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MARKETPLACE OF NFT'S (NON-FUNGIBLE TOKENS): NEW AGE OF DIGITAL ART

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***Abstract.** The article presents a description of a new trend in modern digital art - crypto art, that is considered by the art market as physical art because of the new ability to confirm the ownership of the artwork. It is analysed the main characteristics and problems of digital art as well as the solutions and concerns offered by cryptographic certificates in all aspects of the life of the work of art: creation, diffusion, and preservation. The authenticity of digital art can be verified using an NFT (non-fungible token). This research aims to clarify the concerns of digital artists on the issue of ownership and authorship of digital pieces by explaining how NFTs work in the art market.*

***Key words:** DIGITAL ART MARKETPLACE, NON-FUNGIBLE TOKEN, ARTWORK, OWNERSHIP.*

Introduction

The increased public interest in digital art is due to the availability of technological devices such as smartphones, computers, tablets also the inclusion of information technologies in everyday life, culture, and art. The use of the internet and technologies are changing our way of interacting with the world, currently making it almost impossible to imagine a life without networks. The internet also has a huge impact on culture, and naturally on the arts. Artists today are looking for ways to show how networks and connection to the world through the screen have redefined our way of relating to others, opting for new aesthetics and forms of expression: crypto art, net art, digital activism, online performance, etc.

Today the art institutions do not fully recognize the value of these expressions and their registration as legitimate aesthetic objects. The orientation of museums, galleries, auctions, and the art world towards physical pieces has configured the exhibition spaces for material art, failing to adapt to new media works, that are quite different from previous artistic formats, including formats oriented to the creative processes or dematerialization [1]. This difficulty of adaptation to the new media, to the process of creation and reproduction, increases the gap between world of digital art and art institutions. New media in art require new exhibition formats, new ways of instantaneous communication between artists and people. The space where public communication was carried out is being replaced by the audio-visual content and screens. At the same time, media culture is distinguished by high information capacity, ease and persuasiveness of sensory perception, speed and breadth of broadcasting, endless replication and accessibility.

McLuhan described the electronic age and a new virtual community that is emerging as being home to something called a *global village*, a place where information would be accessible and available to anyone through technology [2]. Easy access and replication *repost* of any information makes us think what *work* or *author* means today. In the era of technical reproducibility, is it possible to certify the *authenticity* of a digital piece and why do we speak about *originals* again? With the non-fungible token, the question about art and its doing returns by resolving the question of the unique and unrepeatable work.

Non-fungible tokens or NFTs can be used to confirm ownership of digital artwork or any other unique digital piece where ownership is added in smart contracts on a blockchain. By any other unique digital piece, we understand any kind of digital object: audio visual content, text content such as articles, animations, GIFs, memes, tweets, sketches, drawings, music, or videos, resulting in a limitless market. These digital tokens establish proven ownership of virtual items on the blockchain, protecting them from replication, making them identifiable and unique, increasing their value, and opening business opportunities. Non-fungible tokens can be used to sell digital collectibles. The token is recorded in a digital data base and can be resold. The value of a work of art can go up or down, but the owner of the token never owns the original digital piece. An NFT can best be described as a digital certificate of authenticity that is on the rise as a collectible. In addition, NFTs have the potential to transform brand-customer relationships by opening exclusive opportunities. They can be used as secure digital passports that guarantee the authenticity of physical goods, making them useful for physical world of retailers. Also, we can imagine using them for identification and the maintenance of permanent records. Occupation-specific credentials like medical licenses, professional certificates, law degrees, and other certifications are unique to an individual and can be issued, maintained, and tracked as NFTs on blockchain networks [3]. While the technology is primarily focused on consumer products and media, its adoption is accelerating.

Aim of the investigation

Being NFTs a significantly growing phenomenon, this investigation deals with a legal analysis of their nature, as well as their implications in relation to copyright that could be involved due to the works of art represented by them. However, prior to this analysis, it is necessary to clarify what these NFTs actually are, for which it will be explained what fungible and non-fungible objects are, and what is a digital token. In addition to this, the structure of the system behind NFTs will be described: the Blockchain; as well as the legal operation of these through smart contracts.

NFT today is the technology that is revolutionizing digital art world and is solving the problems associated with the authorial accreditation of digital artworks, in addition to the difficulties they face at the time of commercialization.

Main part

Problems of ownership and copyright in the digital world

Digital artworks have a series of characteristics that are due to their digital nature that are problematic for their subsequent sale, and that have generated some reluctance to include them to the art market of the collectors of contemporary art, galleries and auction houses. The aforementioned difficulties, which are analyzed below, start in the creation process, in which the author faces some problems to be recognized as such in the art system; In addition, the abundance of works and the theoretically infinite replicability in a virtual space make it difficult to trace the pieces, and therefore their authentication and ownership.

The contemporary world of digital art is trying to adapt to the intermediary-based sales system of the XX century, trying to establish connections between an artist with artworks, a buyer, and someone in-between mediating the transaction. Nowadays a web platform instead of gallerist coordinates the sale between the artist and the buyer and takes a commission for each piece. In a traditional market, such as Christie's, British the 255year old auction house, this model of transactions seems normal, when the figures of a producer, gallery owner, auctioneer coexist managing the experience and the transaction. Digital art has generated innumerable complications to this mediated relationship. Some digital art platforms on the internet simply imitate the physical transactions but are not responsible for the use and possible reproduction of the copies of the sold works. However, other models have emerged, from low-fee platforms like Stocks (for example Shutter Stock) where artists have more control over environments that allow direct transactions with consumers, to artists adapting social networks like Behance and Instagram to develop and sell digital works under different types of licenses that allow the use, modification, or reproduction of the content of the digital work. But it appeared that most of the time the technology has benefited the buyer or the seller at the time of the transaction through modes of control, power and, with greater security, with respect to ownership.

The art market values exclusivity first and foremost, so the downside can be the abundance of digital artworks, the means of production of which are more accessible compared to a traditional artwork. And not only that, but digital works are also technically reproducible, so they can be copied indefinitely without any difference between the original file and its copies - all its versions of the same work are absolutely identical. Faced with this situation, an art collector who wants to acquire a work that is popular in the market and whose economic value is likely to increase over time, asks the questions: Why should I buy an image that can be downloaded for free, if not in the best quality, but enough to see it on the screen? Where can I save and how will I exhibit the work that cannot be retrieved from the virtual space? What are the guarantees that the one who sells is the true author or creator of the work? And many other technical questions related to the preservation and reproduction of the work, requiring special software and hardware. It must be

understood that a digital work of art is not the equivalent of a physical work, a valuable object that can be owned, but rather, due to its multiple nature, it becomes an intangible economic asset with intellectual property rights. These types of rights are closely related to online and digital distribution, so reproducibility becomes a desirable characteristic: the more a work is distributed, and the more people see and repost it, the higher its value and the more profit you can get by selling it at auction – this is where the collector's interest in digital work lies. The question is how to promote a consumption model that is not intended to limit the multiple nature of the digital object, while ensuring the legitimacy and authorship of works. In response to the need to sell digital art and with the aim of resolving the difficulties presented, in recent years online sales mechanisms have been successfully developed and implemented that legitimize the digital sphere as a model of artistic investment - what has been called *Crypto art*, which is nothing more than a digital work accompanied by a cryptographic certificate NFT. The NFT certification capable of transforming digital art works – multiple and difficult to control, into traceable and unique products in the sense of the manifestation of the work that is intended to be part of the art market.

History of Crypto Art

Last two years, the sale of some digital works of art, called Crypto art, have increased notably, reaching the first millionaire figures in auction houses. The commercial success of these pieces is due to the fact that, together with the file of the artwork, they include a type of cryptographic certificate, which collect the data of the work and write it in a chain of blocks or blockchain transforming a file into a unique and traceable digital item, whose ownership can be identified as would be done with any physical and material object. All crypto art exists in the form of NFTs, but not all NFTs are crypto art.

Elhanani (2019) describes Crypto art like a digital artwork that is published directly onto a blockchain in the form of NFT, which makes the sale, transfer, and ownership of this artwork possible in a secure and verifiable manner. [4].

The concept of Crypto art become popular in 2017, when the CryptoKitties project became popular (fig. 1). CryptoKitties is a game on the Ethereum blockchain that allows members to buy, sell and breed cats or special NFT tokens on the Ethereum blockchain [5].

Each token is a unique cat created using a smart contract. The legacy of CryptoKitties is undeniable: the project has raised awareness of the concept of non-fungible tokens. Artists creating crypto art experience a lot of difficulties when it comes to copyright protection on the Internet. Thanks to NFT, it is safe to sell your work. Non-fungible tokens and their smart contracts allow the addition of detailed attributes such as the identity of the owner, extensive metadata, or secure file links, all of which greatly help artists to copyright their work.



Figure 1 – Game CryptoKitties extracted from <https://www.cryptokitties.co/>

The Crypto Art marketplace is a new way for artists to distribute digital works to collectors. Blockchain technology provides secure ownership, traceability, commissions to artists on sales. It is a thriving marketplace with rapidly growing platforms like: Crypto.com – Biggest NFT Marketplace; NFT Launchpad – Fast-Growing NFT Platform with Exciting Collections; Binance – Low-Fee NFT Trading Platform; OpenSea – one of the top NFT Marketplace with Huge Asset Selection; Nifty Gateway – Best NFT Platform for Rare Drops; GameStop – Upcoming NFT Platform for Blockchain Gaming; DraftKings – Popular NFT Marketplace for Sports Collectibles; Rarible – Leading NFT Art Marketplace; WAX – Widely-Used NFT Marketplace and brings many benefits that the traditional art marketplace cannot provide [6]. With no travel and predominantly digital distribution, this new model looks like it could become a sustainable practice for artists. Art is one of the biggest and fastest growing NFT applications. The intersection of proof of ownership and rarity makes it the perfect combination. Buying a digital copy and getting the physical equivalent is becoming big business and part of the ecosystem. It is important to have both centralized and decentralized platforms. Curated platforms are important to collectors because they can be relatively certain of buying original art. However, from an artist's point of view, it is important to have easy access to the markets (without having to apply and wait to be approved). Care must be taken not to make the same mistakes as in the traditional art market, where the system of curators chooses artists, admitting or not admitting them to the museum space. Curators interpret a museum's mission and collection for the viewing public. They organize temporary exhibitions and traveling shows and decide who and how will be shown in the galleries or in the museums. But nowadays technology and the opportunities of digital spaces in the metaverse are brought closer to artists, curators, collectors, and artistic institutions to trade their works or promote and catalog their collections.

Auction houses are also migrating and accepting new rules. Christie's sold \$150 million of NFTs in 2021. In early March 2021, the digital piece by Mike Winkelmann (Beeple), a collage of his first 5,000 days of work, stands as the most expensive work of digital art sold and marked Christie's first-ever sale of non-physical art [7]. It has been sold for \$69.3 million at Christis. The piece *Everydays: The First 5000 Days* (fig. 2) first published new artwork online on May 1, 2007,

continuing for the next 13.5 years to create the finished piece. The winning bid for the 319-gigabyte JPEG file was submitted after a two-week online auction held by Christie's. According to the auction house, it was the third-highest auction price for a work by a living artist, after transactions for pieces by Jeff Koons (\$91 million) and David Hockney (\$90 million). The identity of the winning bidder was not disclosed. Christie's NFT auction accepted payment in both conventional currency and cryptocurrency.



Figure 2 – Digital collage “*Everydays: The First 5000 Days*”
extracted from https://en.wikipedia.org/wiki/File:Everydays,_the_First_5000_Days.jpg

But it's not just about works of art, it's also about tweets like Jack Dorsey, co-founder and CEO of Twitter, did. Dorsey sold an authenticated version of the first tweet in history for \$2.9 million (fig. 3). The image of the tweet *Just setting up my twttr* or configuring my twttr account, which Dorsey published in March 2006 and which was for sale on the platform. Valuable since March 5, it was acquired by businessman Sina Estavi, based in Malaysia.



Figure 3 – First tweet
extracted from <https://twitter.com/trajectorycpt/status/1374324346479591426?lang=zh-Hant>

The NFT market has exploded in 2021 as enthusiasts and investors use their saved money to purchase items that exist online only. The mechanism, created several year ago, covers any virtual object with identity, authenticity, and traceability

in theory indisputable and inviolable, thanks to the technology called blockchain, used for cryptocurrencies such as bitcoin. Blockchain technology has existed before 2021, but only last year it was applied not to cyber-currency, but to artworks such as cybernetic art. videos, photos, contemporary images and collages, gifs, memes are quickly copied and distributed on the Internet, everyone can have it. Not everything that has a token is art. However, the technology itself, its concept and the first sales of cyber art are performance and art.

Structure of NFT marketplace

Various blockchain-based platforms offer the opportunity to sell digital art such as NFTs. Digital artists who want to enter this market must first understand how this system works. On the artist side the process of registration, uploading the content and offer his artwork (fig. 4) look as follows: registration in the platform; creation a crypto wallet or link an existing one with the platform; creation NFTs on the platform's Ethereum engine and set up the price for the artwork or collection; the collection is checked and validated by the marketplace, getting into open display after that; buyers place bids if they want to buy the NFT, and the auction takes place. After the auction is over or one buyer pay fixed price, the NFT marketplace organizes the smart contract-based transfer of NFTs to their new owner.



Figure 4 – Workflow of NFT market (own elaboration)

The number of NFT marketplaces is large and growing. All NFT marketplaces are decentralized platforms:

- Universal NFT Marketplaces like Rarible, OpenSea, Mintable, offer all kinds of NFTs on sale. They are open and democratic for new users, allowing anyone to generate Ethereum-based assets and start selling them;
- Specialized NFT Platforms: Foundation is a premier marketplace featuring artwork auctions for invite-only artists, Valuables platform is a place to buy tweets, Looking Glass Factory – digital holograms;
- NFT Galleries are the equivalents of traditional galleries where owners showcase their NFTs and organize all types of exhibitions and performances.

The standard for NFT creation is the Ethereum blockchain but the cost to create an NFT may vary here from 0.01 to 0.05 ETH (\$50 – \$150). However, many alternative solutions have emerged recently, with NFT marketplaces on other blockchains currently under development [8].

Context of Mexican Art marketplace

In Mexico, virtual assets such as NFTs and other cryptocurrencies are regulated by FinTech Law. The Law to Regulate Financial Technology Institutions – latest reform published in the Official Gazette of the Federation on May 20, 2021 – is the formalization of the entire range of financial services that are provided through mass media technology or innovative platforms [9]. It is the law in charge of regulating electronic payments, collective financing and virtual assets such as cryptocurrencies. From the other side all artworks are regulated by the Federal Copyright Law, no matter the nature of the artwork behind an NFT, as well as its authors, will have the rights and limitations currently established under the Federal Copyright Law, its regulations and secondary laws, respectively. Under the Federal Copyright Law, authors have moral economic / patrimonial rights. Moral rights are inherent and grant the author the right to: decide if the artwork is to be divulged, modified, retired from commerce, also the corresponding credit and demand respect of the work. Patrimonial rights grant the author the authority to exploit the work commercially or transfer such rights to third person. The protection of patrimonial rights in Mexico covers period of the life of the author plus one hundred years, and one hundred years after the work has been published.

Economic activities mark a trend towards digitalization and virtual marketplace, assisted by information and communication technologies that are more relevant in the current Mexican market. Many companies and digital artists during the pandemic and today are engaged in digital marketing, with assets identified as online courses, cryptocurrencies, NFT's, E-books. Among the Mexican NFTs projects could be mentioned:

- *Krishna VR*, the Mexican artist was the one who released her first work on NFT. The 21-year-old Mexican photographer and visual artist, Krishna VR, became one of the pioneering artists of Mexican crypto art by putting up for auction her most recent work *Sinestesia*, an animated self-portrait that she released exclusively in NFT format (fig. 5). *Sinestesia* is the first work in a series of dream photos that talks about how a creative person perceives the senses and colors and makes them part of her creations. This single edition work was available for auction within *Foundation*, an exclusive platform for creators and artists to sell and auction their NFT and crypto artworks;

- *Crypto Mexican Fighters* NFTs inspired by the masks of Mexican wrestlers and created by Mexican designers, and Artcrypted Gallery, first gallery in the country that formally represents artists focused on the production of NFT works. It was launched with the representation of 16 digital artists from both Mexico and Europe, Asia and Latin America;

– *Crypto Lucha Club NFT*, a collection of 6,969 NFT Luchadores in Solana with traits inspired by the most powerful and legendary features of Mexican wrestling;

– *Viva*, created by Juan Carlos Valle, that in the month of June 2021 this piece of art was auctioned for 90,000 pesos by auction house *Morton* who, in addition, became the first auction house in Latin America to offer an NFT (fig. 6).



Figure 5 – *Sinestesia* Krishna Valdez Ramírez extracted from <https://krishnavr.com/sinestesia/>



Figure 6 – *Viva*, created by Juan Carlos Valle extracted from <https://www.vertigopolitico.com/columnas/juan-carlos-del-valle/notas/viva>

Viva is an eminently pictorial work, composed from matter and animated by the painter's own hand. His dense brushstrokes paint a heart, the first organ to be born and the last to die; the heart, symbolic representation of love [10]. The physical work from which *Viva* originated no longer exists, since it was transformed by Del Valle into a different painting, thereby evoking a fundamental material principle: *it is never destroyed, it only transforms*.

Conclusions

The digital space is not only an exchange platform, for the regulation of which it is enough to administer the transactions and the processes of information exchange, but also a full-fledged sphere of society, including individual objects. Such objects can represent a value, both economic and any other value that the things of the material world have for their owners, that is, in fact, things, but not in the material, but in the digital space. In this regard, the rights to such digital things need to be protected, for example, by including digital things in the list of objects of civil law and extending the provisions of civil law to them. Thus, the NFT phenomenon is a clear example of the fact that the current norms of civil law do not contain universal tools for regulating the digital sphere, which makes it difficult to qualify both objects within the digital sphere and legal relations arising in it, and therefore it seems quite effective is the introduction of the concept of *digital object* into civil law and the extension of the provisions of civil law on property law to it, that will contribute to the predictability and stability of circulation within the virtual space.

References.

1. Premiyak, L. (2016). Digital natives – How new east artists are taking over the virtual world. *Calvert Journal*. <https://www.calvertjournal.com/features/show/6116/post-internet-art-networks-borders-memes>.
2. Hoffmann, S. (2002). Marshall McLuhan: Understanding Media. *MEDIENwissenschaft: Rezensionen / Reviews*, 19(1), 118-121.
3. Fernando Domínguez Rubio, Glenn Wharton (2020). The Work of Art in the Age of Digital Fragility. *Public Culture* 1 January 2020; 32 (1): 215-245.
4. Elhanani, Z. (2018). How Blockchain Changed The Art World in 2018. *Retrieved February, 26, 2019*.
5. Serada, A., Sihvonen, T., & Harviainen, J.T. (2021). CryptoKitties and the new ludic economy: how blockchain introduces value, ownership, and scarcity in digital gaming. *Games and Culture*, 16(4), 457-480.
6. Beal, A. (2019). How Non-Fungible Tokens Can Create Value for Enterprises. EY. https://www.ey.com/en_us/financial-services/how-non-fungible-tokens-can-create-value-for-enterprises.
7. Mozé, C. (2021). Christie's sold \$150 million of NFTs in 2021, with the auction house on track for \$7.1 billion in sales for the year. <https://markets.businessinsider.com/news/currencies/christies-nft-sales-total-beeples-auction-crypto-cryptopunks-2021-12> visited 15.05.2022
8. Gomez, A. (2022). The Cost to Create an NFT: A Comprehensive Guide. <https://cyberscrilla.com/the-cost-to-create-an-nft/>.
9. Camara de diputados. Ley para Regular las Instituciones de Tecnología Financiera. Última reforma publicada en el Diario Oficial de la Federación el 20 de mayo de 2021 <https://www.diputados.gob.mx/LeyesBiblio/ref/lritf.htm>.
10. El Universal. Subastarán la primera obra de arte NFT en México. <https://www.eluniversal.com.mx/cultura/subastaran-la-primera-obra-de-arte-nft-en-mexico>.