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1.0 Introduction

Blockchain is a promising emerging technology. It has revolutionised several industries and could be on its way to changing the music industry. However, its potential is subject to debate among industry professionals. In this essay, I will provide background on blockchain technology and explore some of its possible positive applications in the music industry. I will follow with the main drawbacks of blockchain according to industry specialists, the front runners in the field and the response from big players in the music industry.

2.0 Background

The blockchain, popularised by Satoshi Nakamoto in 2008, is a decentralised digital database storing nodes of data and chaining them together, creating fixed records of assets. Along with the blockchain, the cryptocurrency Bitcoin was created with the aim of bypassing banks and making transactions instant, permanent and transparent.

Blockchain technology has been expanding into many industries, including the music and entertainment industries. According to Schultz (2021, quoted in Music Ally, 2021), “the entertainment world is undervalued when it comes to monetisation of data” and blockchain could solve many issues.

3.0 Benefits Of Blockchain Technology In The Music Industry

3.1 Copyright Management

One of the main issues in the music industry is copyright along with royalty payouts. In the current system, the steps to payment from a music streaming platform to a songwriter are numerous and form what Chris Cooke has named “royalty chains”; a phenomenon that causes royalties to sometimes take up to two or three years to reach the rights-holder (MMF, 2019, p.4). With all of the intermediaries such as collection societies, publishers and sub-publishers, royalties often get lost due to incomplete or incorrect metadata. The Ivors Academy (2021, p.2) reported that at least £500M a year are being “delayed, unallocated and/or mis-allocated to songs that have already received payment”. This money is called “black box” royalties. One of the causes for this phenomenon is the lack of a public central database. Streaming services only deal with the ISRC – recording – code, leaving out the ISWC – composition – code attached to a piece of music. Licensing partners are left with the task of identifying the correct rights-holders with different databases and clashing data (MMF, 2019, p.16).

In theory, blockchain technology could fix some of those matters. Collection societies from the US (ASCAP), the UK (PRS) and France (SACEM) launched a joint blockchain project “for managing the links between… ISRCs and… ISWCs” (PRS for Music, 2017). However, previous similar attempts have failed: the Global Repertoire Database, due to launch in 2015, was meant to involve over eighty organisations across six continents. It failed in 2014, leaving a debt of over $13M as collection societies began retracting from the project (Milosic, 2015). Mainelli (2016, cited in Silver, 2016, p.51) argues that collaboration around centralised systems causes distrust as power shifts to the controlling party, which “inevitably results in one party or another destroying the project”. In

the case of the GRD, Lubin (2015, quoted in Silver, 2016, p.52) defines the issues: the proposed solution does not take into account the structural limitations of Blockchain, “requires a utopian level of consensus among stakeholders with differing and often conflicting perspectives and goals” and does not provide an incentive to stakeholders. Gerard (2017, p.124) argues that the solution to messy metadata “doesn’t involve creating a new organisation you can’t trust.”

3.2 Smart Contracts And Royalty Payouts

When it comes to payout speed and accuracy, blockchain technology could be a game-changer for rights-holders. PRS usually pays rights-holders in April, July, October and December (PRS for Music, 2021). With the use of smart contracts, which “automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary’s involvement” (IBM, 2021), payments could be faster and more accurate (Carretta, p.43). A consumer plays a song and a micro-payment is instantly transferred to the rights-holders wallets. This “Pay to Play” system would give rise to user-centric royalties and immediate income through fast, frictionless royalty payments (Geffen, 2021). Additionally, smart contracts improve transparency through the value chain, which is an issue often raised by songwriters as the inner workings of the music streaming business, such as revenue shares or royalty flows, are hidden (Cooke, 2021b).

3.3 Ticketing

Secondary ticketing and scams are some of the issues plaguing the live entertainment industry. Usually, bots will buy a large number of tickets and use resale websites such as Viagogo or Stubhub to add a significant mark up on the original price. While this is not illegal, it is certainly unethical. In the worst cases, buyers get scammed and never see the ticket that they paid for.

With the use of smart contracts in ticket sales, ticketing platforms could potentially set a maximum resale price, distribute a percentage of the price difference to artists, promoters or venues or prevent resales altogether (Shamsedin, 2021). Several ticketing startups utilising blockchain have been launched over the past years and some established ticketing platforms such as Ticketmaster have begun acquiring them. While blockchain ticketing is only beginning, it has the potential of drastically improving the fan experience and keeping resellers from making a profit off of the music industry.

4.0 Drawbacks Of Blockchain

To some, blockchain is a nearly perfect solution to the copyright management issues that the music industry has been facing. However, not everyone shares this point of view and Meharry (2016, quoted in Silver, 2016) calls blockchain the “worst case of smoke and mirrors” in an industry that “specialises in self-deception”. Deahl (2019) argues that blockchain does not solve any of the “real problems in the music industry”

4.1 Format

One of the issues with putting the music industry on the blockchain is that there is currently no consistent format. Most released songs are a standard WAV or MP3, while the format proposed by Rogers (2016) for decentralised music is .bc. Silver (2016, p.4) points out that it would be more feasible “if we started from a blank page” rather than “migrate from our current status to such a wholly digitised, blockchain powered world.” Reformatting songs that have been released up until today would be a lengthy and expensive undertaking.

4.2 Immutability

While smart contracts can be effective when it comes to royalty splits, they have limitations. Gerard (2017, p.103) argues that “smart contracts work on the wrong level: they run on facts and not on human intent – but legal contracts are a codification of human intent.” He adds that the blockchain’s immutable quality makes it very difficult for contractual terms to be changed, leaving artists and songwriters in a vulnerable position.

The blockchain’s immutable property, while secure at first glance, could pose a problem when combined with human interaction. Silver (2016, p.36) argues that ownership information is fluid and ever-changing and makes for “a highly complicated set of rights holders in more than a minority of situations”. Sciaky (2019, p.6) shares Silver’s views and points out that copyright cannot be managed “within an immutable ledger”. Human error and the fluidity of ownership are significant issues when coupled with a model built for permanence.

4.3 Scalability

Scalability is an issue with blockchain technology when it comes to time, size and resources. Blockchain transactions are notoriously slow and expensive. “Bitcoin transactions can take up to days, or even sit unfulfilled forever if the sender doesn’t attach a high enough transaction fee”, which rises with the level of congestion (Zhou, 2021). The average confirmation time for a blockchain transaction is around eight minutes, and it has not improved over time. According to Graham (2015), mainstream use of blockchain would require a confirmation time no longer than a few milliseconds.

In addition to the time problem, the current state of the blockchain is not suitable for the colossal amount of data that would be generated by the music industry. Silver (2016, p.15) points out that the 60kb maximum block size on the current blockchain is nowhere near what licenses would demand, especially with all the intricate details of international licensing. Graham (2015) argues that putting the music industry on the blockchain would require multiple terabytes a day and draws attention to the resources needed for such an undertaking: “all of this data has to move and be stored somewhere, and there is cost to that in financial and time factors as well.”

4.4 Security, Middlemen and Artist Empowerment

Like any digital system, blockchains can be hacked. Security is a worry for consumers (Snyder, 2019). To ensure a standard level of security as well as manage and verify large amounts of data, humans are needed. Kravchenko (2018) argues that “with or without blockchain, the digital ownership platform will always require middlemen”. One of

the main goals of a decentralised system is eliminating intermediaries, however in the case of the music industry, it does not seem possible.

In addition to the administrative tasks required to enter the data into a blockchain, human beings are needed to perform developmental activities such as marketing or A&R. Many, including Badger (2021), argue that blockchain is a miracle solution and that “most of the financial injustices and lack of control faced by musicians of decades past will be resolved”. This could be true for established artists with loyal and dedicated fans. For artists trying to build a career, the services of third-party companies are indispensable and cutting out the middlemen entirely is unattainable.

5.0 Front Runners

Multiple actors are actively trying to establish blockchain in the music industry. Imogen Heap launched the Creative Passport in 2021; “an online identity management platform for creatives” (Frew, 2021). While this project currently hosts its data on a centralised server, it is planning to transition to blockchain. Independent platforms such as PlayTreks or Revelator have launched copyright management tools based on blockchain technology. Revelator’s Artist Wallet is described as “the most advanced B2B layer of its kind for music and will enable millions of dollars to flow directly to rights holders’ non-custodial wallets” (Platform & Stream, 2021).

On the side of music streaming, blockchain-based Audius is growing. It has been referred to as a Spotify rival and has secured a major partnership with video-sharing app TikTok (Locke, 2021) as well as multimillion-dollar funding from celebrities such as Katy Perry or Nas (Hissong, 2021). Audius is the largest consumer blockchain app with seven million monthly active users (Groove Cartel, 2021). One of Audius’ main selling points is

that, unlike its rival SoundCloud, it does not take down copyright-infringing content and “doesn’t have the ability to deplatform you or censor you” (Browning, 2019, quoted in Constine, 2019). This is an issue that goes against the very aim of using blockchain technology to manage copyright as “there’s no way for Audius to remove infringing material, and there is also no way to file an infringement claim on the website” (Deahl, 2019).

If Audius is going to compete with Spotify, scalability will become an issue as the blockchain-powered platform currently hosts just over one hundred thousand artists while Spotify hosts over eight million (Genç, 2021; igroove, 2021).

6.0 Music Industry Response

The music industry, particularly record companies, are notoriously bad at accepting new technologies that force them to review their current, profit-making system. Record labels were reluctant to adopt the CD in the 1980s and are currently unwilling to review their standard recording – 80% – and song – 20% – split (Patokos, 2008, p.233; Cooke, 2021a).

Because of their reach, major labels are gatekeepers when it comes to new technologies; unless a particular system has the support of all major labels, it is unlikely to succeed. The large majority of the music streamed on digital platforms is owned by major labels: out of all the streams on Spotify in 2020, “recorded music controlled by the three major record companies plus Merlin jointly claimed 78%” (Ingham, 2021). It is safe to assume that the figure for major publishers is at least as high. Additionally, major labels are backing Spotify and have shares: Sony owns a 6% share, UMG, 7%, WMG, 4% and Merlin, 1% (Ingham, 2018).

Silver (2016, pp.11-12) argues that if record companies were to adopt blockchain, they would be likely to take on “permissioned” networks, where “the identity of all participants in the network are known to each other, they have trusted confirmed identities and are legally compliant”, rather than “permissionless”, public networks. These private “permissioned” networks could be “an evolutionary improvement on current centralised systems”. According to Music Business Worldwide (2021), “there need to be financial incentives for all the participants of the network” for the industry to be “fully decentralized and permissionless”.

Several efforts have been made without blockchain technology, such as ICE, a joint venture between PRS, STIM and GEMA described as “the world’s first integrated music copyright, licensing and processing hub” (PRS for Music, 2020). ICE’s goal is to ensure reliable data. On the side of music publishers, Kobalt’s KTech is “the most advanced rights management platform in the world” (AMRA, 2021) and Sentric Music Publishing have gotten a “400% increase in digital publishing royalties” by using AMRA’s services (Sentric Music, 2019).

8.0 Conclusion

While a decentralised system for basic transactions such as ticketing seems ideal, it is not the case for data storage and management, smart contracts or royalty distribution. Industry opinion is very divided as some see blockchain technology as a saviour and others, as an unnecessary, idealistic enterprise. There currently seem to be many difficulties with putting the music industry on a blockchain and whether the switch will happen is uncertain. Major labels have the upper hand and it will certainly be interesting to watch their moves in the coming years.

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