

MA Music Business
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1. Introduction

This essay will discuss the concept of Blockchain, provide a definition, explain the commercial uses and legal implications to the music and entertainment industries.

The issue of fair remuneration for artists and rightsholders presents broad logistical and commercial challenges on a worldwide basis for the music industry. Challenges such as the relationship between international public rights organisations such as PRS for Music, ASCAP in the U.S. for example, mean once a transaction has passed through their respective collection agencies, it can often take several months, if not years for artists to receive royalty payments for the use of their work, often at drastically reduced rates once the transaction has incurred administrative fees and charges from one countries collection agency to another.

According to Music Business Worldwide, it takes an average of 9.1 songwriters to create a hit, with reports that Drake's track *In My Feeling's*, had 16 credited writers and his track *Nice For What* had a total of 21. (Ingham, 2019). This is a stark difference to how songs have been traditionally created, in the early 80's the average number of songwriters per song was fewer than 2. (Kopf, 2015) It looks as though the trend of writing music by committee is not something that is going to subside anytime soon and with that in mind there is a need to address the challenges presented by this increasingly complex area to ensure that payment of royalties occur within a timely and efficient manner.

With this in mind it is easy to see that with the sheer volume of music and the considerable increase in collaborators involved with the creation process that traditional processes of Performing Rights Organisations (PRO's) collating and distributing data is going to become increasingly challenging. The impact of this challenge is a profound one and without this efficiency in the process the increase of unclaimed royalties will have a continued detrimental impact to the music industry.

2. Blockchain Definition

The concept of Blockchain was first discussed in Satoshi Nakamoto's paper written in 2008 and implemented the following year in 2009 as the foundation of the cryptocurrency, Bitcoin. Interestingly Satoshi Nakamoto is believed to be a pseudonym with much scrutiny being given to the true identity of the author of the paper and the creator of the Blockchain. (Rasure, 2021).

In Satoshi Nakamoto's paper he claims that 'Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments'. He goes on to state 'What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing two willing parties to transact directly with each other without the need for a trusted third party. We propose a solution to the double-spending platform using a peer-to-peer distributed timestamp server to generate computational proof of the chronological order of transactions'. (Nakamoto, 2008)

On the surface Blockchain seems like a complicated concept. In simplistic terms Blockchain is a digital database; containing information and data such as financial transactions, that can be simultaneously shared within a large decentralised publicly accessible network. (Merriam-Webster , 2021)

Blockchain is a shared immutable ledger that facilitates the process of recording transactions and tracking assets in a business network. An asset can be tangible (a house, car, cash, land) or intangible (intellectual property, patents, copyright, branding). Virtually anything of value can be tracked and traded on a blockchain network, reducing risk and cutting cost of all involved. (IBM , 2021)

The implications of blockchain to the music industry are both profound and transformative. The industry is reliant upon accurate metadata being provided in the transaction process so as to ensure the correct person is paid the right share for the work and contribution to a project in any capacity. It is therefore imperative that the mechanism for managing such transaction is efficient and effective. Blockchain is an ideal method of ensuring relevant parties are paid, almost instantly and in a fully transparent manner.

Three key benefits of the blockchain are as follows (IBM , 2021):

2.1. Distributed Ledger Technology

All network participants have access to the distributed ledger and its immutable record of transactions. Within the shared ledger, transactions are recorded only once, eliminating duplication of effort that's typical of traditional business networks. With the same information being held in several locations there is no central point of failure and therefore, a more robust and reliable environment is created in order to manage a number of complex transactions.

2.2. Immutable Records

No participant can change or tamper with a transaction after it's been recorded to the shared ledger. If a transaction includes an error, a new transaction must be added to reverse the error and both transactions are then visible. This auditable record of events provides clarity and certainty in the information held within the system.

2.3. Smart Contracts

To speed transactions, a set of rules called a smart contract, is stored on the blockchain and executed automatically. A smart contract can define conditions for corporate bond transfers, include terms for payment of services to be paid and much more. Smart contracts offer a significant benefit to the industry. The ability to record track and pay rightsholders directly has the potential to place confidence and control in the hands of the artists. Companies such as Ujo Music have helped artists such as RAC and Imogen Heap release material through their service with consumers using the Ethereum cryptocurrency to purchase music. (Music Ally, 2017)

3. How it works: Transactions in the Blockchain

An electronic coin is defined as a chain of digital signatures. Each owner transfers the coin to the next by digitally signing a hash of the previous transaction and the public key of the next owner and adding these to the end of the coin. A payee can verify the signatures to verify the chain of ownership. (Nakamoto, 2008)

3.1. Timestamp Server

One of the challenges of managing transactions in the blockchain is that the payee can't verify that one of the owners did not double-spend the coin. To resolve this issue without the need of a third party, the solution of a timestamp server is introduced. The timestamp server works by taking a hash of a block of items to be timestamped and widely publishing the hash. A hash is a function that converts an input of letters and numbers into encrypted output of a fixed length. (Frakenfield, 2020) This is the formative aspect of the blockchain. The timestamp proves that the data must have existed at that time in order to get into the hash. Each timestamp includes the previous timestamp in its hash, forming a chain, with additional timestamps reinforcing the one before it. (Nakamoto, 2008)

3.2. Proof of Work

Proof of work is one of the consensus algorithms for achieving agreement on the blockchain network to confirm transactions and produce new blocks in the chain.

This algorithm is used to confirm transactions and produce new blocks within the chain. Within this part of the process there are two primary participants, Miners and Node Operators. In this network users send each other digital tokens. A decentralised ledger gathers these transactions into a block. It is the role of the miner to ensure that the blocks of information gathered are in the correct order and confirmed.

The node operator is then responsible for managing and distributing this information across the network and are then rewarded for managing this aspect of the process.

4. Commercial Uses, the effect on the Music Industry

The impact of the blockchain is potentially transformative to the music industry. It feels that in terms of the challenges that face the industry in relation to transparency, fair remuneration and accuracy of data that the blockchain is practically geared toward providing a solution that can bring a more manageable and sustainable approach to paying artists and rightsowners for their work.

The past few years has seen an explosion in the number of businesses who are looking at creating blockchain companies and in particular within the music industry. There are a number of areas that can benefit:

4.1. A networked database for music copyright information

The importance of metadata in the music industry cannot be understated. As blockchain technology advances along with the networked nature of how the music industry is evolving it is vitally important for musicians and rightsowners to ensure that their end product is clearly labelled. (Nakamoto, 2008) Not only does this help in assuring that payments can be tracked and traced but also, the greater amount of useful data than can be recorded in relation to a piece of music for example, mood, tone, even how the artist would wish for the song to be considered for sync opportunities, the greater the ability to monetise the end product.

At present there is no consistent approach in the numerous databases available that record this information and without one central governing approach in managing this data on

a worldwide basis, the challenges are significant in terms of co-ordinating and ensuring accuracy of information.

All pertinent information in relation to the underlying copyright and the sound recording itself is able to be recorded and stored within the blockchain using a cryptographical data. This means that potentially, data can be updated across a number of data-streams instantaneously. The impact of this is significant and has the potential to change the way in which the music industry functions as a whole.

However, there are several challenges to this idea, for example the question of governance would need to be addressed. How for example would information be uploaded into the system and how would the validity of data be controlled and understood?

One of the main features and focus points of Imogen Heap's project, Mycelia a blockchain project specifically aims to empower artists to manage their own careers through the provision of a number of tools and systems such as their 'Creative Passport' system that provides a digital ID for musicians and artists, where they can update, access and manage information about themselves and their works and share with others (Mycelia , 2021) "It's about how to ease flow of payments, how to ease collaboration, how to grow partnerships, how to make better collaborations on a business level and creative level." (Bitcoin Exchange Guide , 2018)

4.2. Fast, frictionless royalty payments

The music industry is renowned for having complicated and numerous gateway payment systems. This is largely due to a number of factors such as the sheer number of people involved with the production process of making music as well as differing processes amongst various Performing Rights Societies (PRO's) across various territories and the dated systems of administration and payment. This can often lead to extremely long lead time times for artists and rightsowners to be paid, often months, sometimes even years.

The opportunity presented by the blockchain in this process again, benefits from instantaneous payments as well as the traceability of data ensuring the correct rates are paid to co-writers, publishers and performers of music dependant on their relevant copyrights or performance royalty shares etc. This aspect is particularly beneficial in the Smart Contract aspect of the technology. The provision of traceable and immutable data is likely to remove a considerable administrative and management burden for both record labels and PRO's. Some believe blockchain could spell the end of the record company and PRO, however, there are many areas within the industry where they are both still very much required and will continue to play a vital role. It is likely that record companies and PRO's will need to think how they evolve with the music industry and technology in order that they remain relevant.

4.3. Transparency through the value chain

Transparency in any industry, can prove to be something of a double-edged sword. Whilst there is a need and genuine desire for any business to be conducted in such a way that promotes an 'open-book' approach that builds trust, there is an aspect whereby it is important that there is also privacy in terms of confidentiality, certainly in terms of maintaining a competitive advantage within the market. In addition, in the music industry, as is the case in many creative industries, the artist themselves may not necessarily be comfortable with the details of their transactions, such as royalty payments are open for

public interest. Maintaining an element of mystic is an important element for some artists and having this level of detail open to the public may not be appealing.

4.4. Access to alternative sources of capital

As the music industry advances and artists become more independent, blockchain technology provides a number of advantages to bands, musicians and artists who are focussed on remaining entirely independent and self-sufficient. The system provides a level of empowerment that can possibly allow artists to act as start-up investment opportunities where seed investors and accelerators (investors who provide short term support and guidance to technology driven companies) can support bands and artists as if they were a start-up business opportunity. The ability to track success and monitor their investment through the system provides a clear advantage.

5. Legal Implications

One of the challenging aspects of the blockchain and how it is managed and governed is that at present there is no standard database of metadata that is common across the industry as a whole. This results in a situation whereby each organisation is responsible for the maintenance of their own records, databases and associated information. In addition, one of the benefits of blockchain is the transparency that the system offers, as the system is a publicly accessible ledger, anyone can access details of royalty payments and understand how royalties are split amongst artists, rightsholders, labels etc. this may prove to be something that those involved with transactions, such as record producers, record labels and artists may not be fully comfortable with. (Khouri, 2018)

Another concern that is raised from allowing open access to the public to an immutable blockchain system, how would businesses comply with the requirements of data protection?

The world of blockchain and cryptocurrency is still relatively embryonic and there will need to be a point in the evolution of the system where a standardised and governed approach is taken to how the system is managed, monitored and ultimately controlled. There are a number of questions that need to be addressed before the blockchain provides complete confidence and clarity to industry as a whole, including the music business.

6. Conclusion

The opportunity presented by the blockchain is significant and has the potential to revolutionise the music industry. A networked database for copyright data, fast and frictionless royalty payments, increased transparency and access to alternative capital opportunities presents, on the service, the answers that artists and rightsowners have been seeking for decades and presents a significant step in achieving fair remuneration for artists.

With these aspects in consideration there are other areas that need to be explored and understood before it can be said with any true conviction and satisfaction the blockchain is a sustainable solution for the music industry. For example, none of the major record labels have currently committed to the blockchain and whilst there are a large number of innovators that are exploring this technology in innovative and effective ways, without industry acceptance by the major record labels, it may prove challenging to gain traction in establishing the governance and controls that will help to gain confidence and trust in the system and in turn allay the sceptic.

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