SIMONT | BRAUN

NON-FUNGIBLE TOKENS

INTRODUCTION GUIDE

Digital Finance Team | March 2023

Simont Braun takes a deep dive into the technicalities and unique legal challenges that come with NFTs.

This article is the introductory part of a series dedicated to NFTs and law and takes a closer look at what NFTs are, how they work and what use cases exist.

1. INTRODUCTION

Non-fungible tokens (NFTs) are digital assets registered on the blockchain that represent unique though intangible items such as, among others, pictures, videos or video game collectibles. These digital assets feature unique characteristics allowing them to somehow replicate the tangible attributes of physical goods like uniqueness, scarcity and proof of ownership.

While NFTs popularity quickly rose through their original application in the art industry, their underlying concept and technology were subsequently put to use in a variety of ways, such as assets for video games, works of art, and membership tokens for various groups. Yet, the overall hype and value of NFTs have started to decline after being one of the largest tech trends in 2021, partly fuelled by general economic conditions and the state of the cryptocurrency market.

Despite less favourable conditions, the NFT market continues to evolve though. Short-term pump-and-dump projects have now given way to more long-term businesses that are actually leveraging NFTs' potential.

If you've always wondered what NFTs are and what makes them so special, you'll get a good insight below.

2. WHAT ARE NFTs AND HOW DO THEY WORK?

NFTs are Non-Fungible Tokens. Let us try to explain each element of this concept.

A. TOKENS:

NFTs are first and foremost "tokens". These are digital assets, whose ownership can be verified using blockchain technology.

The blockchain technology in turn is a type of distributed ledger technology (DLT). It's an online network working according to a so-called peer-to-peer

(P2P) logic. In general, a computer network is made up of a multitude of servers, whether they be computers or any other type of electronic device, which are interconnected to allow data sharing.

A traditional network operates around the "client/server" relationship, where all devices in the network, known as the "clients", are connected to a central hub, the "server". That server, which is in the centre, handles all the network operations and is where databases are usually digitally stored. It implies some sort of hierarchy between the various participants to the network (the "clients" and the "server").

Unlike such traditional networks, a P2P network allows its users to share data without having to go through a central hub. Users are able to share their data and benefit from the shared data directly. In this type of network, there is no difference between the various participants who can all contribute to the network without distinction. The database is shared and duplicated on each server, known as a "node", participating in the network. This database is often referred to as a "ledger" because it contains all the transactions that have been carried out through the blockchain network since its creation, comparable to a mortgage register.

Using the blockchain technology helps securing token transactions while also making ownership clear. For each transaction carried out on the network, a "block" is created in the register (the ledger). Each block provides information on a transactional component (those are for example, data on the assets that are the object of the transaction, the parties to the transaction, the date of the transaction; etc.). Each of these transactional blocks also refers to the block just before and after it, in such a manner that they are all related/connected to one another. This way, they cannot be updated and a new block can only be added after the last one on the blockchain. A blockchain is made up of all such undividable and unalterable blocks.

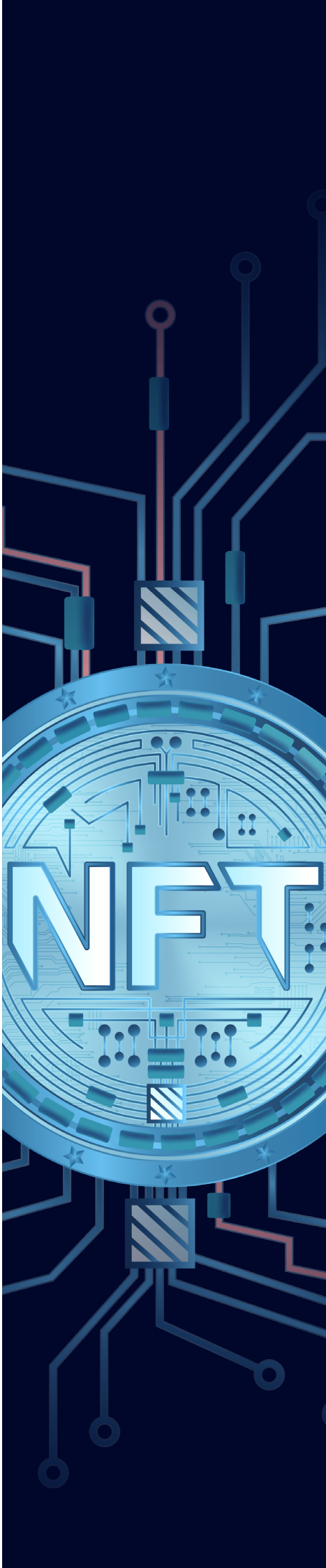
B. NON-FUNGIBLE

NFTs are also non-fungible. This means they are one-of-a-kind.

In the case of mainstream cryptocurrencies like bitcoin or ethereum, each token has the same value and cannot be distinguished from one another. On the contrary, each NFT has a special identity that sets it apart and makes it distinguishable.

From a technical point of view, NFTs value proposition consists of two differentce key pieces: (i) its unique identifier and (ii) the metadata.

i. When an NFT is created, a unique identifier (the "metadata") is assigned to that NFT and linked to a wallet address. Thanks to that unique identifier, NFTs cannot be copied or replaced. Even though digital assets can be "visually" duplicated, its unique identifier cannot. In a sense, the metadata found in an NFT may be compared to a special key that can only be used by the current owner to gain access to the assets.



ii. An NFT is a token that represents a specific digital asset, whether that is a picture file, a video file, or something else. That file itself cannot be stored on the blockchain as this would be impractical due to the large amount of storage and processing power required. Instead, it is hosted outside of the blockchain ("off-chain"). The NFT metadata specifies what that file, the ownership of the token and the transaction history are. Thanks to the metadata, NFTs can be linked to data off-chain. Put simply, NFT metadata is a workaround to avoid the technical hurdle of hosting large files on-chain.

In summary, NFTs are specific kinds of assets that are digital, unique, non-replicable, encrypted, and traceable in terms of ownership.

3. WHAT DO SOME OF THE NFT USE CASES LOOK LIKE?

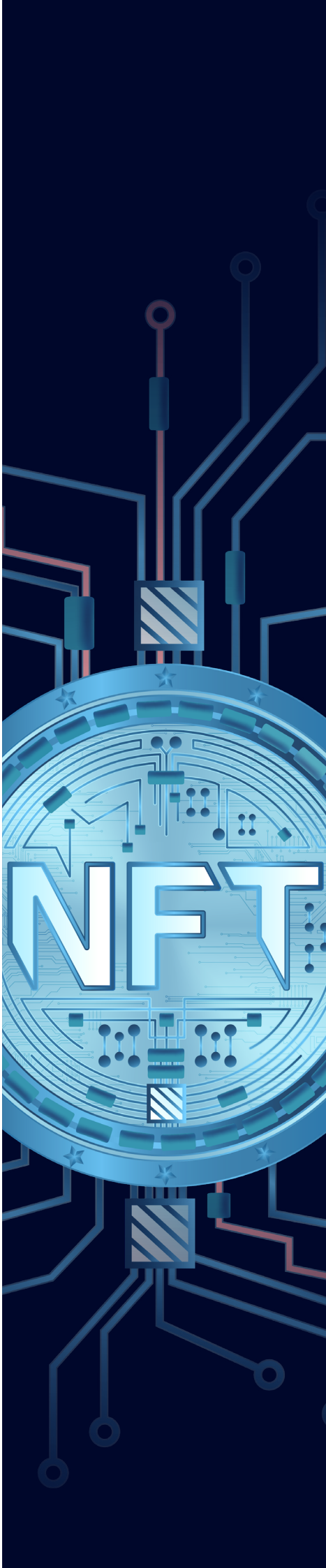
Because of their uniqueness and traceable ownership, NFTs' most common use case is to serve as a sort of authentication certificate of ownership.

This aspect of the NFTs has been used in several sectors such as:

- The art sector: the most frequent problem with digital art is that it can be duplicated without leaving any sign of the "original piece", unless the file is secured and can only be transferred physically together with the hardware on which it is stored. NFTs come in handy at solving this issue. They can act as digital proof of authenticity for an original work of art. By producing an NFT, the artist produces an immutable record that certifies the digital asset as authentic and unique and that can easily be monetised.
- The video games sector: NFTs can be used to represent ownership of any digital assets, including features that can be used in video games. This includes visual elements ("skins") but could also include gameplay elements such as digital cards, equipment, etc.
- Finance sector: NFT sales can be used to pool funds for collective participation in projects, whereby each NFT represents a right that the owner has to potential profits or benefits derived from the project. Examples of such projects can be bitcoin mining companies that have publicly launched their NFT collections in order to fund their initial operations.

4. WHAT COMES NEXT?

NFTs themselves have in a way completed the arsenal of technology at our disposal to better replicate physical world reality in a digital format. The uniqueness of digital assets and their proof of ownership make NFTs the missing piece of the jigsaw. Because of that, NFTs have also fostered discussions about the creation of digital worlds in which participants would truly own their digital assets.



As is frequently the case when new products and technologies are released on the market, they come with their own set of legal issues. Knowing what an NFT is and how it functions, we can now walk you through some of the major legal issues raised around NFTs. Don't miss our upcoming episodes if you're interested in learning more about how NFTs connect with intellectual property rights, financial services regulation or even tax rules.

For any questions or assistance, please reach out to our Digital Finance Team

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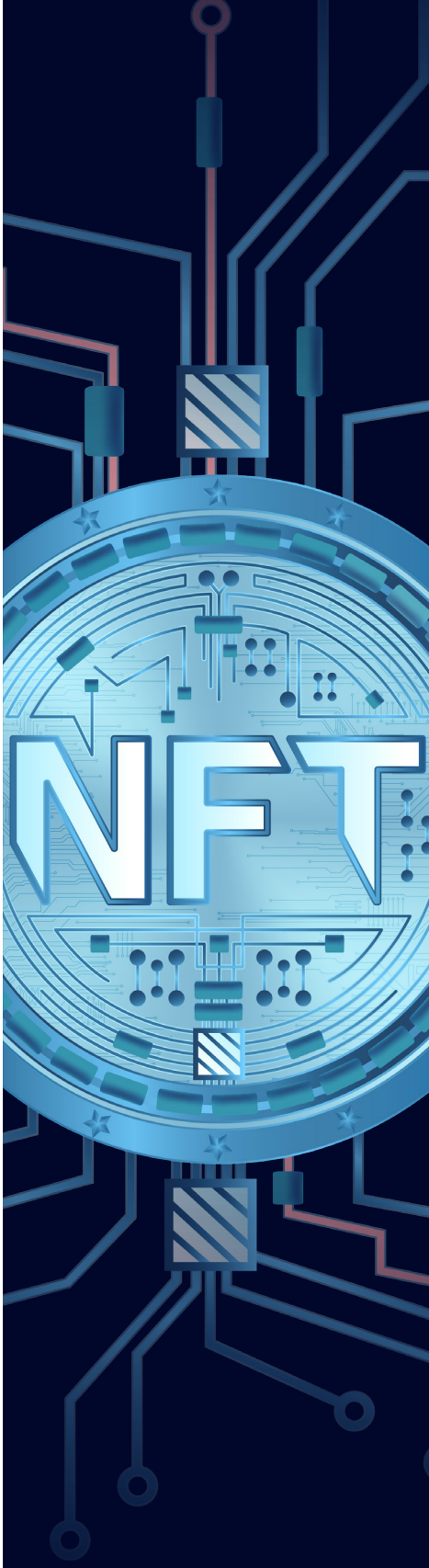
This article is not a legal advice or opinion. You should seek advice from a legal counsel of your choice before acting upon any of the information in this article.



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