



## Original Article

### Realizing Indonesia's Legal Readiness for Patents on Inventions Produced Using Artificial Intelligence

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#### Abstract:

Patents are one aspect of intellectual property rights which protection is of the utmost importance. However, the invention of a new Invention which is claimed to be invented by DABUS as claimed by Dr. Stephen Thaler raises new questions on whether AI can be declared as an Inventor for a patent application. This study discusses the position of AI from the perspective of Indonesian law, patent law in other countries, and relevant court decisions. From this study, it was found that Indonesian law does not stipulate that AI can be declared as an Inventor of an Invention. Therefore, a change of regulations is needed to accommodate this in order to provide clarity for AI stakeholders in the future.

**Keywords:** DABUS; Intellectual Property Rights; Australian Law; Indonesian Law; AI; Patent;

#### Introduction

Patents are one of the branches of intellectual property rights that are important to protect considering that the technological progress of a country cannot be separated from the element of patent protection. With a strong patent protection system, technology in the country will become very advanced because patent protection provides an incentive for inventors to constantly find a solution to solve a problem that could not be solved before. However, if patent protection is too limited, inventors will have no incentive to solve existing problems, and technology in the country will not develop.

However, in the midst of this technological advancement, a new phenomenon has emerged, namely inventions made using AI (Artificial Intelligence) or artificial intelligence. This concept came to the world's attention thanks to a patent application filed by Dr. Stephen Thaler, a computer scientist who created DABUS or Device for the Autonomous Bootstrapping of Unified Sentience. Thaler filed a patent application for the DABUS Invention stating that DABUS was the entity that was the inventor in the Invention to be patented. Although some of the courts rejected Thaler's request to make DABUS the inventor of the Invention, they did not rule out the possibility that there was



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a chance that AI could become an inventor, both under international treaties and the domestic law in which the court was located.

The above facts are interesting to discuss because the author on this occasion intends to conduct an analysis related to the legal readiness of Indonesia to face the potential of AI to become an inventor, especially considering the judicial decisions rendered in countries where the patent application for the DABUS Invention was filed by Dr. Stephen Thaler. In addition, the possibility that AI can be recognized as an inventor in the realm of international intellectual property rights agreements is also a motivation for the author to compile this study.

Indonesia has from time to time made improvements to the regulations on patent rights. Before the enactment of Law No. 14 of 2001 concerning Patents, we were already familiar with Law No. 13 of 1997 and even before Law No. 6 of 1989. The improvement of these various provisions, in addition to intending to overcome obstacles that are perceived in practice to provide less legal protection for an inventor, is also intended in the context of adjustment to international agreements such as the TRIPS Agreement that Indonesia has signed. The great hope in these changes and adjustments is to remove various barriers, especially to provide facilities that support efforts to increase the growth of the trade economy both nationally and internationally ([Gautama & Winata, 1998](#)).

One thing that needs to be said to apply in the Indonesian patent law system is that even if an invention meets the new criteria, the invention is not always entitled to patent protection. According to Insan Budi Maulana, there are several criteria that prevent the patenting of a finding ([Rain, 1999](#)):

- a. If the Invention is contrary to morality, especially when it relates to the concept that makes man "play the role of God" in life (Playing God). One example of an Invention whose patent was rejected is cloning.
- b. If the discovery is a method of examination, treatment, treatment, and surgery applied to humans and animals
- c. If the invention is a theory and method in the field of science and mathematics.

The above prohibitions do not preclude the possibility that AI may be referred to as an Inventor in a patent application provided that the Invention created by the AI does not violate the given prohibition.

Different countries use different procedures to impose requirements on their claims to determine the scope of patent protection. When compared to the previously known common law and civil law legal systems, the different treatment in each country becomes more attractive. It will be more difficult to give a thorough explanation of the notion of claims mentioned in patent law because of the history of the common law system in rejecting the codification that applies in the civil law system.

Based on the background presented above, the researcher compiled two formulations of problems that will be answered in this study, namely:

1. How has the DABUS case affected the patent law landscape in the world?
2. Does the patent law currently in force in Indonesia allow AI inventions to be patented?

In compiling this research, there are several goals that the researcher wants to achieve. First, the researchers hope that this study can provide an overview of how the widespread use of AI affects the patent law landscape in the world. Second, the researcher hopes that this research can be a reference for stakeholders to draft a patent law that also considers the existence of AI as a consequence of technological advances.

## Methods

The research conducted by the author in this article is a normative type of research. Normative research is a study that examines the legal arrangements that apply in Indonesia and legal arrangements that apply in the international realm related to patents on computer programs resulting from artificial intelligence. The type of data used in this study is in the form of secondary data in the form of academic journals compiled by other researchers and books that are relevant to the research topic. In addition, the author also uses tertiary data in the form of websites that contain information related to the research topic. The research data was obtained by conducting a literature study.

## Results

### AI in Indonesian legal perspective

AI is actually not a new technology. Although AI that existed in the past certainly has not been equipped with the expertise that AI programs created in recent years have, the concept of AI has been discovered since humans created a tool that can perform automatic calculations such as computers. When referring to the definition given by KBBI, artificial intelligence is "a computer program in imitating human intelligence, such as making decisions, providing the basis for reasoning, and other human characteristics" ([AI, 2024](#)).

In Indonesian legal settings, AI has not been given a definite definition. The only definition of AI provided by the government is contained in the Circular Letter of the Minister of Communication and Information Technology Number 9 of 2023 concerning Artificial Intelligence Ethics. In the circular, AI, or artificial intelligence as it is referred to in the circular, is defined as "a form of programming on a computer device to carefully process and/or process data" ([Communications & Numbers, 9 C.E.](#)).

When examined word by word, the government determines that AI is a computer program that can process or process data carefully. Regardless of whether or not the results of data processing and/or processing carried out by AI are meticulous ([Hidayati, 2019](#)), the definition given by the government is considered inappropriate because this definition is still very broad. This definition is inaccurate and does not seem to take into account the advances that exist related to AI considering that AI technology now has various branches ([Ansari & Bakar, 2014](#)) whose function is not only limited to processing and/or processing data carefully.

In addition to the definition that is still too broad, the definition given by the Indonesian government has also not considered the status of AI in the eyes of the law. At a time when other countries are facing dilemmas regarding the status of AI legal status ([Boyle, 2024](#)), the definition given by the Minister of Communication and Information still does not consider this. Not considering the legal status of AI can certainly result in uncertainty when associated with intellectual property rights for an Invention made using AI, especially when considering that each AI platform has different policies regarding ownership of inventions used using AI.

Indonesia's position that does not recognize the existence of AI as an entity with legal personality is also seen in other intellectual property protection arrangements. In the realm of other types of intellectual property rights protection, for example, Indonesia does not recognize AI as a legal subject because in article 1 number 2 of Law Number 28

of 2014 concerning Copyright ([No. 28 C.E.](#)), mentioning that only humans can become copyright holders, it is also explained in article 1 number 27 of Law number 28 of 2014 concerning Copyright that only "person" or "person" can receive copyright and patent holders.

### Patent Protection Against AI-Made Inventions in Various Countries

Because Invention with AI as its Inventor is a new phenomenon, countries other than Indonesia do not yet have a definitive regulation on this matter. However, this does not mean that these foreign countries do not have their own patent arrangements that can be enforced against AI Inventions.

European countries have signed the European Patent Convention and have adapted their national legislation. However, this does not rule out the possibility that there are differences in the interpretation of the concept of the scope of patent protection. The Netherlands enshrines the principle of patent protection in Article 30 paragraph (2) of the Netherlands Law 1986, which essentially determines that what is protected is the content of the claim, not the literal formulation of the claim included in the patent application of an invention.

In practice, the attitude of the Dutch court seems different. According to Pieroen that the Court is not bound by the Explanation of the Law. Judges are given freedom to interpret the provisions of the law. The establishment of the Dutch court is in accordance with the intent contained in the European Patent Convention because it provides balanced protection both for patent holders and for third parties. The European Patent Convention Protocol does require balanced legal protection between patent holders and the public ([Marzuki, 1999](#)).

In the United Kingdom, before the Patents Act 1977 came into force, British patent law did not regulate the breadth of invention protection. The determination of the breadth of discovery protection is carried out based on the judge's interpretation outlined through a judicial decision. This is in accordance with the doctrine of stare decisis adopted by the British legal system as a country adhering to the common law system. There is an obligation to formulate a claim, the judge adheres to the grammatical meaning as described in the claim. From the considerations given by the judges, it may be said that the purpose of the monopoly limitation is for legal certainty, and that every person who modifies the claim does not fall into imitation which is an unlawful act.

After the enactment of the Patents Act 1977, section 125 paragraph (1) regulates the extent of protection of previously unknown inventions. The protection in question refers to Article 69 paragraph (1) of the European Patent Convention as previously quoted. However, in its implementation, the judge still has great freedom in determining the extent of the protection of discovery ([Marzuki, 1999](#)). It seems that in this case, the English courts are more consistent with the characteristics of the legal system, namely the common law system. As a country adherent to the common law system, legal considerations relating to existing legal cases to the point of precedent followed by the courts seem to take precedence over the codification of a law, as is the case with the Patents Act 1977.

The United States provides a different arrangement with the European Patent Convention. 35 U.S. Code § 102 provides that a person is entitled to a patent unless prior to the invention by the applicant the invention in question was made in the country by another person to whom such other person has not waived, frozen, or canceled the patent. In this case, the doctrine used is the first-to-file doctrine, but rather the first-to-

invent doctrine. The United States in this case provides protection to users of previous patents. In the event that there is no previous patent user, or the previous user has frozen or canceled, only the applicant is granted protection through the registration of his patent.

The American Patent Law requires novelty as a condition for patenting an Invention, just as a patentable invention is a useful process, machine, engineering, or composition, or progress. In this connection 35 U.S. Code § 102, establishes a person is entitled to a patent, except:

- a. The invention in question has been known or used by another person in the this country, or patented or exhibited in a printed publication in this country or in a foreign country, prior to its invention by the patent applicant; or
- b. The invention in question has been patented or exhibited in a printed publication in this country or in a foreign country or used by the public or sold in this country, more than one year prior to the date of the patent application in this country; or
- c. The invention in question was first patented or made to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or his designees in a foreign country prior to the date of the patent application in this country or the inventor's certificate filed more than 12 months prior to the filing of the application in this country; or
- d. An invention is presented in a patent granted on the basis of an application for a patent by another person filed in the country prior to the invention by the patent applicant, or on the basis of an international application by another person who has met the requirements to commence at the national level under the PCT prior to its invention by the patent applicant.

Another requirement is stated in 35 U.S. Code § 103: A patent cannot be obtained if the legal differences in the subject matter sought to be patented and the prior art (prior invention) are such that the subject matter in question as a whole, at the time of invention is made to a person of ordinary skill in the subject matter to which the subject of matter relates.

35 U.S. Code § 102(e) provides that a person is entitled to a patent unless the invention in question has been disclosed in a patent granted on an application for a patent by another person where such other application was filed in the United States prior to the invention in question by the patent applicant. Under United States law, a patent may be used as prior art either for new purposes or for clarity purposes, after the grant of the patent in question, with prior art retroactive effect until the earliest effective filing date in the United States, and not until the date of filing outside the U.S.

In this respect the United States is not like European countries. This difference is even clearer, especially for the Netherlands and Germany. In determining the scope of patent invention protection in practice, the doctrine of file wrapper estoppel and the doctrine of equivalent use is used. Whether or not there is an infringement of a patented invention must first be considered in the words of the claim, which means a narrow interpretation. However, the court held that if only words were to be considered, it would place form above substance. Of course, it will deprive the owner of the invention of the profit that was supposed to be obtained. This is clearly not in accordance with the main purpose of the patent system, which is the disclosure of inventions carried out through the principle of disclosure. To protect the owners of patented inventions the equivalent doctrine was developed.

According to the doctrine of equivalent, if two tools have the same function by a substantially the same way of working, and to obtain substantially the same results, the two tools are considered the same, even though they differ in name, form, or form. In general, the equivalent doctrine does benefit the owner of the invention. But on the other hand, the equivalent doctrine can also be used to attack the owner of the invention. This occurs when the patented tool is altered in such a way that its way of working is substantially different from the patented item but functions the same as the patented one and is still covered by the words of the claim. If it were done by the owner of another invention, and the equivalent doctrine would be used to limit that claim in the dispute that arose, it is unlikely that the doctrine would have made it difficult for the patentee ([Marzuki, 1999](#)).

In its development, the equivalent doctrine is related to the estoppel file wrapper doctrine. According to the doctrine of estoppel wrapper files, in order to obtain patents, the owner of the invention limits his claims. If the doctrine of file wrapper estoppel has been used in defending its patent from impersonation, the patent holder may use the doctrine of equivalent. The use of the doctrine at this time is only for ambiguous claims and as a tool of interpretation. In the case of *Alpex Computer Corporation v Nintendo Company Ltd and Nintendo America, Inc.*, the United States Supreme Court declared Alpex as the holder of patent No. 4,026,555 suing Nintendo that Nintendo had infringed on the patent. In this case, Nintendo of America – one of the largest video game makers from Japan – lost more than US\$ 2 billion (two billion dollars) in the early 90s ([Rain, 1999](#)).

Both the plaintiff (Alpex) and the defendant (Nintendo) are video game manufacturers. The position of the case, starting from the video game industry has started since the early 1970s. At this time, two types of video games and home video games are developing. Video games can be found in gaming venues while home video games are usually found in homes. In 1974, Alpex invented a system that allowed home video games to play a variety of games including games with rotating images. The invention was later patented in 1977 by Alpex. The patented invention was then commercialized in the system by Attari, Mattel, and Coleco ([Marzuki, 1999](#)).

In the early 1980s, Nintendo also entered the home video game market with the Nintendo Entertainment System (NES). After the NES was featured at the 1985 Consumer Electronic Show, Alpex informed Nintendo that it had infringed its patents. Therefore, in February 1986, Alpex sued Nintendo, after repeatedly seeking an out-of-court settlement. At the court of first instance Alpex was won. The court's consideration is that between a patented tool and a tool that is considered an imitation in terms of function, method and result does not have a substantial difference. However, the court of first instance did not prove that the two tools actually worked in the same way substantially. Therefore, the appellate court interpreted the doctrine of equivalent, not merely that the two tools are equivalence of the functional result, but must be able to be proven that the two have insubstantial differences in their way of working ([Marzuki, 1999](#)).

From this it can be seen that the laws of the United States are actually narrower when compared to the scope of patent protection in the United Kingdom. Narrow protections facilitate the process of technology transfer through modification of the patent in question. Insan Budi Maulana said that inventors or researchers in developed countries often look for "shortcuts" by reading patent application information, then researching, developing, and making improvements to the shortcomings and weaknesses

of prior art. Such a method is much faster, simpler, does not cost too much and does not require research from scratch ([Rain, 1999](#)).

Japan in drafting patent protection laws largely follows the doctrines of file wrapper estoppel and equivalent that apply in the United States, in addition to the Japanese Patent Act, namely Law Number 21/1959 which also regulates the scope of invention protection. In the case of *Badische Anilin and Soda Fabrik A.G. v Sekisui Kagaku Kogyo KK and Sekisui Sponge*, the Osaka District Court interpreted the breadth of invention protection by applying the doctrine of equivalent. The equivalent definition developed by the Japanese courts is the same as that adopted in the United States compared to the estoppel file wrapper doctrine, applied in the case of *Muranaka v K. K. Daiwa Gomu Seisakusho*. Since the Japanese legal system is based on the Civil Law tradition, the principle of good faith contained in the Japanese Civil Code is used in situations where the doctrine of file wrapper estoppel is applied. Of these systems, the one that can be said to be balanced in providing protection between the patent holder and the public is the United States system and of course Japan which does imitate the American system. In the United States system, there is an opportunity for judges to interpret theologically, that is, according to the interests faced at that time. This is possible because the breadth of invention protection is not regulated in legislation. Therefore, in determining the extent of the protection of the invention, it is left to the discretion of the judge. This is in accordance with the Common Law system adopted by the United States. In the Common Law system, judges do have great discretion ([Marzuki, 1999](#)).

In relation to the common law system, Friedman stated that the common law differs in many ways from the legal order in other European countries, such as France, the Netherlands, including Indonesia, which adheres to the civil law system. One important thing is that common law rejects codification. There has never been any kind of Napoleonic Code in England. Its basic legal principles are not found in laws made by Parliament, and only a small part is found through systematic, detailed legal statements passed by legislative bodies or enacted through legislation. The principle is found in case law – in the set of opinions written by judges, and developed by judges in deciding certain cases. The doctrine of "precedent" – the maxim that judges are bound by what has been decided – is a strong common law doctrine ([Friedman & Hayden, 2017](#)). Concrete examples of the common law doctrine in question, regarding the scope of patent invention protection, are the doctrine of "purposive construction" followed by the British courts, the doctrine of file wrapper estoppel and equivalent that applies in the United States, which not only the courts of the United States but Japan have adopted this doctrine.

### The Influence of the DABUS Case on the Patent Filing Landscape

When it comes to AI as the inventor of an invention, there are several rulings in Europe that are relevant to the topic of research. In a decision of the United Kingdom Supreme Court, it was decided that AI cannot be an inventor or an applicant for a patent ([Scaria, 2024](#)). This case relates to an Invention that was stated to have been made by DABUS based on the statement of DABUS's inventor, Dr. Stephen Thaler. The case began with the filing of patents for several Inventions by Dr. Thaler. However, in his patent application, Dr. Thaler listed DABUS as the inventor of the Invention and stated that Dr. Thaler was entitled to apply for the patent because he was the inventor of DABUS.

Although Dr. Thaler's application to make DABUS an inventor was rejected in the United Kingdom and Europe, Dr. Thaler also filed patent applications in question in several countries, such as the United States, Japan, Saudi Arabia, India, South Africa, Australia, and New Zealand. The majority of these countries expressed their rejection of Dr. Thaler's proposal to make DABUS the inventor of the Invention, but there were two countries that granted his request. The countries are Australia and South Africa.

On 30 July 2021, the Australian Federal Court made history as the first court in the world to recognise artificial intelligence (AI) as an inventor in the case of Thaler versus FCA's Patent Commissioner ([Kanna & Singh, 2021](#)). This ruling came as a surprise to many because for the first time, a non-human entity was recognized as the inventor of a patent. The decision overturned an earlier decision from the Commissioner of the Patent Office that rejected Dr. Thaler's application on February 29, 2021 with case number 2019363177. At the end of 2018, DABUS, an AI system developed by Dr. Thaler, came up with two inventions: first, a food container with features of efficient interconnectivity, grip, and heat transfer, and second, a method to modulate lightpulse that facilitates voice identification.

It is likely that FCA judges are heavily influenced by an industry 4.0 approach called Cyber Physical. Correctively, according to him, the world is currently entering industry 5.0 which continues 4.0 technology by changing the Cyber Physical paradigm to Cyber Physical Human Centered. Technology is not to replace human existence absolutely, but rather to play a role for the benefit of humans and human subjects as such. The part of civilization remains irreplaceable ([Ramli, 2021](#)).

The ruling issued by the Australian Federal Court provides a new understanding that DABUS is not registered as the object of a patent, but rather as an inventor. This allows DABUS to produce inventions that can be registered as new patents. The judge's decision was based on the fact that in the Patent Act 1990 and related regulations in Australia, there is no definition that restricts the definition of inventor, so an inventor can be defined as a non-living entity, such as a computer or a program that does not have a life. Based on this interpretation, the court held that the concept of inventor is not only limited to individuals or legal entities, but can also include objects. The normative approach taken by the Australian courts confirms that the country's patent laws do not require that the inventor must be a human being. This is different from the provisions in copyright, where the creator must be an individual who has moral rights ([Ramli, 2021](#)).

Apart from Australia, South Africa is also one of the other countries that recognize that AI can be an Inventor. This relates to the patent application for DABUS submitted by Thaler as stated above. However, South Africa did not conduct a substantive examination of Thaler's patent application in making its decision, so the granted patent application was granted without any careful consideration.

## Conclusion

Patents are a type of intellectual property rights that can help encourage technological progress from a country, including Indonesia. This fact creates an obligation for the state to provide adequate protection for the nation's inventions to provide incentives for the nation's children to continue to innovate in finding solutions to problems that have not yet been answered. Solving these problems will make Indonesia a country that has qualified technology and is no less competitive than other countries.

Dr. Thaler's efforts in proposing artificial intelligence (AI) as inventors have

opened up a broader discourse among the international community, particularly related to the potential changes that AI can bring to the regulations governing intellectual property rights, especially in the context of patents. The law's inability to recognize AI as an inventor risks creating new problems in the future, especially related to who should be recognized as the inventor of an invention, especially if the invention is proven to violate applicable law. Given the rapid development of technology, inventions generated by AI are inevitable. Therefore, updates to the existing legal framework are urgently needed to provide legal certainty regarding the status and protection of inventions generated by AI.

In the midst of the rapid development of the times and the advancement of AI technology, the Indonesian government has not been able to provide answers to the challenges posed by AI in relation to patent protection for inventions created by AI. This is because there is no clarity regarding the legal status of AI, especially regarding whether AI can be referred to as an entity that has legal personality or not. Although the Indonesian government through the Ministry of Communication and Information Technology has acknowledged the existence of AI and how it can affect people's lives in Indonesia, the preparation of this circular is not yet an indication that the government is really prepared to welcome the existence of AI and the implications that can arise from the widespread use of AI in Indonesia, especially when it is associated with patent regulation in Indonesia.

By considering related decisions in the courts of other countries, the author argues that Indonesia can improve the content of current legal regulations to include AI in it so that there are no inconsistencies in the problems faced at present and in the future and gain clarity on the position of AI in the future by seeing that Artificial Intelligence is increasingly sophisticated and has been circulating everywhere

### **Suggestion**

Seeing the rapid development of artificial intelligence (AI) technology and the great potential it has in producing new inventions, it is time for Indonesia to take strategic steps to reform the existing legal framework, especially in the field of patents. The Indonesian government needs to review and revise Law Number 13 of 2016 concerning Patents to provide legal clarity regarding the status of AI in the process of creating inventions, including the possibility of its recognition as an inventor. Legal uncertainty in this case not only risks hindering innovation, but can also result in Indonesia lagging behind in following the global trend that has begun to accommodate the existence of AI in the realm of intellectual property. As a first step, a more comprehensive and prescriptive legal definition related to AI is needed, including its legal status, scope of responsibility, and AI's position in the national legal system.

Furthermore, Indonesia can consider establishing a special body or committee tasked with reviewing developments in international law related to AI and intellectual property, as well as formulating adaptive and responsive policy recommendations. Comparisons with best practices from other countries such as Australia, which have progressively recognized AI as an inventor through an interpretive approach to positive law, can be used as a reference in shaping national policies that are not only adaptive to technological developments, but also consistent with the principles of justice and legal certainty. In addition, the active involvement of stakeholders, both academics, legal practitioners, technology industry players, and civil society, is also needed in the policy formulation process to create regulations that are inclusive and relevant to real needs in

the field.

Finally, education and socialization to the public about the relationship between AI and intellectual property rights is also important. This aims to create a more mature collective understanding of the urgency of legal reform in the digital era, while encouraging awareness of the importance of legal protection for the results of inventions produced in an unconventional manner. Thus, Indonesia can strengthen its position in the international legal landscape and create a conducive and sustainable innovation climate in the midst of ongoing technological disruption.

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