

The Intellectual Property Value of Non-Fungible Tokens

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The Hot NFT Market

Non-Fungible Tokens, known as NFTs, recently made headlines with sales of individual tokens valued at millions of dollars, comparable to sales of fine art. Christie's— a “conventional” auction house – sold its first NFT, the piece “Everydays: The First 5,000 Days” by the artist Beeple – for a staggering \$69 million.^[1] Most NFTs sell from merchants without such established reputations. Traders should understand the value of intellectual property, or lack thereof, tied to NFTs.

How NFTs Work – a Brief Overview

NFTs are digital certificates, or “tokens” stored on decentralized ledgers popularly referred to as the blockchain. NFTs use software code, referred to as “smart contracts,” to transfer the digital certificate of ownership, ensuring proof of ownership in the process. Like cryptocurrency, NFTs also use the blockchain to record transactions, but where cryptocurrency creates interchangeable (or “fungible”) tokens, NFTs create unique, noninterchangeable tokens with distinct identifiers.

The non-fungible nature of NFTs offers particular advantages. NFTs can refer to tangible or intangible assets and commonly *represent* digital media such as images or videos. NFTs often do not include the digital media itself in the blockchain. Instead, the unique identifiers in the tokens point to a storage location of the media, with the blockchain serving as proof of ownership and a medium of transfer.

The Value of Copyrights

17 U.S.C. §§ 101-122 defines the scope of U.S. copyrights. Depending on the nature of the work, copyrights provide the exclusive rights to reproduce the work, prepare derivative works, distribute copies of the work, publicly perform the work, and publicly transmit the work. To transfer a copyright, the owner usually must sign a writing as required by 17 U.S.C. § 204.

By nature, copyrights exclude others from the market and have inherent monopolistic value. For example, the owners of a blockbuster movie may license the right to show or view the movie at high prices by excluding others from showing the movie at lower prices.

What Copyrights do NFTs Transfer?

Most NFTs do *NOT* claim to transfer any copyrights. A party purchasing an NFT should generally *NOT* assume that an NFT comes with any copyright without receiving the signed writing required by 17 U.S.C. § 204. Parties should seek legal advice on the exact scope of rights transferred in any copyright sale.

For example, some NFTs use the erc721 standard. This standard includes the following code comments about an NFT transfer event:

```
/// @dev This emits when ownership of any NFT changes by any mechanism.
/// This event emits when NFTs are created (`from` == 0) and destroyed
/// (`to` == 0). Exception: during contract creation, any number of NFTs
/// may be created and assigned without emitting Transfer. At the time of
/// any transfer, the approved address for that NFT (if any) is reset to none.
event Transfer(address indexed _from, address indexed _to, uint256 indexed _tokenId);
```

This code refers to “when ownership of any NFT changes,” but ownership of a *token* generally differs from ownership of a *copyright*. Any party seeking to write or verify code for transferring copyrights should consult an attorney about compliance with the statute of frauds.

As another example, the popular CryptoKitties NFT code^[2] includes different language purporting to transfer “kitten ownership,” without mentioning copyrights:

```
228     /// @dev Transfer event as defined in current draft of ERC721. Emitted every time a kitten
229     /// ownership is assigned, including births.
230     event Transfer(address from, address to, uint256 tokenId);
```

Some NFT merchants include copyright language in their terms and conditions rather than in the source code of the smart contracts. The NFT-based horse racing game ZED includes the following language in their terms and conditions:

From time to time during your use of the App, you may elect to purchase one or more thoroughbreds (a “purchased thoroughbred”). Subject to your continued compliance with these Terms, ZED grants you a worldwide, non-exclusive, non-transferable, royalty-free license to use, copy, and display the Art for your Purchased thoroughbreds, solely for the following purposes:

- (i) for your own personal, non-commercial use;
- (ii) as part of a marketplace that permits the purchase, sale and breeding of thoroughbreds, provided that the marketplace cryptographically verifies each thoroughbred owners' rights to display the Art for their Purchased thoroughbred to ensure that only the actual owner can display the Art; or
- (iii) as part of a third party website or application that permits the inclusion, involvement, or participation of ZED, provided that the website/application cryptographically verifies each thoroughbred owners' rights to display the Art for their Purchased thoroughbred to ensure that only the actual owner can display the Art, and provided that the Art is no longer visible once the owner of the Purchased thoroughbred leaves the website/application.

Because these terms purport to grant a limited license “to use, copy, and display the Art” for three purposes, ZED’s NFTs may have copyright license value.^[3]

What Ownerships Do NFTs Confer?

Without other arrangements, an owner of an NFT owns only the *token* itself.

Owning an NFT can compare to owning a collectible card, such as a rare baseball card or rare Pokémon card. Like a card, an NFT is a *token* that represents an item. Owning a *token* or *card* confers no ownership or rights in the represented item.

For example, an owner of a Babe Ruth baseball card owns only a physical paper card with artwork showing Babe Ruth. The card owner does not own Babe Ruth, nor does the card owner have any right to make Babe Ruth play baseball for a particular team. The owner of a Pikachu Pokémon card owns only the physical paper card with artwork. The owner of the Pikachu card does not own a real-life Pikachu, nor does the card owner have the copyright to create a derivative anime cartoon showing Pikachu’s likeness as a character.

In the same way, absent other arrangements, an owner of an NFT owns only the *token* itself but not the underlying item or any related copyright.

Why Do NFT’s Have Value?

Despite not usually transferring any copyright, NFTs derive value in other ways. NFTs commonly derive value from scarcity, collectability, and authenticity. The NFT may also derive value from the item that the token purports to represent.

These properties make NFTs comparable to collectible cards or fine art. The authentic Mona Lisa would sell for millions of dollars in part because of its scarcity. Leonardo da Vinci will never paint another. A poster copy Mona Lisa at the Louvre’s gift shop, although visually identical, will sell for a few dollars at most because of the lack of scarcity and authenticity.

NFTs With Utility Value

Though NFTs commonly represent art, some NFTs have digital “utility.” These NFTs give owners rights to perform certain actions on a blockchain.

For example, the online horse racing game “ZED” sells such tokens. The ZED website^[4] explains that ZED is “a digital horse racing game where players can build a stable of racehorses by buying, breeding, and racing digital racehorses.” Buyers purchase NFTs that represent digital “horses.” Each digital horse has a breed, blood type, and other characteristics affecting racing potential. These digital horses race against other horses in digital races. The characteristics of the horses directly correlate with the outcome of the races – with some horses being better geared towards particular race lengths and starting positions. ZED’s terms^[5] explain that:

Terms of Use

ZED is a distributed application that runs on the Ethereum network, using uniquely developed smart contracts (“Smart Contract”) to enable users to purchase, sell, breed and race, statistically unique digital thoroughbreds, which can then be visualized on a website that the user can interact and earn Ethereum from (the “Site”). The Smart Contracts and the Site are collectively referred to in these Terms as the “App”. Using the App, users can view their thoroughbreds and use the Smart Contracts to purchase, sell, breed and race thoroughbreds through various means within the Site such as fixed price purchasing or via a clock based auction.

The value of this NFT derives partly from its utility in addition to scarcity and collectability.

Value to Creators

Some NFTs include a structure for automatically collecting royalties each time a sale of the NFT occurs.^[6] For example, an artist of a work represented by an NFT may receive a 10% royalty each time the NFT sells on the blockchain.

Common NFT Risks

Any party purchasing an NFT should conduct due diligence of authenticity. An art collector seeking to purchase the authentic Mona Lisa would only buy the painting from the Louvre, verify its authenticity, and verify title to the painting. Collectors of rare cards will look for signs of fakery.

In the same way, NFT purchasers should conduct similar due diligence for high-value purchases. Authenticity remains a big concern. For a low transaction fee, anyone can create an NFT that purports to represent something important (such as the Mona Lisa), but these NFTs have no authenticity or scarcity, and thus have low value. If, on the other hand, the Louvre created one and only one NFT for the Mona Lisa, then the Louvre’s NFT will have more value. Internet transactions that hide the identities of sellers make verifying authenticity difficult.

NFTs remain a new technology in a fast-changing market. The extent of copyright and other law’s application to this new technology remains unsettled. NFT traders should understand the latest technology, market conditions, and applicable copyright law when engaging in NFT transactions.

^[1] Beeple’s masterwork: the first purely digital artwork offered at Christie’s | Christie’s (2021), <https://www.christies.com/features/Monumental-collage-by-Beeple-is-first-purely-digital-artwork-NFT-to-come-to-auction-11510-7.aspx> (last visited Apr 16, 2021).

^[2] Beeple’s masterwork: the first purely digital artwork offered at Christie’s | Christie’s (2021), <https://www.christies.com/features/Monumental-collage-by-Beeple-is-first-purely-digital-artwork-NFT-to-come-to-auction-11510-7.aspx> (last visited Apr 16, 2021). Nothing in this article should be interpreted as a statement about the validity or scope of rights granted.

^[3] ZED RUN: Digital Horse Racing, <https://zed.run/terms> (last visited Apr 16, 2021). Nothing in this article should be interpreted as a statement about the validity or scope of rights granted.

^[4] Frequently Asked Questions, ZED RUN: Community, <https://community.zed.run/faq> (last visited Apr 16, 2021).

^[5] ZED RUN: Digital Horse Racing, <https://zed.run/terms> (last visited Apr 16, 2021). Nothing in this article should be interpreted as a statement about the validity or scope of rights granted.

^[6] Non-fungible tokens (NFT), [ethereum.org, https://ethereum.org/en/nft](https://ethereum.org/en/nft), (last visited Apr 16, 2021).

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