Research Article

Legal Ownership of Images Generated by Generative Artificial Intelligence

(A Study of Buying and Selling Transactions on Adobe Stock in Indonesia)

Alisya Rahma Saebani [1],*, Heru Sugiyono [2], Muthia Sakti [3]

[1] Magister of Law, Universitas Pembangunan Nasional "Veteran" Jakarta, Indonesia; e-mail : alisyarahma51@gmail.com

[2] Magister of Law, Universitas Pembangunan Nasional "Veteran" Jakarta, Indonesia; e-mail : herusugiyono@upnvj.ac.id

[3] Magister of Law, Universitas Pembangunan Nasional "Veteran" Jakarta, Indonesia; e-mail : muthiasakti@upnvj.ac.id

* Corresponding Author : Alisya Rahma Saebani

Abstract: The development of Artificial Intelligence (AI) technology has led to the creation of various works, including images generated without direct human involvement. One of the platforms that facilitates the buying and selling of AI-generated images is Adobe Stock. However, this raises legal issues regarding ownership status and copyright protection of such images, considering that Indonesia's positive law has not explicitly regulated ownership of works produced by non-human entities. This research aims to examine the legality of ownership over images generated by Generative AI in transactions through Adobe Stock and to analyze its compatibility with the Indonesian legal system. This study uses a normative juridical method with statutory, case, comparative, and conceptual approaches, as well as a literature study relevant to the issues discussed. The results show that under the Indonesian legal system, a work must have a creator who is a legal subject. Therefore, images generated by AI cannot automatically be granted copyright status unless there is significant human intervention in the creation process. In transactions through Adobe Stock, the platform's policy serves as the main reference in determining ownership and legal responsibility over AI-generated images. The legality of AI-generated image ownership in Indonesia remains a gray area and requires regulatory updates to accommodate technological developments. Legal clarity is needed to protect parties involved in AI-based digital transactions and to ensure legal certainty in the protection of creative works.

Keywords: Artificial Intelligence; Artwork Ownership; Copyright.

1. Introduction

Impact revolution industry expand blessing innovation technology like intelligence artificial intelligence (AI), which drives adjustment regulation law . generative AI now Lots in demand Because capable produce automatic visual content , opens opportunity big in the industry creative , advertising , and e-commerce, for example in making digital image for sold on platforms like Adobe Stock [1] . Generative AI is technology intelligence artificial that can create various content , such as writings and works art , only with Instructions simple via the site or easy application used without need skill special . However , until now Indonesia has not own regulation special related the use of AI, especially question right copyright and rights related [2] .

Presence technology This cause challenge law related legality and ownership works . In Indonesia, regulations right create Still focus on work humans , where the Copyright Law only confess creator as individuals / groups that use ability intellectual . This is bring up

ambiguity of ownership status and protection law on picture GAI -made , considering that AI is not subject law [3] . Images generated by GAI such as in Adobe Stock have mark economy and utilized wide , but buyer need understand rights and limitations law , including potential dispute ownership or claim right create , because regulations in Indonesia have not yet fully arrange ownership AI work so that cause uncertainty law . Microstock , as example , allows purchase license digital image with price affordable and system royalty , different from stock photography Traditional ones are more expensive, so popular among business small and maker digital content [4] .

Cases analyzed is suspicion violation right created on Adobe Stock, where American artist Bastien Lecouffe Deharme report via Facebook that picture titled " Aewheros style of Michael Whelan and Bastien Deharme and Fragon " for sale without permission artist . The alleged image AI generated and uploaded by users named Jennifer copy artists' styles , available for free for use limited , but also for sale paid until harm artist the original [5].
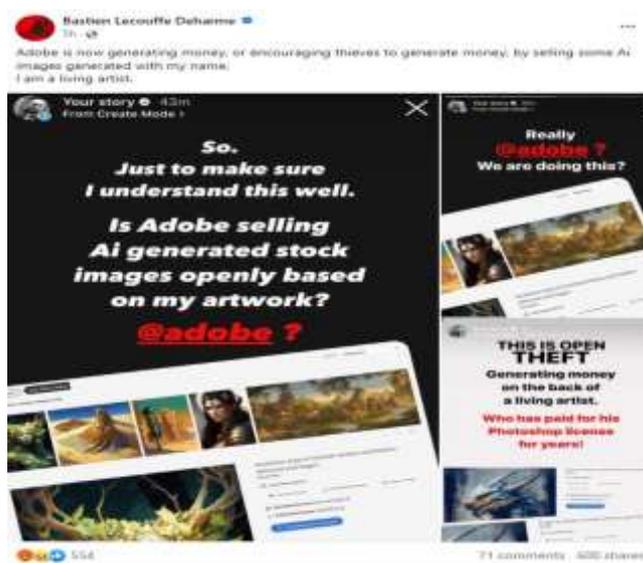

Figure 1. Upload Facebook Bastien Lecouffe Deharme
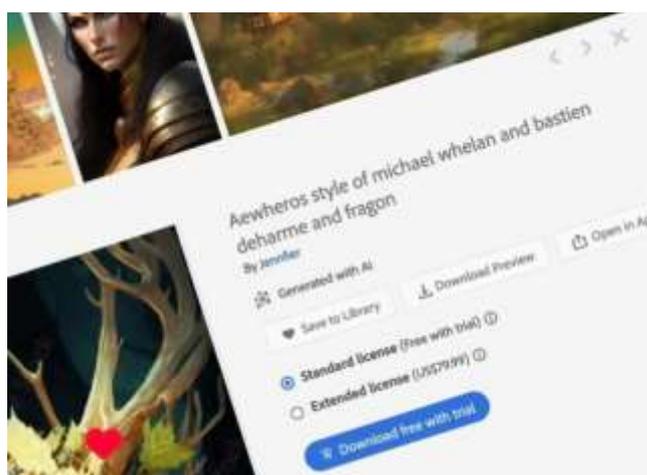
Source : Gamebrott

Figure 2. Jennifer's upload on Adobe Stock " Aewheros style of Michael Whelan and Bastien Deharme and Fragon "

Source : Gamebrott

Jennifer as Adobe Stock uploaders and users are considered owner legitimate AI images , though picture the Can resemble work other artists due to the AI training process that uses billions picture from the internet. Ownership law stick with Jennifer, though He responsible answer on potential violation right create If his work copy other people's work . AI training

with big data at risk violate right creation , especially If use work without permission , and generally No including fair use. Law No.28 of 2014 not yet recognizing AI as subject law creator , so that there is emptiness law related protection right create on AI work in Indonesia, which has the potential threaten originality and rights perpetrator economy creative [6] .

Protection law to right create work art based on intelligence Artificial Intelligence (AI) in Indonesia is increasing urge along rapid development technology and its impact on law as well as economy creative. Challenge main is need responsive and inclusive regulation For protect all party in ecosystem creative. Research This analyze : (1) ownership picture Generative AI results in transactions in Adobe Stock in Indonesia, considering Not yet There is certainty law Because The Copyright Act only confess man or legal entity as creator ; and (2) form protection law for owner AI images on Adobe Stock, considering Not yet There is rule special that protects right create AI work , so that vulnerable violation right economy creator original and confirmed the need more regulation clear [7] .

2. Preliminaries or Related Work or Literature Review

2.1 Theory of Legal Certainty

Certainty law is objective main system law and parts important in reach justice, because ensure rule applied fair without discrimination. With certainty law, everyone can predict consequence law from his actions and confidence that treatment law applicable The same for all. Principle This related close with formal and legal truth, so without certainty law, individual difficult know rules that must be followed followed by. Gustav Radbruch confirm that certainty law is fundamental purpose of the system law, so that become runway important in realize objective law in a way overall [8] .

2.2 Legal Protection Theory

State law demand all over aspect life, including government, always based on law. According to Simorangkir , a country based on law prioritize principle legality, namely every state action must in accordance applicable law. With Thus, the law become highest so that state power is subject to law, not on the contrary [9]. Fitzgerald stated that according to theory protection law, law aiming to unite and organize various interest public with limit One interests in order to protect others. The law has the authority determine which interests are regulated and protected through agreed rules and regulations , in order to regulate connection inter-resident and also between individuals and government as representation interest public [10] . The law plays a role important in unite and align interest society that often contradictory , and minimize conflict . According to KBBI, law is rule or recognized and regulated norms government For arrange life social , including provision about incident nature , decision court , and judge's decision [11] .

2.3 Copyright

Copyright is right exclusive creator For publish , copy and utilize work his intellectual talents in the fields of literature, science, art and others , including books , computer programs , speeches , recordings , and performance . According to Patricia Loughlan , the right create give the owner control on use and utilization work like literature , music , visual arts , recordings sound , film, radio and broadcast television [12] . From the understanding that has been delivered , can concluded that right create is right exclusive for creator or recipient right For control , utilize , and provide permission use work create in accordance law , and forbid other parties use without permission .

2.4 Artificial Intelligence/ Intelligence Artificial

Artificial Intelligence or intelligence artificial is one of branch knowledge purposeful knowledge For allow machine or computer For execute tasks as done human beings , even Possible with more performance good . There are some the advantages possessed by intelligence artificial , namely [13] :

- Intelligence artificial more stable compared to with intelligence experience Because intelligence experience can influenced by factors like forget .
- Intelligence artificial more easy For replicated and disseminated .
- Intelligence artificial capable give more consistency tall in its performance .
- Intelligence artificial own more costs low compared to with development and maintenance intelligence experience .

2.5 Generative Artificial Intelligence (GAI)/ Generative AI

Generative artificial intelligence (GAI) is one of the branch in intelligence artificial or Artificial Intelligence. Artificial intelligence Alone is concept that includes various aspect machine that has intelligence . Machines This can think , act , communicate , and demonstrate behavior that resembles man [14] . Generative Artificial Intelligence No only useful For produce work art that resembles style writer or illustrator , but also has the potential support man in various aspect life . Technology This Can used as system ask answer smart that helps activity everyday . In addition , generative AI can give information practical like recipe cooking , medical advice , to solution law . In overall , technology This own opportunity big For play a role in Lots field , good in create art , answer questions , support task daily , and provide knowledge beneficial [15] .

2.6 Buy and sell

According to the Big Indonesian Dictionary (KBBI), selling buy is binding agreement between two parties , where the seller deliver goods to the buyer , who then to pay price goods said . Agreement sell buy set up in Article 1457 to Article 1540 of the Civil Code . Based on Article 1457 of the Civil Code , the sale buy defined as an agreement in which one party promise For deliver goods certain , while party other committed For pay the price that has been agreed [16] . Based on Article 1540 of the Civil Code , if debtor pay off his debt to seller before receivables sold the handed over , action the Already Enough For to free debtor from his obligation [16].

3. Research Method

Research methods used in study This is study law legal normative , namely research that places law as a written norm in legislation and as guidelines behavior human being who is considered in accordance ; approach used covering approach statute approach , approach case approach, approach comparative approach, and the approach conceptual (conceptual approach) in order to obtain understanding deep to issue the law under review from various dimensions , good application , comparison , and runway theoretically . Types and sources material the law used covering material primary law such as laws, regulations government, and regulations related others, materials law secondary in the form of books, journals and scientific papers others, and non- legal material like relevant books, dictionaries, mass media articles and non - legal reports. Collection technique material law done through study library research with identify problem, collect regulation legislation, as well as access books, journals and documents relevant government. Analysis material law done in a way prescriptive, namely with analyze data for identify pattern, make prediction, and determine optimal action based on interpretation regulations, news, and studies relevant literature with Topic study.

4. Results and Discussion

4.1 Legality Ownership of Images Generated by Generative Artificial Intelligence in Buy and Sell Transactions Through Adobe Stock In Indonesia

In the Civil Code , ownership known with term right property or right owned , regulated in Article 570 of the Civil Code . This article state that :

"Right of ownership is right For enjoy a goods in a way more free and for do to goods That in a way free completely , provided that No contradictory with Constitution or regulation general as determined by the competent authority and origin No bother the rights of others; all of them That No reduce possibility revocation rights for the sake of interest general and replacement appropriate damages , based on terms and conditions legislation ."

Ownership is fundamental aspects of law civil law that gives individual or legal entity right master and utilize object in a way free . In the Civil Code , ownership called right property (Article 570), namely right enjoy and master goods fully during No violate law or the rights of others [17] . Based on provision said , the rights property own a number of characteristics main . This right is right highest on a goods , which means owner own authority full For use , control , and take benefit from goods that he owns . However , ownership This No nature absolute Because still limited by law and rights other party . For example , someone No can use For harmful activities [18] .

Right of ownership can limited by law for the sake of general . The state has authority to pull out or limit right such as , for example through the concept of fair use in Article 44 paragraph (1) of the Copyright Law, which makes it possible quote limited work entitled create For education , research , or criticism without permission owner . In addition , the state

can take transfer work create For interest national , such as archiving culture or distribution information important , with still give proper compensation to creator . This is show that right create nature limited for the sake of interest public wide [19] .

Development technology , especially digitalization and intelligence artificial intelligence (AI), create draft ownership digital works are increasingly complex . In Indonesia, the regulation Still referring to Copyright Law No. 28 of 2014, however The presence of Generative AI raises challenge law new related ownership work . Violation right create , such as distribution illegal and piracy , often happens in the digital era. To protect right creators , especially in the field of songs and music , government issued PP No. 56 of 2021 concerning Royalty Management , which strengthens protection right economy creator [3] .

In the system Indonesian law , rights create given to creator as form protection on results his work . Based on Article 1 Paragraph (2) of the Copyright Law, the creator is somebody or some people who are individually or together produce a creations that are of a nature distinctive and personal . Definition This confirm that creator must is subject law , namely man or legal entity , which has right exclusive on his work [20] . However , the problem appear when digital works are generated by AI systems without involvement significant from human . If a picture created completely by AI, then according to law right Indonesian creation , image the No can claimed as belongs to AI because AI is not subject law .

During centuries , philosopher has think about intelligence artificial as challenging machine understanding man about intelligence and existence (Bruce G. Buchanan, "A (Very) Brief History of Artificial Intelligence", AI Magazine). For example , Leibniz proposed machine that can think logical . However , the development real new AI happen in half century lastly . AI itself is system artificial human being who is not think in a way natural , but Work based on algorithm and work data previously , so that the result is modification from work that has been done there is , isn't there? creativity new [21] .

The images generated by Generative AI are results algorithms that process and modify visual data from various source previously . This AI No own creativity independent like human , but rather reconstruct patterns that have been studied , so that the process is not creativity in the traditional sense [21] . Generative AI is branch intelligence artificial that uses a learning model machines , such as GANs and Diffusion Models, to create content new (images , text , music , etc.) with analyze pattern from large datasets and generate output that resembles the original data However No identical [15] .

AI -generated images now the more difficult differentiated from picture original blessing progress technology . According to Mhairi Aitken of the Alan Turing Institute, AI is trained use gathering big picture labeled from the internet to recognize patterns and relationships between pictures and descriptions , so that capable produce picture new in accordance order users . However , Amin Ebrahimi Afrouzi from Yale Law School asserts , no like humans , AI only copy pattern from data without understand meaning or context the resulting image [22] .

At first , AI images were easy differentiated from Photo original , but along progress technology , the results now the more realistic and difficult differentiated from photography conventional . Mhairi Aitken said that even though Not yet perfect , the AI image is very convincing , especially at high resolution low like on social media . Even though so , still There is characteristics typical like form finger or strange legs , shadows No realistic , non - blurry lighting reasonable , and visible visual impression like dream or No experience [22] .

For ensure authenticity image , important verify and assess credibility the source . With progress AI technology , distinguishing AI images and photos original will the more difficult . Afrouzi stated , along with AI sophistication increases , differences between AI images and reality Can almost not detected . In law right creation , work create man must involving creativity and engagement direct human rights . According to WIPO, human rights create given to creation results thinking human . While that , picture from AI raises challenge law Because lack of involvement creative man in a way directly . AI only process data based on algorithm , so that appear question whether AI product worthy get right create and who owner : user , developer , or AI platform. The difference main with work man lies in originality and involvement humans , because AI is only reproduce pattern without creativity and awareness [23] .

Classification picture results intelligence artificial (AI Generated Images) in art appearance can analyzed based on definition picture according to Explanation of Article 40 paragraph (1) letter f of the Copyright Law, which includes motifs, diagrams, sketches , logos, elements graphics , combination color , and shape letter worth aesthetics . Required study more carry on For determine whether AI images include " images " according to law right

create , remember picture the produced algorithm and provide impression as if made by individuals with digital skills [24] .

AI generated images have form concrete so that fulfil element embodiment creation according to Article 1 number 1 Jo. Article 1 number 3 of the Copyright Law, and can categorized as work art protected form . However , no all auto AI image get protection right create , because must fulfil condition originality and fixation in accordance law right Indonesian creation [25] .

In order for the work intelligence artificial acknowledged as creation according to Copyright Law , works the must fulfill Article 1 number 2, namely own characteristics unique and personal . Although Constitution No define originality in a way explicit , a work considered original If is results concrete thinking intellectual human , have uniqueness , characteristics distinctive , and can explained by its creator [26] .

Copyright Act confirms importance information Copyright management as proof originality and identity creator , and as mechanism evaluation authenticity works (Article 7 Jo. Article 6). In the digital realm , the works produced with help device soft still considered work create Because involving creativity human , different with minimally intervened AI work hands and creativity human , so that No fulfil element originality [27] .

Article 1 number 3 of the Copyright Law confirms that creation must in the form of expression real creativity , not just idea . In art appearance based on AI Image Generator, appears doubt related presence element distinctive and personal creator , because AI works automatic based on input data . Although user give order text (prompt), not yet Of course AI results reflect uniqueness or characteristics personal characteristics of the creator . Originality work close the relation with creative process and freedom creator in make decision creative in a way direct , which reflects identity and uniqueness work the [4].

The process of creating images by AI Image Generator begins with a training stage using a collection of images and text descriptions from the internet, then AI utilizes algorithms and parameters designed by developers to optimally respond to user commands [28]. The AI system automatically processes and combines image references in the database using deep learning to produce new visuals. However, images generated by AI do not fully meet the criteria for "original intellectual creation," because AI only modifies elements of existing images, not creating them independently. A work is considered a creation if it has originality, namely showing the individual expression and creativity of its creator, not just copying. Novelty is not an absolute requirement, what is important is the existence of personal interpretation and creativity. In AI-Generated Images, the creative process can occur when humans give commands (text prompting) or when AI processes visual data to match the description given [29].

A work is considered original if its ideas and creativity are realized independently by the creator. In AI Text-to-Image Art, users design descriptions (prompts) so that AI produces images according to their imagination, but user control over details such as style and aesthetics remains limited because the final result depends on the AI algorithm [23].

The AI Image Generator system does not meet the requirements for originality according to Article 1 number 2 of the Copyright Law, because the results do not contain personal expressions or subjective characteristics of the creator as required by Indonesian law. Thus, AI images cannot be categorized as copyrighted creations in Indonesia. The element of personality remains an essential requirement for originality, so even though AI images can be fixed, without individual expression, the results do not receive copyright protection.

On the other hand, Adobe Stock allows the sale of AI images with strict rules. Contributors must ensure full ownership of distribution and commercialization rights, and must not violate third-party copyrights. AI images must be labeled "generative AI content", must not include the names of artists, figures, fictional characters, or government agencies in the prompt, title, or keywords, and must not mislead the public or violate the intellectual property of others. Adobe Stock actively monitors and can remove content or disable contributor accounts that violate these provisions.

Under Indonesian law, AI images are not recognized as copyrighted creations because they do not meet the elements of personality, while Adobe Stock allows the sale of AI images as long as all rules of ownership, transparency, and ethics are strictly met [30].

Adobe Stock allows the sale of images generated by generative AI with strict provisions regarding copyright and licensing. Contributors must ensure that the uploaded AI work is theirs and created with an AI tool that has an official license or subscription, so that the rights to the work are clear and can be commercialized through Adobe Stock45. Adobe does not

provide explicit guidance on the legality of AI content, so the responsibility for licensing compliance lies entirely with the contributor4.

Adobe Firefly, Adobe's generative AI, is trained using licensed content from Adobe Stock and the public domain, promising to be copyright safe and not infringe on the rights of other artists. Adobe is also committed to avoiding copyright infringement by not training its models on infringing content and is developing a compensation strategy for artists whose data is used in AI training. Legally, Adobe Stock users' contractual relationships are governed by different provisions based on geographic region: users in North America are subject to the laws of the State of California, while users outside of that region are subject to the laws of Ireland, with a specific exception for Australia. Adobe also recognizes and respects the imperative consumer rights of the user's country, so that contractual provisions that conflict with compelling national law cannot override those rights.

In short, Adobe Stock's rules emphasize:

- Uploaded AI works must be created with licensed or subscribed AI tools.
- Contributors are responsible for ensuring AI tool license compliance.
- AI content must be clearly labeled as AI-generated.
- Adobe protects copyright by training AI using only licensed content.
- Applicable laws depend on the user's location, with local consumer rights protections still respected.

4.2 Adobe enforces strict rules to maintain the legality and copyright of the use and sale of AI images on its platform [30].

By uploading AI-generated content to Adobe Stock, contributors automatically guarantee that they have full rights to use and distribute that content in accordance with Adobe Stock's Contributor Terms. This includes the right to grant commercial licenses to third parties as well as ensuring that the uploaded work does not infringe the intellectual property rights of others. If it is later found that there is a violation of third party rights or non-compliance with Adobe Stock's policies, legal consequences and administrative sanctions may be applied, including the possibility of removing content or suspending the contributor's account [31].

Legal Protection for Owners of Images Generated by Generative Artificial Intelligence Through the Adobe Stock Platform

Artificial Intelligence (AI) technology works by processing big data using algorithms, without relying on original human ideas, to produce works of art such as music, images, or literature. One application of AI in art is the "The Next Rembrandt" project (2016), which uses deep learning and facial recognition systems to analyze 346 of Rembrandt's works, then produces new three-dimensional paintings that imitate the master's style based on data and algorithmic rules, not human creativity [32].

In addition to the "The Next Rembrandt" art project, Kris Kashtanova's Zarya of the Dawn comic created with the help of AI Midjourney in 2023 highlights new legal issues related to copyright for AI-based works. The U.S. Copyright Office only provides limited copyright protection for this comic: the text and panel layout are recognized as human work, but the AI-generated images are not protected because they are considered not the result of direct human creativity. This decision confirms that, according to the rules in the United States, only works that are entirely created by humans can obtain copyright protection, while AI results, even through creative prompts, do not meet these requirements [32]. According to Djumhana and Djubaedillah, substantial requirements for Copyright include originality, creativity, and fixation, which are part of the doctrine of originality and fixation in copyright law. A work meets the elements of originality and creativity if it is the result of one's own creation, even if inspired by another work, as long as it is not copied directly. Meanwhile, the element of fixation requires the work to be expressed in a tangible form, because Copyright protection is only given to the expression of ideas that have been realized, not just ideas [33].

Originality is the result of independent thought and imagination, as defined by Oxford and Merriam-Webster. In the context of Copyright, international rules such as Article 9 paragraph 2 of TRIPs and the opinion of L.J. Taylor emphasize that protection is only given to the concrete expression of an idea, not to the idea, method, or abstract concept itself. This is also emphasized by Agus Sardjono who stated that ideas must be realized in real terms in order to be protected.

The 2014 Copyright Law in Indonesia regulates fixation as a recording of sound, visuals, or a combination of both that can be watched, heard, reproduced, or distributed, including

through digital devices such as Adobe. However, this definition is considered too narrow because it only highlights sound and image recordings, while the scope of creation in the law is actually broader. Thus, in order for digital works created using Adobe to receive copyright protection, the work must be realized in concrete terms (for example, stored design, video, or audio files), not just in the form of ideas or concepts [23].

The doctrine of originality and fixation is the main requirement for copyright protection: the work must be original, that is, the result of the creator's creativity and personal expression, and must be manifested in a tangible form that can be seen or heard. The challenge arises in AI images distributed on platforms such as Adobe Stock, because AI does not have human creativity or personality, so the originality of the work is difficult to fulfill, even though fixation (manifestation) is clearly present. In Indonesia, Law Number 28 of 2014 concerning Copyright has not explicitly regulated the protection of AI works, in contrast to the UK and Canada which already have special regulations related to this. On platforms such as Adobe Stock, the rules still demand originality and fixation as the basis for protection, so AI works face legal obstacles in obtaining copyright without the involvement of human creators.

4.3 Law Number 28 of 2014 Concerning Copyright

Copyright protection in Indonesia based on Law Number 28 of 2014 emphasizes the principle of originality and personal expression of the creator, as regulated in Article 1 number 2, which states that creation is the result of human personal expression. Works that are entirely produced by AI without human creative intervention are not recognized as creations that can be protected by copyright, because they do not fulfill the elements of expression of the creator's personality as referred to in the regulation. The current Indonesian legal system does not accommodate copyright protection for AI works that are produced independently.

4.4 United Kingdom Copyright, Design, and Patents Act (CDPA) 1988

Based on Section 178 of the Copyright, Designs, and Patents Act (CDPA) 1988, works produced by computers including AI are categorized as creations without direct human intervention, so they do not have a human creator in the traditional sense. This regulation is the basis for legal protection for AI works, because AI as a non-physical entity cannot be a legal subject or copyright holder. The determination of authorship for AI-generated artwork is regulated by Section 9(3) of the CDPA 1988, which states that the author is the party who directs or controls the creation process of the work, not the AI. Therefore, there must be a human being who is responsible for copyright infringement.

Copyright protection for computer-generated works is regulated by Section 12(7) of the CDPA 1988, with a validity period of 50 years from the end of the calendar year in which the work was created. However, computer-generated artwork is exempt from moral rights, such as the right to be recognized as the author (Section 79) and the right to object to derogatory treatment of the work (Section 81). In short, the CDPA 1988 explicitly stipulates that AI works are still protected by copyright, but the rights are held by the human who directed the creation process, not by the AI or computer system itself.

4.5 Canada Copyright Act C-42 1985 and Copyright Modernization Act 2012

In the Canadian legal system, the primary rule is that the creator of a work is the first copyright holder without limitation that it must be a human being, as set out in Article 13(1) and (2) of the Copyright Act C-42 of 1985, and is confirmed through judicial interpretation that the originality of a work is independent of the human identity of the creator. Article 13(1) and (4) also confirm that the creator automatically becomes the first copyright holder and has full authority to transfer or license his/her work.

Copyright infringement is regulated in detail in Article 41(a)-(b) of the Copyright Modernization Act 2012, specifically regarding violations of technological protections such as dismantling or disabling the work's security. However, Article 41.12(1) provides a legal exception for the owner or legitimate licensee of a computer program to make certain copies.

In relation to derivative works, the risk of copyright infringement arises if the work takes creative elements from the original work without the explicit permission of the copyright holder. AI-generated artwork can be categorized as "artistic work" according to Article 2 of the Copyright Act C-42 of 1985, because it includes paintings, drawings, photographs, and other forms of art.

The Theberge v. Galerie d'Art du Petit Champlain Inc. ruling confirms that derivative works infringe copyright if they clearly copy elements of the original work, and must still pass

the test of originality, namely the use of skill and judgment by the creator, and maintaining a balance between the creator's exclusive rights and the public interest [34].

A comparison of copyright regulations between Indonesia, the UK, and Canada shows the strengths and weaknesses of each country in dealing with the legal challenges posed by artificial intelligence (AI)-based artwork, namely:

- Indonesia emphasizes copyright protection, creator status, and a comprehensive definition of creation in accordance with Law Number 28 of 2014, with a protection period of 70 years after the creator's death. This regulation also regulates the registration mechanism and strict sanctions for violations. However, the legal status of AI-based artwork has not been explicitly regulated, so AI works have not yet received full legal protection even though their use for commercial purposes is increasing.

- The UK has specifically regulated legal protection for artwork produced by AI, although the duration of protection is shorter than that of human works. AI is not recognized as the creator or owner of copyright, and the law gives creators the right to refuse derogatory treatment of their work. However, this regulation does not yet technically regulate the process of creating AI works and preventing the entry of illegal works into AI systems.

- Canada does not yet have regulations that explicitly regulate the legal status of AI-made artwork, similar to Indonesia. Based on Article 13 paragraphs (1) and (4) of the Canada Copyright Act C-42 1985, the creator is recognized as the first owner of copyright without confirmation of whether the creator must be human. Copyright protection still requires originality and artistic value (Article 2). AI artwork is classified as a derivative work and is recognized if it meets the originality test. Legal protection applies for 70 years (Article 6), and AI works as software are protected if licensed in accordance with Article 41 parts (a)-(b) and Article 41.12 paragraph (1) of the Copyright Modernization Act 2012.

In response to the rapid development of technology, the Indonesian government issued Law Number 19 of 2016 as an amendment to Law Number 11 of 2008 concerning Information and Electronic Transactions (UU ITE). The enactment of the ITE Law confirms the government's commitment to regulating and handling legal issues resulting from technological advances, in accordance with the objectives of the law according to Gustav Radbruch [35]. Article 1 paragraph (8) of Law Number 19 of 2016 defines an electronic agent as a system designed to act automatically on human orders, so that AI is categorized as a legal object, not a legal subject, and all legal responsibility remains with humans or system providers. In the context of copyright, Law Number 28 of 2014 has not explicitly regulated the legal status of works that are entirely produced by AI, so that these works cannot be officially registered because AI is not a creator according to the definition of the law. As a result, there is a lack of norms regarding ownership, transfer, and copyright protection of AI works, as well as uncertainty in resolving disputes in the Commercial Court because there is no clear legal basis for AI-generated artwork [34].

The debate regarding legal protection for images produced by Generative Artificial Intelligence (AI) is still developing, especially in Indonesia, which until now has no specific regulations that explicitly regulate AI creations. However, if an image produced by AI is used without permission, there are several legal approaches that can be used to provide protection, although not directly.

- Protection based on copyright: Based on Article 1 number (3) of Law No. 28 of 2014, a creation is a work that is manifested in real terms from inspiration, ability, thought, imagination, and expertise. Because AI is not a legal subject, AI cannot be recognized as a creator. However, if humans provide creative and significant instructions on the process of creating images by AI, copyright can belong to that human. Use of images without permission from the rights holder can be considered a violation of copyright, as long as the work meets the elements of originality and human expression.

- Protection Based on Platform Provisions (Adobe Stock): On the image buying and selling website at Adobe Stock, parties who upload AI images are required to state that they have full rights to the image, including the right to commercialize it. Adobe Stock is not responsible for the legality of the content, and places full legal responsibility on the contributor. Therefore, if the image is used without permission

(e.g. illegally downloaded or used without a license), the contributor still has the right to sue on the grounds of license violation and violation of platform terms.

The case of copyright infringement on Adobe Stock highlights the importance of complying with platform rules and copyright law. An American artist, Bastien Lecouffe Deharme, reported that his work was sold without permission on Adobe Stock after it was allegedly recreated using AI by a contributor named Jennifer. Although the image was available for free for limited use, the paid license was sold without compensation to the original artist, thus violating copyright.

Adobe Stock has a strict policy: works that violate intellectual property rights will be removed and contributor accounts may be suspended. The platform also stipulates that contributors may not claim ownership of works that are not their own creation, and prohibits the use of works to train AI without explicit permission. In the event of a violation, Adobe will respond according to DMCA procedures and internal policies.

In Canadian jurisdiction, according to the Canada Copyright Act C-42 1985 and the Copyright Modernization Act 2012, copyright is granted to creators who make significant creative contributions, although the law does not explicitly regulate copyright ownership by AI. If humans play an active role in the creative process, they can be recognized as copyright owners. However, if the AI work substantially imitates existing works without permission, the AI user can still be sued civilly or criminally.

In Indonesia, based on Law No. 28 of 2014 concerning Copyright, only individuals or groups can be creators, so AI is not recognized as a legal subject. Claims of ownership of AI works are problematic unless significant human creative contributions can be proven. Copyright infringement can be sued if proven to use or distribute works that resemble those of another party without permission, but the principle of similarity has not been explicitly regulated so that the settlement is highly dependent on the judge's interpretation.

- It is prohibited to upload, sell, or claim works that infringe copyright on Adobe Stock.
- AI works can only be uploaded if they do not violate the intellectual property rights of others and comply with the platform's policies.
- Violations can result in the removal of works and suspension of contributor accounts.
- Copyright ownership of AI works is dependent on human creative contributions under applicable jurisdictions, and unauthorized use of others' works remains illegal in both Canada and Indonesia.

Enforcement of these rules is important to protect artists' rights and maintain the integrity of digital work distribution platforms [36]. In Indonesia, there are no specific and clear regulations governing ownership and legal protection of works produced by artificial intelligence (AI), thus creating significant legal risks for owners or uploaders of such works. Based on applicable copyright law principles, only humans are recognized as legal subjects and copyright owners of original works, while works that are entirely produced by AI are not yet legally recognized as objects of copyright protection. As a result, uploaders of AI works do not have a strong legal basis to claim exclusive rights, making the works vulnerable to being duplicated, modified, or resold without legal sanction.

In addition, the use of big data in AI training increases the risk of copyright infringement allegations from third parties, especially if the AI work resembles copyrighted works. Without formal recognition and detailed rules regarding the legal status, licensing, and responsibilities of users of AI works, the distribution and commercialization of AI works are in a legal gray area, which is detrimental to the owners of the work and hinders the development of the digital creative ecosystem. Therefore, clear, specific, and binding rules are needed so that legal certainty and protection of AI works can be realized in Indonesia [37].

Adobe Stock applies strict rules for the legal protection of AI images. This platform prohibits the use of generative AI to create content that violates copyright, trademark, privacy rights, and third-party publication rights, including prompts that imitate copyrighted works, use of protected reference materials, and insertion of personal data without permission. Users can report violations through the formal DMCA channel, confirming Adobe's compliance with international legal norms.

AI content may only be used commercially if it comes from the final version of an Adobe product; beta versions of generative AI are prohibited for commercial use to avoid legal risks due to unstable quality and legal validity. Adobe also requires labeling of AI-generated works as a form of transparency and legal education, so that the public can distinguish between

human and AI works. In addition, only content generated with licensed AI tools may be uploaded to Adobe Stock, and users must mark AI content when uploading, according to significant changes or manipulations made [38].

Adobe Stock's internal policies are comprehensive, but their enforcement is limited across countries because Adobe's jurisdiction is not automatically subject to Indonesian law. As a result, Indonesian users do not receive full legal certainty, because there are no explicit regulations in Indonesia that regulate the legality of generative AI works or the responsibility of digital platforms for user content. The legal protection provided by Adobe Stock is contractual and based on internal policies, not universal legal recognition of AI works.

Currently, Indonesian law only recognizes copyright in works involving human creativity; AI is not recognized as a legal subject or copyright holder. The Indonesian government is preparing a revision of the Copyright Law and AI regulations to respond to developments in digital technology, including issues of ownership and responsibility for AI content. This regulatory update urges domestic users to receive equal legal protection when interacting on global platforms such as Adobe Stock.

Thus, until clear national regulations are passed, legal certainty over AI content in Indonesia is still weak and highly dependent on the internal rules of digital platforms. The government needs to immediately formulate adaptive regulations, so that legal protection in the digital era becomes fairer and protects all parties.

5. Conclusions

Based on the previous discussion, it can be concluded that images produced entirely by generative AI without human creative intervention cannot be considered as copyrighted creations under Indonesian positive law, because AI is not a legal subject and does not fulfill the elements of personal expression as stipulated in Law Number 28 of 2014 concerning Copyright. Copyright protection for generative AI works still faces challenges, especially regarding originality and human involvement, so the presence of a human element is needed for the work to be legally recognized. In addition, differences in jurisdiction in the application of contract law, such as on the Adobe Stock platform, emphasize the importance of the principle of consumer protection and the need for adaptive national regulations to provide legal certainty in commercial transactions of AI works. Therefore, the government needs to immediately formulate special legal regulations that accommodate the development of artificial intelligence, as well as encourage a stricter interpretation of the law and education for the public to understand the legal aspects and potential risks in buying and selling digital assets based on AI.

References

[1] D. Ko, "Reprogramming Copyright Law-Comparing the Copyright Regimes in Singapore and the United Kingdom and Their Application on AI-Generated Content," *Singapore Comp. Law Rev.* , 2021.

[2] Indonesian Institute of Business and Technology (INSTIKI), "Getting to Know Microstock: How to Earn Income in the Creative Industry," Instiki.ac.id. [Online]. Available: https://instiki.ac.id/2022/04/05/mengenal-microstock-cara-berpenghasilan-di-industri-kreatif/

[3] L. Prihatin, MYE Listyowati, and TI Hidayat, " Intellectual Property Rights Protection: An Essential of Copyright in the Era of Industrial Revolution 4.0.," *UNES Law Rev.* , vol. 6, no. 4, pp. 11321–11329, 2024, doi: 10.31933/unesrev.v6i4.2081.

[4] RJ Alam Wibowo, "Creations and Inventions Resulting from Artificial Intelligence in the Perspective of Copyright and Patents," *J. Ilm. Kebijakan. Law.* , vol. 17, no. 3, p. 269, Nov. 2023, doi: 10.30641/kebijakan.2023.V17.269-288.

[5] Gamebrott, "Adobe Accused of Selling AI Artist-Generated Images Without Permission," Gamebrott. [Online]. Available: https://gamebrott.com/adobe-accused-of-selling-ai-artist-generated-images-without-permission/#google_vignette

[6] RSHLCKBDPKBHKIDI Mahendra, "Legal Analysis of Artificial Intelligence-Created Songs in Commercial Use Based on Intellectual Property Rights in Indonesia," *Fairness Justice J. Ilm. Ilmu Huk.* , vol. 21, no. 1, pp. 1–8, May 2023, doi: 10.32528/faj.v21i1.22964.

[7] S. Santoso, MR Saputra, S. Masitah, and S. Amelia, "Unraveling Piracy: Enforcement of Film Copyright in Indonesia's Digital Era," *Optim. J. Econ. And Manaj.* , vol. 3, no. 1, pp. 333–349, 2023, doi: 10.55606/optimal.v2i1.4456.

[8] M. Julyano and AY Sulistyawan, "Understanding the principle of legal certainty through the construction of legal positivism reasoning," *CREPIDO* , vol. 1, no. 1, pp. 13–22, Jul. 2019, doi: 10.14710/crepido.1.1.13-22.

[9] B. Manan, *Several Problems of Constitutional Law* . Bandung: PT. Alumni, 2017.

[10] S. Raharjo, *Legal Science* . Bandung: PT. Citra Aditya Bakti, 2000.

[11] The team compiling the Dictionary of the Center for Language Development and Cultivation, *Big Indonesian Dictionary* , 2nd ed. Jakarta: Balai Pustaka, 1991.

[12] A. Purba, G. Saleh, and A. Krisnawati, *Trips-WTO & Indonesian Intellectual Property Rights Law* . Jakarta: Rineka Cipta, 2005.

[13] S. Kusumadewi, L. Rosita, and EG Wahyuni, "Stability of classification performance on an adaptive neuro fuzzy inference system for disease complication prediction," *IAES Int. J. Artif. Intel.* , vol. 12, no. 2, p. 532, Jun. 2023, doi: 10.11591/ijai.v12.i2.pp532-542.

[14]   A. Rooney, *Artificial Intelligence* . Bandung: Pakar Raya, 2019.
[15]   S. Feuerriegel, J. Hartmann, C. Janiesch, and P. Zschech, "Generative AI," *Bus. Inf. Syst. Eng.* , vol. 66, no. 1, pp. 111–126, Feb. 2024, doi: 10.1007/s12599-023-00834-7.
[16]   R. Subekti and R. Tjitrosudibio, *Civil Code* . Jakarta: PT. Pradnya Paramita, 2013.
[17]   Online Law, "Eigendom Rights, Erfpacht Rights, Opstal Rights, and Gebruik Rights," Online Law. [Online]. Available: https://www.hukumonline.com/klinik/a/hak-eigendom-lt58e28281dd903/#_ftn1
[18]   B. Harsono, *Indonesian agrarian law: history of the formation of the basic agrarian law, its contents and implementation* . Jakarta: Djambatan, 2007.
[19]   Hukum Online, "Article 44 paragraph (1) of the Copyright Law concerning Fair Use," Hukum Online. [Online]. Available: https://www.hukumonline.com/klinik/a/pasal-44-ayat-1-uu-hak-cipta-tentang-fair-use-lt4f1523ec723aa/
[20]   K. Kristopansen, WS Widiarty, and B. Nainggolan, "The Influence of Technology in the Development of Copyright," *J. Sos. Technol.* , vol. 5, no. 4, pp. 903–924, Apr. 2025, doi: 10.59188/jurnalsostech.v5i4.32066.
[21]   A. Guadamuz, "Do Androids Dream of Electric Copyright?," in *Artificial Intelligence and Intellectual Property* , Oxford University PressOxford, 2021, pp. 147–176. doi: 10.1093/oso/9780198870944.003.0008.
[22]   A. Kaplan and M. Haenlein, "Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence," *Bus. Horiz.* , vol. 62, no. 1, pp. 15–25, Jan. 2019, doi: 10.1016/j.bushor.2018.08.004.
[23]   CP Tanujaya, "Analysis of Artificial Intelligence Creations According to Law Number 28 of 2014 Concerning Copyright," *JLEB J. Law, Educ. Bus.* , vol. 2, no. 1, pp. 435–443, Apr. 2024, doi: 10.57235/jleb.v2i1.1763.
[24]   Z. Lin *et al.* , "Evaluating Text-to-Visual Generation with Image-to-Text Generation," 2025, pp. 366–384. doi: 10.1007/978-3-031-72673-6_20.
[25]   B. Muhammad Daffa, "Legal Aspects of the Use of the Stable Diffusion Method by Artificial Intelligence Against a Creation Based on Law Number 28 of 2014," *COMSERVA J. Researcher. and Public Servant.* , vol. 3, no. 11, pp. 4434–4442, Mar. 2024, doi: 10.59141/comserva.v3i11.1254.
[26]   Muhammad Raihan Nugraha, "Legal Regulation of Fine Art Works Resulting from Artificial Intelligence Systems Generating Images (Ai Generated Image) Reviewed from Law Number 28 of 2014 Concerning Copyright," *Bandung Conf. Ser. Law Stud.* , vol. 4, no. 1, pp. 482–487, Jan. 2024, doi: 10.29313/bcsls.v4i1.9948.
[27]   Y. Devianto and S. Dwiasnati, "Artificial Intelligence System Framework in Improving Indonesian Human Resource Competence," *J. Telecommun. and Comput.* , vol. 10, no. 1, p. 19, Apr. 2020, doi: 10.22441/incomtech.v10i1.7460.
[28]   N. Jamilah, P. Putri, S. Sundari, and Z. Amalia, "The Influence of Artificial Intelligence on Copyright (Analysis of Creative Works Produced by Bing Image Creator)," *J. Law and Human Rights Wara Sains* , vol. 3, no. 01, pp. 77–83, Feb. 2024, doi: 10.58812/jhhws.v3i01.931.
[29]   TS Ramli, AM Ramli, RF Mayana, E. Ramadayanti, and R. Fauzi, "Artificial intelligence as object of intellectual property in Indonesian law," *J. World Intellect. Prop.* , vol. 26, no. 2, pp. 142–154, Jul. 2023, doi: 10.1111/jwip.12264.
[30]   W. Dwiastuti, "Artificial Intelligence Sign Analysis for Visual Identity Design," *BARIK* , vol. 6, no. 3, pp. 29–42, Dec. 2024, doi: 10.26740/jdkv.v6i3.64939.
[31]   DL Hocutt, "Composing with generative AI on digital advertising platforms," *Comput. Compost.* , vol. 71, p. 102829, Mar. 2024, doi: 10.1016/j.compcom.2024.102829.
[32]   S. Silvana and H. Suyanto, "Reformulation of Copyright Regulations for Artificial Intelligence Works Through the Work Made For Hire Doctrine," *Kertha Semaya* , vol. 12, no. 1, pp. 3094–3112, 2023, doi: 10.24843/KS.2023.v12.i01.p07.
[33]   M. Djumhana and R. Djubaedillah, *Intellectual Property Rights: History, Theory, and Practice in Indonesia* . Bandung: Citra Aditya Bakti, 1993.
[34]   ND Chrisanti and H. Sulistiyantoro, "Analysis of Legal Protection of Copyright of Artworks Created by Artificial Intelligence Reviewed in Indonesia, England, and Canada (Comparative Study in Indonesia, England, and Canada)," *Kabillah J. Soc. Community* , vol. 9, no. 2, pp. 132–143, 2024.
[35]   M. Muslih, "Indonesian Legal State in the Perspective of Gustav Radbruch's Legal Theory (Three Basic Legal Values)," *Leg. J. Huk.* , vol. 4, no. 1, pp. 130–152, 2017.
[36]   Hukum Online, "Online Copyright Piracy," Hukum Online. [Online]. Available: https://www.hukumonline.com/klinik/a/online-copyright-piracy-lt55c720b13f51d/
[37]   RS Pakasy, RA Pratam, and HL Hakim, "Legal Implications of the Use of Artificial Intelligence Affecting Copyright of Scientific Papers," *J. Media Akad.* , vol. 2, no. 11, pp. 1–15, 2024, doi: 10.62281/v2i11.1062.
[38]   Adobe, "Adobe Gen AI User Guidelines," Adobe. [On line]. Available: https://www.adobe.com/id_id/legal/licenses-terms/adobe-gen-ai-user-guidelines.htm