

Utilization of Non-Fungible Token and Regulatory Challenges In Indonesia: Aspects of Copyright Law

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A non-fungible token or NFT is a digital asset that is based on the use of blockchain technology to store digital artwork as an investment tool; it has increased the growth of digital trading, especially in marketplaces with huge volumes. However, the regulations in Indonesia have not been able to respond to the above concept, for example, in the aspects of copyright. The article conducts an in-depth analysis of the above concept by determining the extent to which the utilization of NFT in the marketplace in Indonesia can provide economic benefits. It explores whether current regulations on copyright in Indonesia can provide legal protection and optimize NFT technology. The research uses the normative legal approach by conducting online library data research. The end of this research is to make inputs into government policies: first, it is expected to draw the attention of government that utilization of NFT in the marketplace are needed today because it can provide economic benefits through its copyright. It would encourage policy and regulatory optimization by the government on NFT technology to be able to provide optimal regulatory or policy directions so that the use of NFTs is in line with copyright protection.

Keywords: NFT, Copyright, Electronic Transactions

The digital transformation era has led to considerable change and provided many conveniences in cyberspace in various fields, one of which is the economic area. Economic activities carried out through digital media are known as the digital economy. The digital economy is associated with copyright objects, among other items that are traded as goods. In the digital transformation era, certain unique items can produce economic rights, such as work of art in the form of non-fungible token (NFT), which is recognized as an object of copyright.

NFTs are a form of art-related digital asset that are unique and distinguishable from each other. The unique nature of each NFT makes it possible to apply them in representing physical assets, like work of art, in digital form. NFT transactions usually occur in unique platforms, such as OpenSea, Variable, Foundation, etc. Payments through cryptocurrencies are derived from an Ethereum program (*the Ethereum smart contracts*).¹

The activities of buying and selling NFT artwork in digital media brings new opportunities for artists. This is an interesting field to study because the concept of NFT is relatively new and many people do not yet

fully grasp its mechanism of operation; however, the need to protect copyrighted works from actions that harm the creator is relevant in NFT platforms like any other system.

NFT is different from classic cryptocurrencies like Bitcoin; Bitcoin is a standard cryptocurrency where all coins are equal and indistinguishable.² In contrast, NFT is unique and suitable for identifying something or a person with distinct features.³ NFT can prove ownership and existence of digital assets, including artwork, videos, photos, music, etc. Furthermore, digital asset makers can benefit from trading in the NFT market or exchanges on a peer-to-peer basis. Using a blockchain system for validating the authenticity of a work in NFT form can be a promising intellectual property protection solution. Therefore, to realize this, attention should be paid to several aspects as follows: ensure a unique design of token utilities, make provisions that will be included in the smart-contract, and determine costs and incentives for each stakeholder who accesses the platform.⁴ Hence, the use of NFT globally in the framework of supporting the digital economy needs special attention. In early 2022, NFT achieved a high level of popularity in Indonesia due to certain events. However, NFT is not new as Kevin McCoy minted the first NFT, named "Quantum", in 2014.⁵

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Intersection of Copyright and Non-Fungible Token

The existence of NFT, which is only a few years old, is expected to encourage global trade, especially in marketplaces, thereby providing benefits, mainly for creators and innovators of art and copyright works. NFT can protect creators and innovators of copyrighted works because it relies on a blockchain system that is considered secure. Accordingly, NFT allows monetization and protection of copyright.⁶

The presence of NFT as a new digital asset is expected to make it easier for digital artists or creators to maintain their works. This can be used by artists to be able to return to work when they have difficulty selling their works conventionally. In addition, transactions using NFT are expected to increase the awareness about Intellectual Property Rights. The presence of blockchain technology can be a solution in detecting copyright abuse, because at this time internet access and the digital world make it easier for everyone to publish their work. However, what must be watched out for, a work can be stolen and then sold into an NFT.

The Law No. 19 of 2016 on Electronic Information and Transactions (Electronic Information and Transactions Act) also protects intellectual property in cyberspace. Article 25 of Electronic Information and Transactions Act stipulates that electronic information and/or electronic documents compiled into intellectual works and internet sites as well as the intellectual works contained in them are protected by intellectual property rights based on laws and regulations. This provision applies to all intellectual works, including those that have been digitally transformed to NFT.

NFT itself is important in copyright protection. NFTs can prove that a work of art existed first because it was recorded earlier. This is strong evidence of a work, which is what makes NFT an enabler technology to protect copyright.

However, when viewed from the basic principles, NFT is a work based on computer programs so that it can be legally protected as stipulated in the provisions of Article 40 Paragraph (1) letter s of Copyrights Act, namely the protection of Computer Programs. However, if it is withdrawn from the basis of copyright, then the initial work or work is clearly protected by copyright since it is realized in tangible form or first announced.

When a seller violates copyright on the NFT marketplace, then based on Article 10 of the Copyrights Act, the relevant marketplace is prohibited

from allowing trading and/or doubling on the platform it manages. The existence of such provisions should be a guarantee of protection for copyright objects in the NFT marketplace because they are vulnerable to copyright infringement. The electronic system operator must ensure that the content on its system does not violate the economic rights of the creator or related rights holder and/or has no objection to such utilization.

This obligation is in line with Article 15 of the Electronic Information and Transactions Act, which lists the responsibility of electronic system organizers to organize their systems reliably, safely, and responsibly.⁷ In detail, the minimum obligations of electronic system organizers can be found in Article 16 of the Electronic Information and Transactions Act and Article 4 of Gov. Reg 71/2019. For the optimization of his economic rights, a creator has the right to royalty, i.e., a reward for the economic rights of his creation. A copyright holder also has the right to grant a license to another party to exercise economic rights through a written agreement. In the context of royalty receipts, the amount of royalties is based on the license agreement between the copyright holder and the licensee, and fairness should prevail in such agreements.⁸

The NFT values of copyrighted works may continue to grow based on their uniqueness in the marketplace. Currently, the NFT market is experiencing rapid development globally and in Indonesia. The increasing commercialization of NFT in Indonesia is heavily influenced by news on social media and the growing number of digital asset investors looking to diversify their digital asset portfolios, which before now have been characterized by investment in mainly cryptocurrencies.⁹

NFTs in proof of work recorded on the blockchain network also cannot be edited and deleted. The copyright is in the form of a Smart Contract wrapped in the form of a digital token that anyone can buy or own. Those who own it must comply with the contents of the smart contract in it.

Utilization of Non-Fungible Token in Copyright

NFT can be seen as a unit of digital information/tokens stored on a blockchain system and is inherently non-interchangeable with other digital assets. It is created through minting a work to enter the blockchain system. There are various forms of NFT, including photography, music, game items, drawing and painting artwork. NFT buying and selling

can currently be done through¹⁰ sites such as Opensea, SuperRare, Foundation, Mintable, and NBA TopShot, which use Ethereum cryptocurrency coins.

NFT assets certainly do not escape their connection to copyright. If we look at the process of creating an NFT asset, it can be categorized as a creation because the creation process occurs gradually through the conversion or minting process, as can be seen in Article 1 Number 3 of the Law Number 28 of 2014 on Copyrights (Copyrights Act) that the creation is a work of copyright in the fields of science, art, and literature produced by inspiration, abilities, thoughts, imaginations, dexterity, skills, or expertise expressed in tangible form. But, actually, from a copyright perspective, it is difficult to say that the creation of NFTs is a work. This is because NFTs are a series of numbers. There is coding generated from a work. However, Copyrights Act has not clearly regulated NFT.

The existence of NFT is a boost to the digital economy and increasingly encourages the massive sales and purchases of two-dimensional artwork through the internet. Therefore, the presence of NFT has considerable potential in the intellectual property regime because it has transparency and liquidity and can commercialize an invention in the market.

There is something that distinguishes NFT from other assets, namely regarding the procedure for receiving royalties generated, artists or creators of NFT assets can receive royalties from the sale of their work, not from the results of granting permits or licenses like copyrighted works in general. Smart contracts are unique as NFT transition media where artists or creators of NFT assets can set the desired royalty percentage of successful NFT assets on an ongoing basis. But if examined further, smart contracts can be a threat to artists, this is because there is no clear regulation regarding the legality of the smart contract.

Also, NFT can be used to track patent owners or facilitate the commercialization of patents. In practice, IBM and IpWe have used NFT to secure patent ownership; the two companies are working together to build an NFT-based patent market infrastructure.¹¹ Thus, the blockchain technology attached to NFT can be optimized to protect intellectual property rights, such as patents and copyrights, because the following advantages support it:¹²

- (i) Availability of important information;
- (ii) Proof of ownership;

- (iii) Transfer of intellectual property rights; and
- (iv) Protection of intellectual property rights by publication.

However, ownership of NFT does not make the owner have absolute rights because there are limits to the property.¹³

There are three components of the NFT ecosystem: users, marketplace and external entities. The users are of three types: content creators, sellers, and buyers. The content creator is the party that creates digital content and uploads it on the site to be accessible to the public. In this case, not all creators can transform their content into NFT; therefore, creators often work with sellers to convert their contents into NFT and then store it as a token on the blockchain to be offered to buyers.¹⁴

The buyer will buy according to the price listed on the list, unless there is a higher bid or auction. The NFT will be transferred after payment and change of ownership will be done according to the requester's auction. The NFT marketplace is a platform for trading NFT. It has two main components: a front-end web presented to users and a set of smart contracts that interact with the blockchain. In an open marketplace, it is possible to create and sell NFT; the requirement is to transact in cryptocurrencies with a "non-custodial" platform so that users can hold and store their assets.¹⁵

Some activities that are carried out in the NFT marketplace are: User authentication: Users must register before accessing the NFT marketplace service; Token minting: It is the process of converting digital files into NFT. A token is created using the contract token method based on several accepted standards, like ERC-20 and ERC-721. However, the security token standard consists of ERC-1462, ERC-1450 LDGR, and ERC-1644;¹⁶ and Token listing: After the token is created, the seller will peddle his assets for sale. Some NFT marketplaces, such as Nifty, mandate that all collections of NFT be verified first to build credibility, trigger trust from buyers, and have strong liability provisions.

The marketplace provide the services and tools necessary for the system to run as it should. These entities, e.g., IPFS, are used for the storage of metadata and artwork because they provide tamper-proof file storage.¹⁷ It is obvious that the transition towards the digital economy is gaining momentum with the increasing number of electronic transactions. However, despite the advantages of digital trade, it

comes with many legal problems. It is imperative to make the digital economic ecosystem in Indonesia safe and conducive, especially with respect to the issues of copyright related to NFT.

The Regulatory Challenges in Copyright Law

The regulatory challenges in NFTs will basically rest on the fundamental question of what are the problems caused by NFTs with copyright as a result of not being able or difficult to be responds by regulations in Indonesia. The existence of technological advances in the form of NFT can indeed be a solution such as avoiding piracy through the system it has so that it can become the identity of the work. However, on the other hand, we also have to think about how to make sure that the work uploaded on the NFT system really belongs to the person who uploaded it for the first time.

Although NFTs aim to avoid various types of illegal copying, a form of infringement of an artist's intellectual property rights, in practice these NFTs still have obstacles to claim ownership of their work due to lack of transparency and are run or implemented on the blockchain system anonymously, thus anyone can claim digital art as their work.¹⁸

There is indeed a need for technology for certain artists, but there are also conventional artists who are negatively affected by the presence of technology. Since blockchain cannot know that the artwork in the form of digital assets is a genuine work of art or the result of someone else's claim, there is still the possibility of someone who is not the Creator taking the artwork and making it into a token or NFT. This will certainly have an impact on copyright infringement on the artwork. That is, not all works claimed as original are original, considering that there are works whose creators are not known, especially if the work has not been copyrighted.¹⁹

There have been tremendous advancement in the areas of technology and copyright. The transformation of artwork into NFT is classified as a creation resulting from copyrighted works that come from science, art, and literature.²⁰ This can be seen from various examples of artwork in NFT, as mentioned earlier.

The dissemination of digital content over the Internet also increases the risk of copyright infringement. In fact, the current Copyright Law still has a number of problems to protect copyrighted works in the fields of art, literature, and science expressed through the Internet. Anyone can freely

publish a work or access the copyrighted work, which can then result in copyright infringement, for example through unauthorized digitization of the work.

According to Peter Groves, "Modern telecommunication systems make it possible to move copyrighted works from one side of the world to the other almost instantly and spread it at the same time to many users. This creates new opportunities for the creators of copyrighted works to exploit them".²¹

There is also the case of Kendra Ahimsa and a crypto artist by the name of Twisted Vacancy, where the crypto artist claimed to get elements of his work from the internet to be placed into his asset bank. In this case, he only made modifications with a new design, to be sold at a fantastic price.²² In terms of copyright regulation, this kind of case is very difficult to prove its authenticity because it cannot be known exactly how the exact calculation mechanism to assess whether a work is really original or obtained from someone else's work because of modifications.

Against this, the Directorate of Copyright and Industrial Design at the Ministry of Law and Human Rights of the Republic of Indonesia, still provides protection for the original work, but for works in the form of NFTs it is still rather difficult to prove the originality of the scattered works so that NFTs still cannot be given protection. However, NFT creators can receive royalties when their NFTs are sold, even if the underlying content cannot be copyrighted.²³

Because it is difficult to measure the modification of a digital work taken from an existing work because the assessment to find out whether the owner of the work did it himself is also not known for sure. For example, with artificial intelligence, many works are then reformulated without involving the ability of the owner of the work in the modification process at all. While we know that the spirit of intellectual property protection begins with a sense of appreciation for one's ability or struggle in producing a valuable work.

So this makes it easier for someone to plagiarize either half or all of someone else's work without permission and reap profits for himself. Moreover, if the work has been included in an NFT, the blockchain system will automatically record the ownership and cannot be changed, deleted and stolen. So that whoever first registers the work in the NFT can be said to be the rightful owner. Even, the NFT is accused of being a den for criminals because in accordance with the statement by Opensea, that at least 80% of NFTs created with this tool are plagiarized works, fake collections, and spam.²⁴

The implementation of protection for a work in the form of NFT becomes a form of optimization of protection of exclusive rights that arise automatically by declarative principles. Article 4 of the Copyright Act halves copyright into moral and economic rights. The transformation of a work to an NFT is one form of implementing economic rights, as stipulated in Article 9 (1) of the Copyright Act, especially related to the right to reproduce a work in all its forms and the right to transformation of works. Article 9 (2) of the Copyright Act expressly requires the permission of the creator and/or copyright holder before a person can exercise such economic rights.

The determination of the value of NFT is very subjective, depending on how people assess it. Hence, the market valuation is unreasonable and speculative; price may soar continuously. Although NFT is a digital asset based on blockchain technology, the buyer of NFT actually has limited rights to the digital asset he buys.

When someone has purchased an NFT from the creator of that digital asset, they acquire ownership in the sense of being theirs. However, the NFT holder has no other rights to the work. This means that rights such as adaptation rights, reproductive rights and communication rights to the public are not owned by the NFT holder. This is because NFTs are digital certificates of ownership that represent the purchase of digital assets and can be tracked on the blockchain, not proof of ownership that comes with a license under the Copyright Act.

Thus, the NFT holder cannot sue others in case of copyright infringement (e.g. reproducing images in paintings without permission) unless the copyright owner of the digital asset grants the copyright of the digital asset to the NFT holder in writing.

The problem that arises from digital assets is that because they are digital, they are very easy to share and reproduce, so that if the NFT holder carries out buying and selling activities or distributing it to the general public without permission from the copyright owner of the digital asset, the NFT holder may be subject to copyright infringement.

There are some NFTs where NFT Holders have been granted limited rights to use copyrights, for example the Kings of Leon Band (the first band to make their songs into NFTs) stipulates that NFTs in the form of their music are for personal consumption only, thus the NFT Buyer/NFT holder cannot use the purchased digital assets for commercial use.

The protection of user data in the NFT platform is also closely related to the licensing system in establishing the NFT platform. NFT platform businesses must guarantee and provide personal data protection features for their users. This is in line with Electronic Information and Transactions Act and its implementing regulations which require all PSEs to ensure that platforms are not used for acts that violate laws and regulations.

Violation of existing obligations may be subject to administrative sanctions, including termination of platform access to operate in Indonesia. The regulation does not only apply to companies or business actors that organize domestic electronic systems, but also applies to foreign companies or businesses. Based on Government Regulation Number 80 of 2019 concerning Trading Through Electronic Systems, foreign companies that carry out their business activities that are actively related to Indonesian consumers and have met criteria such as transaction volume, transaction value, and/or amount of traffic are subject to Indonesian law.

In the event that business actors want to form and operate an NFT platform in Indonesia, they must meet the criteria and business requirements as stipulated in the Standard Classification of Indonesian Business Fields (KBLI).

As an electronically managed and traded asset, NFTs shall be subject to the electronic information and transaction regulatory regime in Indonesia. In the era of WEB 3.0, technology can identify private data, such as online identifiers and avatars, blockchain addresses, and transaction activities.²⁶

It covers the general aspects contained in the electronic information and transaction law regime, including the operation of the system, as well as aspects of storing, processing, and transferring NFT assets. In addition, NFT organizers must also still be subject to provisions related to the protection of personal electronic data.

Meanwhile, the rapid development of NFT intersects with the copyright phenomenon. This is inseparable from the anatomy of the NFT ecosystem. The NFT ecosystem involves interactions between NFT components. In the NFT ecosystem, communication between components are either data-centric or command-centric.²⁷ This basically proves that although NFTs already have a system that can track the historical ownership of a work before it becomes a derivative work, it does not guarantee that

the work on the NFT is a work that has an originality side. Given that there is no way or mechanism to check the validation of a work in the form of NFT.

Some articles of the Consumer Protection Act regulate e-commerce. However, such provisions are unable to solve the latest problems associated with e-commerce transactions, especially those related to security of consumers and digital contracts. Protection of consumers with the use of an effective regulatory framework is essential for the growth of the e-commerce business. The sector will grow if people trust the digital platforms used for online transactions. Hence, they would feel safe while conducting electronic transactions. The Consumer Protection Act does not specifically regulate intellectual property rights violations. This is evident in the general explanation of the Act, which indicates that it does not regulate the activities of business actors who commit intellectual property rights violations.

They prohibit the manufacture or sale of goods and/or services that violate intellectual property rights. However, it does not mean that the Consumer Protection Act does not contain preventive provisions that could be applied to intellectual property rights violations. We can refer to Article 19 of the Act, which stipulates the responsibility of business actors to compensate for losses incurred by consumers due to goods and/or services produced or sold. If contextualized with regard to works in the form NFT, then business actors in the NFT marketplace should bear responsibility for the works traded. Therefore, intellectual property rights should not be violated because it will cause harm to buyers (NFT consumers) or the owner of the intellectual property rights.

Penn State University Law Professor Tonya M. Evans at the time researched digital collectibles and argued that digital assets should get equal treatment with physical assets, so it can be concluded that digital assets should get the same legal arrangements as physical assets. This is actually driven by the large number of NFT users in America itself, especially for business people and technology enthusiasts.²⁷

NFT marketplaces must follow applicable regulations regarding copyright in Indonesia, along with the need for optimization from the complement of the regulatory side in responding to challenges stemming from NFTs in terms of copyright in Indonesia. Because blockchain technology can be said to be still new and there is a great opportunity to continue to find new ways of doing transactions.

Conclusion

The arrangements made are still in general, so the dynamics and problems of NFT in Indonesia have not been able to be reached specifically and fundamentally. Even though its existence concerns user rights. In this context, the creator/copyright holder of the original work, shows that copyright infringement is still possible.

NFTs have the potential to enforce copyright on the basis of a transparent blockchain mechanism. NFT is all related rights and rights of their holders, where legal parties have rights such as copyright in the realm of intellectual property or ownership rights to certain works. It is necessary to regulate NFT more comprehensively in Indonesia to prevent copyright infringement in digital transactions, as the present regulations are not specifically targeted at NFT. These measures would ensure that the people of Indonesia feel safe in carrying out electronic transactions on various platforms.

The existence of various problems previously explained does not mean that NFTs must be abandoned, if NFTs can be developed even better, then NFTs can improve the game industry such as market place ecosystems for developers and players, strengthen the protection of digital collectibles such as digital images, videos, domain names, or other intellectual property, and even income for the state through taxes.

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