

COPYRIGHT LAW PROTECTION IN METAVERSE, THE SANDBOX BASED ON POSITIVE LAW IN INDONESIA

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ABSTRACT

Keywords: Copyright, Metaverse, UU ITE, NFT, The Sandbox.

Metaverse, as one of the innovations of technological developments, can present copyright in it, such as the existence of NFTs in The Sandbox metaverse. The existence of NFTs as digital copyrights in The Sandbox raises problems, one of which is that legal regulations in Indonesia need to regulate the ownership and position of NFTs clearly, and no system can confirm the authenticity of these NFTs. This study aims to determine the protection of NFTs in The Sandbox metaverse and to find out the technical settings in The Sandbox metaverse to protect NFTs based on legal, technological, and theoretical aspects used in research. This research uses normative juridical methods by analysing laws, regulations, and legal literature. Although not explicitly regulated in Indonesia's positive law, NFT as a digital work in The Sandbox is an object of copyright referring to the Copyright Law. Electronic systems may seek the use of architecture or technology ("code") in conjunction with market modalities, social norms, and laws to protect copyright.



Introduction

Technological developments related to the internet, such as content, internet capacity, number of users, electronic commerce (e-commerce), and so on, also develop continuously and very quickly (Barkatullah, 2019). Innovations that continue to grow in the information and communication technology field introduce metaverse technology, which is realised by combining augmented reality, virtual reality, and artificial intelligence to allow users to interact virtually with the use of other electronic media for metaverse operations. Combining these technologies brings users into the digital world without physical restrictions (Kumalasari, Pradana, & Miftahuddin, 2022). Metaverse can provide opportunities for intellectual property to evolve and gradually adjust to the metaverse ecosystem itself. One of them is the existence of Non-Fungible Token (from now on referred to as "NFT") in The Sandbox metaverse, one of the metaverses built and decentralised on the Ethereum blockchain.

NFT is a unique code that cannot be duplicated, with electronic information that can be processed through a computer program. It is also actually an idea that is realised in a real way in the virtual world. So basically, NFT is a work realised by compiling a series of codes containing electronic information in the virtual world (Hapsari, Aprinisa, & Putri, 2023). Electronic information that becomes an intellectual work based on Article 25 of the ITE Law is protected as intellectual property rights based on laws and regulations. NFTs can be an alternative new media opportunity for digital artworks on the

blockchain to promote creators' work. This phenomenon proves that there is a relationship between the virtual world of the metaverse and intellectual property copyright.

Please note that intellectual property rights are material rights, rights to objects that come from the hard work of the mind that produces a creation in the fields of science, art, literature, and technology (Suryamizon, 2017). Human creativity that emerges as one's intellectual asset has long had a significant influence on human civilisation, among others, through inventions and results in creation and art (art and literary work). Giving recognition and also rewards (rewards) to the results of one's creativity with the legal order is included in the protection of the legal regime of intellectual property rights. Creators and inventors are also given the exclusive right to exploit intellectual property to recover what they have issued. Legal protection of intellectual property rights aims to motivate the production of more innovative findings or copyrighted works (Taufik H. Simatupang, 2017).

Legal protection of intellectual property rights is not only to provide motivation but is expected to increase the exploration of wealth and create optimal economic opportunities for a country following the development of information technology that occurs (Mahriwa & Wuryanata, 2021). The use of blockchain technology, such as the metaverse, will also be effective if it contributes to the protection and trade of intellectual property (Wang et al., 2019). However, technological developments can also, in fact, cause legal problems, especially in this case related to intellectual property. The problem is that it is known that Law No. 28 of 2014 concerning Copyright (from now on referred to as the Copyright Law) specifically does not regulate ownership or legal protection, including legal protection for NFT digital works. The unclear legal position of NFT digital works also results in a high chance of intellectual property rights infringement, which can harm copyright owners because their exclusive rights are disrupted (Bank, 2021). Although the Copyright Law has regulated technology-based copyright protection with regulations regarding technological control facilities, the substance is still simple, so it still requires further deepening interpretation. Meanwhile, the ITE Law still needs to contain rules to optimise technology-based copyright protection practices.

With this explanation, there is an identification of problems that will be discussed in this study, namely how legal protection of copyrighted works in The Sandbox Metaverse is based on positive law in Indonesia and how the technical arrangements of The Sandbox Metaverse in protecting copyrighted works are reviewed based on related theories and positive laws in Indonesia. This study also aims to determine the legal basis for the legal protection of NFT copyrighted works in The Sandbox metaverse based on positive laws in Indonesia. Another objective is to determine the provisions that must be contained in the technical arrangements of The Sandbox metaverse in protecting copyrighted works by applicable laws based on positive law in Indonesia. This research is expected to provide knowledge to be able to find out the protection of intellectual property rights and technological developments, especially copyright protection in the metaverse. This research is also expected to help improve policies regarding copyright protection and the development of virtual technology.

Research Methods

This research was prepared using legal research methods. The method carried out is the normative juridical method, which is a study that emphasises research on legal science and legal principles and also tries to examine legal rules that apply in society and are adapted to current conditions. Therefore, research will be based on laws and regulations and other legal materials that have a relationship with each other with this research, especially the protection of intellectual property rights of copyright regimes in the digital era. This research produces qualitative elaboration in the form of analytical descriptives to answer questions on problem identification that point to general principles and, laws and regulations that apply as positive legal norms. Researchers use data collection techniques by conducting theoretical literature studies by collecting data from laws and regulations and reading and studying literature related to the problem topic in research.

Results and Discussion

1. Copyright Protection of Non-Fungible Token (NFT) in The Sandbox Metaverse based on Copyright Law in Indonesia

The term metaverse does not exist in the legal definition in Indonesia, but it can be understood as a mirror of the real world, namely the virtual world. A virtual world is a computer-generated environment in a consistent network where many users in different physical locations can interact in real-time and simultaneously for work or play purposes. In this virtual world without physical limitations, users can socialise, interact, play, and buy products using avatars. These projections of ourselves are specifically designed in the metaverse as visualisations of the user's virtual identity. Virtual worlds have a relationship with intellectual property, especially copyrights attached to content and elements in the metaverse. In addition to the metaverse, copyright protection can arise for computer programs that drive or operate the metaverse so that copyright protection can be utilised to fight possible violations that occur in the metaverse (Latypov, 2023).

In protection for computer programs that drive or operate the metaverse, a protected object is a series of algorithmic codes containing written language and instructions designed for computers to perform a specific function or to achieve a certain result. Article 1 number 9 of the Copyright Law defines a computer program as a set of instructions expressed in the form of language, code, scheme, or in any form intended for the computer to work to perform a certain function or to achieve a certain result. Computer programs are protected as literary works because of the process of writing algorithm codes from the creator, which will eventually produce instruction codes and objects made by the creator as an expression of the creator. So based on this explanation, it can be said that the metaverse or, more precisely, the algorithm code that drives or operates the metaverse is protected as a computer program where in the Copyright Law, this computer program is protected as a copyright object based on Article 40 Paragraph (1) letter s.

The computer program previously described is used to design virtual worlds. Still, for other components or elements contained in the metaverse, such as buildings, assets, or avatars, including NFTs, the protection may be different from the copyright protection given to computer programs because it is considered a graphical user interface or graphical interface that allows users to interact with these visual representations. In short, the existence of components such as buildings, assets, and avatars, including NFTs, as a graphical user interface or graphical interface allows users to interact with computers through these components.

NFT, as one of the components of The Sandbox metaverse, can be traded digitally on The Sandbox NFT marketplace itself and in large NFT marketplaces such as OpenSea (Sandbox, 2020). NFTs experienced a huge surge with the existence of NFT-specific marketplaces. NFT is a series of encrypted electronic information codes in an electronic system that mimics objects in the real world powered by blockchain technology where all transactions are recorded. Put, NFTs contain data stored as artwork, which can be traded on the blockchain. NFTs are non-fungible. This is because the collection of codes contained in the NFT is stored in a digital archive, making the collection of codes unique and different. The fact is that although NFTs do not prove originality, they can reinforce originality and have a nonfungible rarity (Hapsari et al., 2023). The scarcity of an NFT provides high economic value so that NFT can be an alternative new media opportunity for digital artworks on the blockchain to promote creators' work.

In Indonesia, the protection of the creator has actually been regulated in the Copyright Law, which also protects the economic interests of the creator's copyrighted work and the moral interests of the creator. Copyright is exclusive because special protection and recognition are given to those who own the intellectual property. The exclusive rights in the Copyright Law in Indonesia are contained in Article 4, which consists of economic rights and moral rights. Protection of moral rights as the exclusive right of creators of digital creations in The Sandbox is basically regulated in Article 6 letter b of the Copyright Law, which protects the moral rights of creators to own copyrighted electronic information. Protection of economic rights as the exclusive right of the creator is also regulated in Article 9, namely the right of the creator to obtain economic benefits from the work. The basic framework of creator economic rights includes reproductive rights, distribution rights, adaptation rights, public appearance rights, broadcasting rights, and cable program rights (Mayana, Santika, Pratama, & Wulandari, 2022).

Based on this explanation, it can be said that there are several reasons why NFTs in The Sandbox metaverse need to be protected as one of the copyright objects, namely, in addition to the increasingly massive transaction practices in the community and have economic value due to their scarcity as NFTs, the arrangement of The Sandbox NFT electronic information code is different from The Sandbox itself which is a metaverse as a computer program and can be traded in external NFT special markets such as OpenSea where the OpenSea algorithm is different from The Sandbox. Hence, it is not enough only to protect the metaverse. Another reason for the existence of the interests of the creator,

as explained, is that the exclusive rights of the creator include economic rights and moral rights attached to a copyrighted work that needs to be protected.

These Sandbox NFTs can be protected by copyright as long as they are the result of the creator's originality. Original, in this case, is the result of someone's intellectual thought as outlined in a work, making it a work of creation. Protection of NFT The Sandbox digital artwork is composed of electronic information code that can be processed through a computer program. For now, the regulation regarding the scope of copyright objects based on the Citpa Rights Law can refer to Article 40 Paragraph (1) letter p, where the compilation of works or data, both in a format that can be read with computer programs and other media is one of the objects that receive copyright law protection. Even so, the article still does not clearly mention the legal position of historical NFTs because the article is not specifically explained. Still, implicitly, NFT can be understood to refer to Article 40 Paragraph (1) letter p based on its characteristics that can be read with computer programs and other media (Disemadi, Yusuf, & Zebua, 2021).

Regulation regarding technology-based copyright is one of the conditions given at the World Intellectual Property Organization (WIPO) conference so that member countries, including Indonesia, update copyright laws to adapt to the current digital era. The conference resulted in the WIPO Copyright Treaty (from now on referred to as WCT) in response to the development of the digital environment. Article 11 of the WCT states, "the parties shall provide adequate legal protection and effective remedies against the provision of effective safeguards used by creators relating to the exercise of their rights under this agreement or the Berne Convention and restrict action, against the works of the creators, not authorised by the relevant authors or permitted by law."

The Copyright Law in Indonesia, in response to the WCT conference regarding the provisions of copyright security technology, actually regulates it in Article 52 concerning the protection of security technology (means of technology control). A means of technological control is any technology, device, or component designed to prevent or limit actions that are not authorised by the creator, copyright holder, or owner of related rights and prohibited by laws and regulations. Furthermore, Article 53 of the Copyright Law regulates works that use information technology and high technology-based data production and storage facilities. In the explanation, what is meant as a means of production and storage of data based on information technology and high technology, namely optical discs, servers, cloud computing (cloud), secret codes, passwords, barcodes, serial numbers, description technology (description), and encryption (encryption)? Further provisions regarding information technology and high technology-based data production and storage facilities are further regulated by Government Regulations. However, these further provisions have not been stipulated as of the time of this writing, and there is no criminal provision against the regulation of Article 53.

Although the security technology regulated in the Copyright Law includes the protection of moral rights and economic rights of work, and there are criminal provisions for the destruction of the security technology, the regulation of security technology owned by Indonesia, as stated in the Copyright Law, can be said to be still simple and does not

contain procedures for methods and further use of security technology (Elizabeth Simatupang & Yuhertiana, 2021). The government needs to establish regulations to formulate further provisions for the method and use of digital copyright protection safeguarding technology, including NFT protection in optimising the protection of digital copyright works. The regulations contained in the Copyright Law in Indonesia, although it has not affirmed NFT as a copyright object and is still simple to regulate the standards of security technology that can be used to protect digital copyrighted works, the law still seeks protection for a digital copyright work based on these explanations even though it is not perfect. In practice, there is a need for other supporting arrangements derived from technology or the metaverse service itself.

2. Copyright Protection in Metaverse Technical Settings The Sandbox is reviewed based on Pathetic Dot Theory and the Electronic Information and Transactions Act and its implementing regulations

Based on the explanation that in the Copyright Law, the metaverse is protected as a computer program, which is a set of instructions intended for the computer to work to perform a certain function or to achieve certain results, the function in the ITE Law refers to an electronic system, namely a series of electronic devices and procedures that have functions in preparation, collection, processing, analysis, storage, appearance, announcement, delivery, and dissemination of Electronic Information. So, the metaverse can be referred to as an electronic system when referring to the provisions of the ITE Law.

Basically, both metaverse and blockchain can only operate with a developer or development company from the metaverse itself (Mahriwa & Wuryanata, 2021). Pixowl.Inc., which Amonica Brands acquired as a metaverse development company, The Sandbox, can be said to act as an electronic system organiser who, in organising its electronic system, must be reliable, secure, and responsible for the operation of its electronic system. The operator of the electronic system is also responsible for the operation of the electronic system unless there is an error or negligence on the part of the user of the electronic system.

Legal acts carried out in the implementation of electronic systems can be said to be electronic transactions, which are legal acts carried out using computers, computer networks, and other electronic media (Bahri, Yahanan, & Trisaka, 2019). This discussion can refer to the dissemination, commercialisation, and display of NFTs in the metaverse, referring to electronic transaction activities because they are carried out using computers, computer networks, and other electronic media. In the case of electronic transactions carried out in the metaverse operating within the blockchain network, they are carried out using electronic contracts or smart contracts that can accommodate transactions automatically and digitally signed by the parties using encryption. Electronic transactions conducted by the parties in their implementation must take into account the principles of good faith, prudence, transparency, accountability, and fairness.

In the use of information technology and electronic transactions, in the use of the internet, there are actually arrangements that are determined by not only conventional law

but also arrangements in technical architecture that can be accommodated based on *lex informatica* through technological capabilities because the jurisdiction is that the network is sending. *Lex Informatica* can also replace law when technical rules are better for resolving policy problems. In addition, the use of technology to regulate society is something stated in the Pathetic Dot Theory by Lawrence Lessig, which states that there are four modalities to regulate society, namely law, social norms, markets, and architecture or technology. This theory is basically designed by emphasising the role of technology where technology itself can cause problems, in this case, copyright infringement, so as to limit what users can and cannot do. Therefore, the four modalities in this theory require the role of technology in order to be used technically to protect digital copyright.

Legal modalities are used to shape the behaviour of the parties and form regulatory tools. The law regulating the behaviour of the parties can be done through a regulation that becomes a policy that the community must obey at large. The parties in this discussion can be said to be the organisers of electronic systems and also their users. This can be seen from the legal provisions in Indonesia that regulate electronic system operators.

If reviewed based on the legal provisions of Article 5 of Government Regulation No 71 of 2019 concerning the Implementation of Electronic Systems and Transactions (from now on referred to as PP PSTE), which prohibits containing electronic information and electronic documents that are not in accordance with the law. In its implementation, the operator of the electronic system The Sandbox contains these regulations in written provisions as rules in its services to prohibit the dissemination or distribution of anything that may infringe intellectual property rights, including copyright. So the law also regulates users to guarantee that the assets and games distributed are the user's original creations and are solely the result of his artistic efforts, which are also in accordance with one of the principles of copyright, namely protection given to original ideas where originality refers to the authenticity where the creator himself produces the work. The User also warrants that no other services and materials provided, created, produced, compiled, developed, or otherwise made available infringe or infringe copyright (Sandbox, The Sandbox Terms of Use).

The legal arrangements in Article 26 Paragraphs (3) and (4) of the ITE Law described earlier regulate the obligations of electronic system operators where each electronic system operator is also required to provide a mechanism for deleting and deleting electronic information and electronic documents that are not relevant in accordance with the provisions of laws and regulations. The Sandbox electronic system operator implements that The Sandbox may take action to disable and delete user accounts and remove user assets and games from The Sandbox if they infringe the intellectual property rights of others. The law, in this case, means regulating users not to use The Sandbox's electronic systems to collect, upload, transmit, display, or distribute any user content that infringes intellectual property rights, including copyright (Sandbox, The Sandbox Terms of Use).

In the event of an act of infringing copyright as prohibited content, the law in the regulation of Article 10 Paragraph (3) of the Minister of Communication and Information No. 5 of 2020 concerning the Implementation of Private Scope Electronic Systems (from now on referred to as Private Scope PSE) states that the UGC Private Scope PSE must provide reporting facilities that the public can access. The provisions of Article 10 Paragraph (4) state that the UGC Private Scope PSE must follow up on the report and take down the prohibited content. In relation to the legal provisions regarding the means of reporting, in its implementation, the organiser of the electronic system, The Sandbox, provides a means of reporting in its electronic system that is publicly accessible on the details of the NFT to be reported or can visit The Sandbox Help Center and will be directed to send electronic mail (e-mail) through the address suggested by The Sandbox or through a notification letter to a copyright legal agent appointed by The Sandbox. So that regulates users' need to report or complain about NFTs that violate their copyright to The Sandbox. This reporting or complaint can be made by the user on the details of the NFT to be reported, or the user can visit The Sandbox Help Center (Sandbox, The Sandbox Terms of Use).

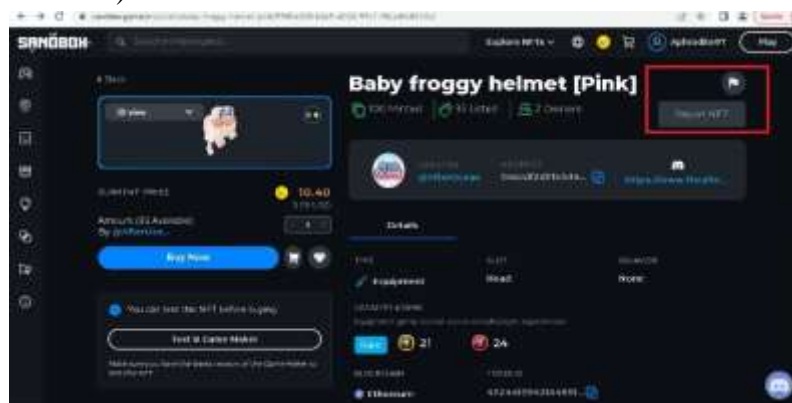


Figure 1
Reporting Tools in The Sandbox Metaverse NFTs

Reviewed based on the legal provisions in PP PSTE Article 26 Paragraph (2), electronic information and electronic documents that can also be intellectual and transferable must be unique and explain their control and ownership. Unique in this case, that represents one particular value. The Sandbox implements this by including these legal rules in its service, requiring that game assets and creations must be unique assets that have scarcity. In this case, the law allows users to distribute NFTs compiled by users of their creation as one of the conditions of protected copyright, not based on someone else's creation. The Sandbox, in its architecture, stipulates that if a visual resemblance of an asset is found clearly with a pre-existing asset, it will be removed from the Sandbox.

The market modality will be concerned with users as market participants. The implementation of this market modality can be seen with the existence of digital distributions that commercialise assets and games that are only available on The Sandbox or OpenSea's NFT-only marketplaces. If you purchase an asset in The Sandbox, please note that the creator of the asset holds the copyright to the asset, which means that the

user, as the buyer, cannot use the asset for commercial purposes in any form except acquiring the right to display and resell the asset. Things that can be considered in determining asset prices are design quality, including small details, animation quality, asset rarity uniqueness, and rarity (Sandbox, The Sandbox Terms of Use). The consideration of the uniqueness and scarcity of assets means that what was previously stipulated in the legal modalities regarding the provision of assets must also be uniquely implemented in the practice of electronic transactions as a consideration in the making of assets determining market prices.

The modality of social norms refers to the behaviour applied by the users themselves. The fulfilment of legal provisions and other aspects in the implementation of technology utilisation will have an impact on the behaviour of social norms where users will be more confident in creating a digital work in the metaverse that has provisions in accordance with applicable law in protecting their copyrighted works and their rights as creators. This creates social norms and rules that influence users to understand better and pay attention to the protection of copyrighted works in the virtual world.

Architectural or technological modalities ("code") pertain to software and hardware that make virtual worlds limit the way users behave. This "code" will later become a set of rules through software and hardware to regulate user interaction with computers and fellow users so that it can be said that "code" is law. Architecture is an underlying factor providing facilities for "code" to be able to govern. The implementation of this "code" in The Sandbox architecture can be seen as a law that governs that The Sandbox can moderate, review, and remove assets for copyright infringement in The Sandbox electronic system (Sandbox, The Sandbox Terms of Use). This means that the "Code" offers automatic law enforcement or self-executing (Elizabeth Simatupang & Yuhertiana, 2021). The Sandbox will take action to delete or modify uploaded user content and terminate user accounts if users violate its terms. So with this, user behaviour is limited to behaving in accordance with the "code" as the law that governs that users are prohibited from infringing copyright in The Sandbox electronic system.

Based on these explanations, it shows that the interaction between modalities in the Pathetic Dot Theory by Lawrence Lessig in law, markets, architecture or technology ("code"), and social norms can be implemented by emphasising the role of electronic system technology in The Sandbox in efforts to protect intellectual property, especially copyright. Although these provisions can be implemented in The Sandbox's electronic system, there is no guarantee that they will perfectly protect copyright as it is known that the function of proof of ownership and the scarcity that NFTs have does not guarantee the originality of an NFT. This is emphasised by the difference between rarity and originality referred to in NFT copyrighted works. The uniqueness and rarity set in The Sandbox's electronic system cannot necessarily guarantee that the NFT is an original work of intellect. Neither NFTs nor blockchain-smart contracts have an authentication system to confirm or justify a copyrighted work. Hence, users still have to manually search whether the NFTs that have been distributed and commercialised are copyright infringing or not.

Basically, a machine learning fraud detection system that allows the creation of algorithms to detect possible fraudulent actions can be used by users, like WatchDog, which can identify duplicates, imitators, and violations of NFTs and provide further advice on protecting intellectual property or Doppel that can index NFT data on various blockchains such as Ethereum, Solana, Flow, and others. In optimising copyright protection in its electronic system, The Sandbox also requires a machine learning system that is connected to the blockchain where The Sandbox operates.

Protecting digital intellectual property is actually not that simple. Technical architecture also still requires the role of conventional law in its implementation. It can direct this technical architecture to ensure that its rules contain ways of conforming to legal practices. Lawrence Lessig also states that the government has the ability, through legal arrangements, to regulate the behaviour of its citizens active in cyberspace. The explanation provides the idea that both conventional law and technical architecture can complement each other in their implementation to optimise the prevention process, especially against violations of digital copyright work.

Conclusion

In Indonesia, the challenge of legal regulation is that it specifically does not regulate ownership or legal protection of NFT digital artworks. Even so, the law must be present according to its function as a means of community renewal whose role is to accompany various changes and developments that occur in order to remain in accordance with the law that is currently in force to achieve legal certainty. For this reason, by taking into account the function and role of the law, the characteristics of The Sandbox NFT, which is composed of a unique electronic information code that can be processed through a computer program, in the regulation regarding the scope of copyright objects based on the Citpa Rights Law can implicitly refer to Article 40 paragraph (1) letter p, namely the compilation of works or data, both in a format that can be read with computer programs and other media. This is because the compilation of data from the unique electronic information code array that makes up The Sandbox NFT is an intellectual creation that can be processed through a computer program, The Sandbox. The interaction between Pathetic Dot Theory modalities by Lawrence Lessig, namely law, markets, social norms, and architecture ("code"), influences the regulation of certain behaviours and patterns in the virtual world and the optimisation of digital copyright protection. The provisions in the ITE Law and its implementing rules play a role in regulating and directing the electronic system to contain rules based on the law so that the technical rules of The Sandbox metaverse make it a "code" as a set of rules through its electronic system to regulate behaviour in the virtual world according to applicable law. Technical rules in accordance with applicable law will also have an impact on efforts to protect digital copyrights based on legal aspects and technological aspects. Even so, in fact, the uniqueness and rarity of an NFT still cannot guarantee its originality. Both the Copyright Law and the ITE Law and its implementing regulations have not further regulated security

technology and authentication system arrangements in optimising copyright protection both from legal and technological aspects.

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