, AI is considered a 'tool' that supports creators in producing IP works, and it emphasizes the position of AI as an object. For example, in the context of copyright, AI is used as a technical tool that helps humans create inventions such as microphones, voice recorders, and sound systems. AI can also be applied to create other tools or creations that are usually made without AI (Ramli et al. 2023, 150). The consequence is that exclusive rights that arise from the process of creating IP works are owned by the person behind the AI program.

In relation to GAI, AI could create creative work with text-based commands from the user's will. Meanwhile, in essence, GAI is a computer program that was created by a programmer and made as if the programmer had a work relationship. This condition causes uncertainty in the law about who deserves to obtain the right of exclusive use. According to the positive law in Indonesia about IP, specifically the regulation about exclusive rights from creative works produced by AI, it could be reviewed from the terms as explained below:

Table 2. Comparison of the Regulation of Exclusive Rights Holders to AI as an IP Object in Indonesia

Types of Intellectual Property	Governing Laws	Contents of the Rules
Copyright	Article 36 of Law Number 28 of 2014 concerning Copyright	The creator and the copyright holder for the work made in an employment relationship or on an order are the party who made the work, unless otherwise agreed.
Patent	Article 12, paragraph (1) of Law Number 13 of 2016 concerning Patents	The patent holder for an invention produced by the inventor in a working relationship is the party who provides the work, unless otherwise agreed.

Integrated Circuit Layout Design	Article 6, paragraph (3) of Law Number 32 of 2000 concerning Integrated Circuit Layout Design	If an integrated circuit layout design is made in an employment relationship or on an order, the person making the integrated circuit layout design is deemed to be the designer and rights holder, unless other agreements are agreed upon between the two parties.
Industrial Design	Article 7, paragraph (3) of Law Number 31 of 2000 concerning Industrial Design	If an industrial design is made in a working relationship or on an order, the person who makes the industrial design is deemed to be the designer and the holder of the industrial design rights, unless otherwise agreed upon between both parties.

Source: Author's compilation from Law Number 31 of 2000 concerning Industrial Design, Law Number 32 of 2000 concerning Integrated Circuit Layout Design, Law Number 28 of 2014 concerning Copyright and Law Number 13 of 2016 concerning Patents.

The table above shows that the exclusive right to IP work is owned by the creator. However, the creator and the right holder of the IP work could change or transfer the right if there is an agreement or contract between the programmer and the other party (within the work relation) or vice versa.

The rights holder of the AI application has the authority to determine the use of the application. It is usually listed in the agreement between the AI licensee and the user that can be viewed through the *terms and conditions/terms of service/terms of use,* which is a standard agreement that regulates the relationship between the service provider and the user. Those terms and conditions are usually provided and must be read by the user if they want to create an account on the *platform* and use the services. The agreement also specifically regulates the ownership of *output* produced.

Referring to the terms and conditions of SUNO AI, it regulates that for users who have subscribed on a paid basis, SUNO grants the entire rights to the works produced by SUNO AI to the user, but does not guarantee the resulting works will be attached to IP rights. As for non-subscription users, SUNO will only provide rights for users for personal and non-commercial purposes (Suno Inc. 2024).

There is also an AI program that can produce images, namely Dall-E, developed by OpenAI. Regulated in terms of use of the application, OpenAI grants all of its rights to Dall-E's work to users, whether they are subscribed users or not. It means that users have the right to disseminate, duplicate, and sell the work (OpenAI 2024).

The explanation above reveals that the exclusive right to *output* produced by GAI is determined based on an agreement between the user and the AI development company, regulated in the *"Terms and Conditions,"* which raises a clause regarding the ownership of rights to AI-generated works. AI development companies can give full rights to AI-generated content. On the other hand, a developer company of AI can also refuse to grant rights to the content generated by the AI programs they have.

CONCLUSION

Indonesia does not yet have regulations that regulate AI, especially regarding the status of AI as a legal subject in an IP work. However, if referring to the current laws and regulations on IP, AI as a legal subject is still not possible. It is because the subject of IP law is limited only to people and legal entities; there are no other entities. Therefore, AI is only seen as a technical tool or instrument that supports creative and innovative processes, without having a legal status as a legal subject of rights holders. The consequence is that the IP works produced through AI programs have exclusive rights owned by the users of the AI program in question. However, it is still necessary to pay attention to the standard agreement between users and AI development companies, which is regulated in the *"Terms and Conditions"* of each AI program. AI development companies, in this case, can grant or refuse to grant rights to content created in AI programs owned by the developer company.

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