

MBO0123: Legal & Business Affairs (BMTY7002)**Lecturer: Ian Penman****Submission Element 2: Essay**

Blockchain technology has already been described in numerous publications (e.g. O'Dair and Beaven, 2017; Sintonio and Nucciarelli, 2018; O'Dair and Owen, 2019; O'Mara, 2021; Li, 2022) as innovative, revolutionary and (potentially) transformative for the music industry. In addition to the possible benefits for diverse stakeholder groups, however, countless dangers or unresolved issues that still need to be overcome are immediately pointed out as well. This essay therefore asks whether blockchain technology actually has the power, from an economic and legal point of view, to revolutionise the music industry once again from the ground up. In order to find this out, the current challenges of the music industry, possible solutions through blockchain and potential problems in the actual implementation will be discussed. Furthermore, current developments and companies that are already working with this new technology will be included if relevant.

To even begin to evaluate the potential transformative power of blockchain in the music business, the concept behind it must first be understood and defined. De Leon and Gupta (2017, p. 15) describe Blockchain technology as “a type of distributed ledger or database that keeps records of digital transactions.” What makes blockchain so special, however, is that compared to traditional databases, there is no central administrator behind it, such as a bank, government, or other auditing company. Instead, there is a “network of chronologically evolving replicated databases, synchronized using the internet, and visible to anyone within the network” (De Leon and Gupta, 2017, p. 15). Pilkington (2016, cited in Chalmers, Matthews and Hyslop, 2021, p. 3) refers to blockchain as being “comprised of blocks that store data (currencies, software programs, contracts, etc.)” which “contain a unique identifying hash and a further hash that links to a previous block (hence, ‘the chain’).” It is further described that once a new transaction is executed, the “ledger of activity is shared publicly with everyone on the network” and then “all nodes on the network must validate its legitimacy before it is accepted on the blockchain” (ibid.). Due to the chronological sequence, every transaction can therefore be traced, and it can be determined at any time who currently owns what. This in turn means that there is no need for intermediaries. For this very reason, it is often argued that any attacks on large and centralised intermediaries, for example by hackers, would be much more difficult to carry out on the blockchain (De Leon and Gupta, 2017, p. 16). It should be mentioned here, however, that there was indeed a hacker attack on the American Web3 music streaming platform “Audius” in 2022, in which crypto tokens worth six million US dollars were stolen (Dalugdug, 2022a).

A challenge of extreme relevance for the music industry, which is recognised in numerous publications (e.g. O'Dair and Beaven, 2017; Sintonio and Nucciarelli, 2018; Torbensen and Ciriello, 2019; O'Mara, 2021), is the lack of a universally valid database and the associated lack of transparency in terms of copyright ownerships and pay-outs. In concrete terms, the issue is that there is currently no single database in which all the copyrights for both the underlying music and the sound recordings are stored, but instead there are many different ones and even

these are reportedly often opaque (O'Dair and Beaven, 2017, p. 472). This in turn means that artists or other copyright holders are often not remunerated or recognised as authors. At the same time, they often have to spend a lot of resources dealing with various licensing issues (O'Mara, 2021, p.209). Zhao and O'Mahony (2018), whose paper deals with a prototype based on blockchain technology to protect musical copyrights and the associated income rights of authors, consider the mechanisms described at the beginning of this essay as a possible solution to this problem. Since all transactions can be traced along the blockchain, it should be possible to avoid incorrect or non-existent pay-outs to legitimate rightsholders due to incomplete or wrong data (Zhao and O'Mahony, 2018, pp. 1-2). On the other hand, this optimistic assessment must be countered by the fact that it is still very unclear at this point in time how to deal with the extensive data that has so far been collected outside the blockchain. Li (2022), who presents another possible blockchain model for the music industry in her paper, explains that for such a prototype to be implemented, however secure the system, the "processing (of) all available data", which, according to her, "is not immediately feasible, especially in substantial digital music repositories." Consequently, the question arises as to which party would be responsible for transferring the already existing data and records to the blockchain, should it be possible after all. If it was indeed achievable to transfer the existing data and records to the blockchain or to include them in new transactions, another question arises: Which party would be responsible for entering or – perhaps more importantly – verifying that same extensive data? Should the big players of our time, such as collection societies, publishers, or labels, take on this task, one could assume that they would become even more powerful and, accordingly, possibly generate even more revenues than they already do. It is also questionable, whether they would also be responsible for the correction of false information or whether this would even be possible, considering that the blockchain is supposedly immutable (O'Mara, 2021, p. 2019).

At this point, it is advisable to take a closer look at the role of the middlemen or intermediaries – in the case of the music industry, being collection societies, labels, etc. – in relation to blockchain technology. Since only direct transactions take place with blockchain technology, one might assume that any intermediating entities would be obsolete and therefore no longer needed. This was not the case with the last structural change from music as a physical product to a digital product (O'Dair and Owen, 2019, p. 2). However, it is still considered to be unlikely that third parties would be removed entirely. According to O'Dair and Owen (2019, p. 5), there might be a "thinning of intermediaries", meaning that "those intermediaries that add value will remain, although their revenue share may decrease and their position in the value chain may shift." This could become an obstacle if the large corporations (labels, publishers, collection societies etc.) rebel against this kind of shift. However, taking Warner Music Group as an example, as one of today's major labels, it seems just as realistic that the big players are taking advantage of the new technology rather than fighting it. Only towards the end of 2022 did it emerge that the label was teaming up with two different companies related to this field, one of which was dedicated to the development of blockchain networks (Dalugdug, 2022b).

In contrast, if the problem with the large amounts of data outside of the blockchain cannot be overcome, or if the most prominent companies in the business are fundamentally opposed to the technology, Dredge (2018, cited in O'Mara, 2021, p. 220) brings up another idea. The novel blockchain models could be used exclusively for new artists who are not yet signed to labels or

publishers or who are in the process of signing contracts. This way, at least with emerging talent, a complete and traceable database could be built up from the beginning (ibid.). Like the interests of affected third parties, it is also questionable from the artist's point of view whether they would like to get involved with the technology or not. Some musicians simply do not want their income figures to be shared publicly (Zhao and O'Mahony, 2018), perhaps even if transparent disclosure via the blockchain would bring them more revenue. O'Dair and Owen (2019, p. 5) even argue, that with novel blockchain financing structures, there might be "the potential, then, for increased artistic freedom and greater remuneration for artists, especially less established artists." However, especially for emerging artists, the question arises as to who should provide the initial budget if companies such as labels either cease to exist altogether or simply lose room for manoeuvre due to the shift of their roles. In addition, the role of the negotiator with large institutions such as public television or radio stations, which up to now has usually been the responsibility of performance rights organizations, would also have to be filled anew (O'Dair and Beaven, 2017, p. 476). Nevertheless, independent artists and labels who cannot rely on the support of record-breaking revenue figures or a gigantic network do not seem to shy away from blockchain technology altogether. In their conference paper, Sitonio and Nucciarelli (2019, p.12) found out that, for example, three of the companies that are already working with blockchain technology and which they analysed – Musicoin, Resonate and Ujo by name – are primarily contracted with independent artists and labels.

Another problem that heavily affects not only, but especially, emerging artists, and is equally recognised in numerous publications (e.g. O'Dair and Beaven, 2017; De Leon and Gupta, 2017; Sitonio and Nucciarelli, 2018; Torbensen and Ciriello, 2019; O'Mara, 2021) as a challenge for the music industry, is the time component in the payment process of royalties. While musical content can be listened to or downloaded with just a few clicks these days, it often takes a long time before the people behind the creation of the music actually receive their remuneration (De Leon and Gupta, 2017, p. 17). O'Mara (2021, p. 209) aims to describe this very issue as "imperfect royalty distribution with lengthy time gaps between consumption of music and payment reaching the rightsholders (...)". Looking at the UK as an example of this issue, one finds that artists usually receive their income from labels or publishers after six months, from the PRS (Performing Right Society) once a quarter and from the PPL (Phonographic Performance Limited) only once a year (O'Dair and Beaven, 2017, p. 472). Sitonio and Nucciarelli (2018, p. 11) also see the current payment system as inefficient, but they argue that blockchain applications can be used to address this problem. One of these possibilities could be the new business model of micro-payments by fans, who in this case would not only be responsible for the consumption but also to a certain extent for the promotion of music. This could allegedly even lead to an increase in sales for the entire music industry. (De Leon and Gupta, 2017, p. 25). Similar to individual artists who find it easier to stand out among growing competition when supported by the resources of large companies, O'Dair and Owen (2019, p.1) argue that emerging businesses in music also find it much easier when backed by musicians who are already successful in the industry. In addition, it is noted that new methods of funding enabled by blockchain, on the one hand, may lead to existing power structures simply being reproduced with this new technology. On the other hand, it would be equally possible for emerging companies to gain access to alternative sources of funding, both for the initial start-up period and to generate ongoing revenue (Ibid., p. 11). The latter assumption is supported, for

example, by Chalmers, Matthews and Hislop (2021, pp. 5-6), who claim in their study that music industry entrepreneurs refer to blockchain technology as “a foundational technology”, mentioning the “enhanced security afforded to transactions on the network” and “its rapidly evolving nature” as two of the most important features.

It is usually also a financial matter if one's intellectual property is invoked or if a copyright infringement claim is made. At the moment, it is still very questionable to what extent authors of a work can be verified in the blockchain or confirmed as the rightful author of certain content. Possible approaches could be the supporting use of digital signatures or the “first to file” principle, according to which the person who first creates a digital signature for his musical work is the rightful owner of the content. At this point, however, it should be mentioned that the corresponding music or content may have already been stolen before it was integrated into the blockchain, but the owner will still be recognised as the proper rightsholder in the system. Nevertheless, the technology could at least make it possible for authors who have not (correctly) registered their works until now to finally do so, as this is the only way for potential pay-outs to take place (De Leon and Gupta, 2017, pp. 26-27). O'Mara (2021, p. 220) also talks about the need for some verification of rightful ownership directly when content is uploaded to the blockchain. Apart from that, it is still questionable how governments or other bodies want to handle blockchain technology legally, and – maybe even more importantly – how licences should be handled. It would have to be clearly defined what kind of licence is required and how or where it can be obtained to avoid a flood of copyright infringements. Again, country-specific differences must be taken into account as well (ibid., pp. 23-24). In any case, however, the question arises as to how legal discussions regarding copyright and blockchain can or should be resolved at all and who the different legal opponents actually are (Peters and Panayyi, 2015, cited in O'Dair and Beaven, 2017, p. 475). Offering a possible answer to the questions just raised, Wright and De Filippi (2015, cited in ibid., p.476) even propose that “a new subset of law” called “Lex Cryptographia” would be needed “to address smart contracts and decentralized autonomous organizations.”

All current challenges and possible solutions that blockchain may or may not provide cannot be highlighted in this essay, as this would go beyond the scope. However, looking at the different aspects and arguments discussed, one can see that there are still a lot of open questions and unresolved implementation possibilities. However, if the various parties in the music industry which are affected by the changes brought about by blockchain technology pull together and recognise the potential benefits in terms of transparency, efficiency, and revenue growth (Carretta, 2020, cited in O'Mara, 2022, p. 222), it is conceivable that the industry as a whole could develop in a positive way. However, in order for there to be sufficient incentives for such cooperation and for the rigid pursuit of one's own interests not to prevail, the profitability of the use of blockchain must be given in the first place. This is precisely why it is important to constantly improve not only the technology itself, but also the economic (Zhao and O'Mahony, 2018) and legal structures. Maybe then, as O'Dair and Beaven (2017, p. 477) fittingly conclude it, “this time, the lesson for the record industry is to work with, rather than against” the new blockchain technology.

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