

Student name: Caitlin Annie Skea

Student ID: 2012157

Module title: Legal and Business Affairs

Module number: BTY7002

Assignment: Essay

Lecturer: Ian Penman

Word count (not including headings/subheadings): 2713

Contents:

1. Introduction	Page 2
2. Discussing Blockchain	Page 2
2.1 - What is blockchain?	
2.2 - Is blockchain safe?	
2.3 - Blockchain's history	
2.4 - Music blockchain stakeholders	
2.5 - Impact on other entertainment industries	
2.6 - General opinions on blockchain	
2.7 - Beatdapp	
3. Advantages and Disadvantages	Page 7
3.1 - Advantages	
3.2 - Disadvantages	
4. Is blockchain relevant?	Page 9
5. Summary	Page 10
6. Bibliography	Page 11

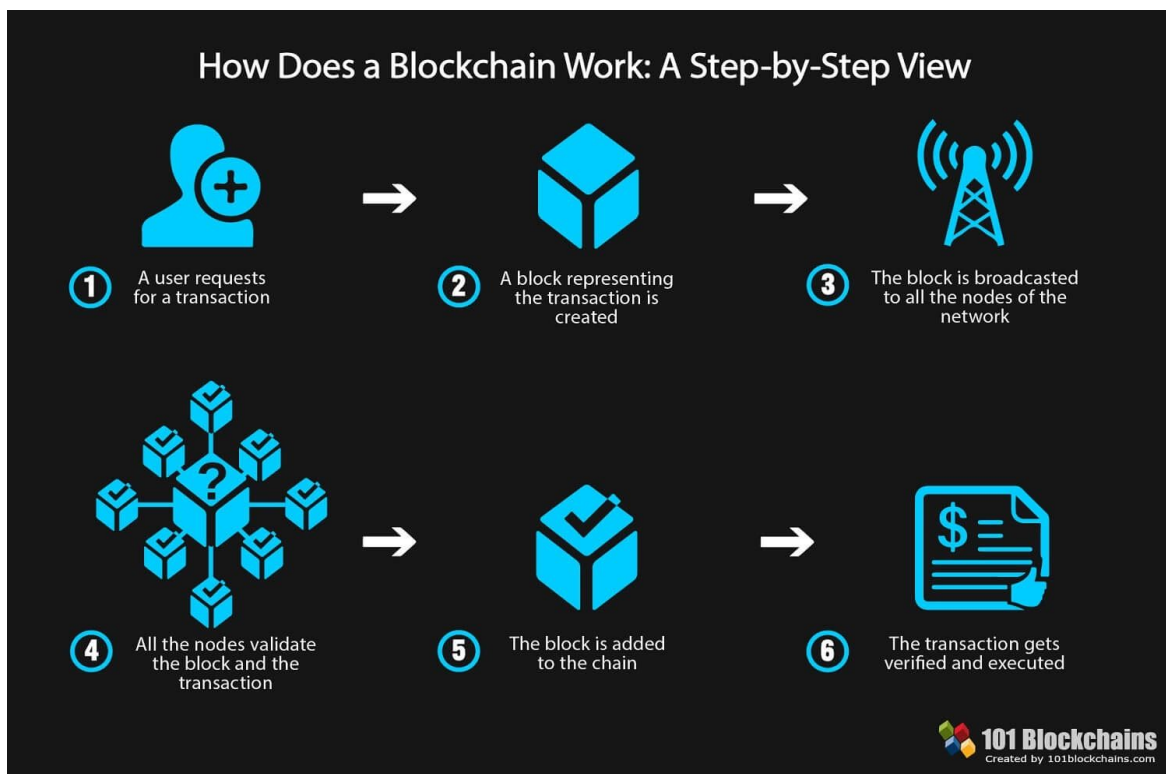
1. Introduction

This essay is going to explore the concept of blockchain: looking at what it does, its history and structure. It will discuss the advantages and disadvantages, for the music industry in general, the artists and more. Using many different resources, from academic websites to books and reports, it will then consider the commercial uses and legal implications surrounding blockchain, finally discussing its potential relevance to the industry.

2. Discussing blockchain

2.1 - What is blockchain?

Blockchain technology first began as the 'foundation for the cryptocurrency bitcoin'. Except whilst bitcoin refers to buying and purchasing objects or goods arguably, blockchain refers to 'the technology rather than the product'. A simple diagram to understand the workings of blockchain seen below (Anwar, H., 2018):



The definition of blockchain is simply 'digital information - the "block" - stored in a public database - the "chain" (Reiff, N, 2020). Once blocks of information start to chain together, it then starts to create a blockchain. New information included is then added to the 'linearly and chronologically' ordered blockchain.

2.2 - Is blockchain safe?

Blockchain technology accounts 'for the issues of security and trust in several ways' (Conway, L., 2020). Due to the structure of blockchain, as mentioned above, new information added is always done at the end of a chain. Due to this 'it is very difficult to go back and alter the contents of the block' once it has been added to the chain. Each block contains its own 'hash stamp', which is the reason for its added security. The purpose of the hash stamp is to turn 'digital information into a string of numbers and letters'. Therefore, any information that becomes changed or altered will also change the 'hash code' completely. Due to this, blockchain is deemed very safe due to the security surrounding it. Luke Conway described a scenario in his article on blockchain technology, about what would happen if a hacker tried to 'alter the blockchain'. If a hacker attempted this, they would 'alter their own single copy'. However, it would then 'no longer align with everyone else's copy'. When cross-referenced with the other copies, it would be evident that it 'stands out and the hacker's version of the chain would be cast away as illegitimate'. Due to these reasons, it is suggested that blockchain technology be used and trusted, for many different industries and purposes.

2.3 - Blockchain's history

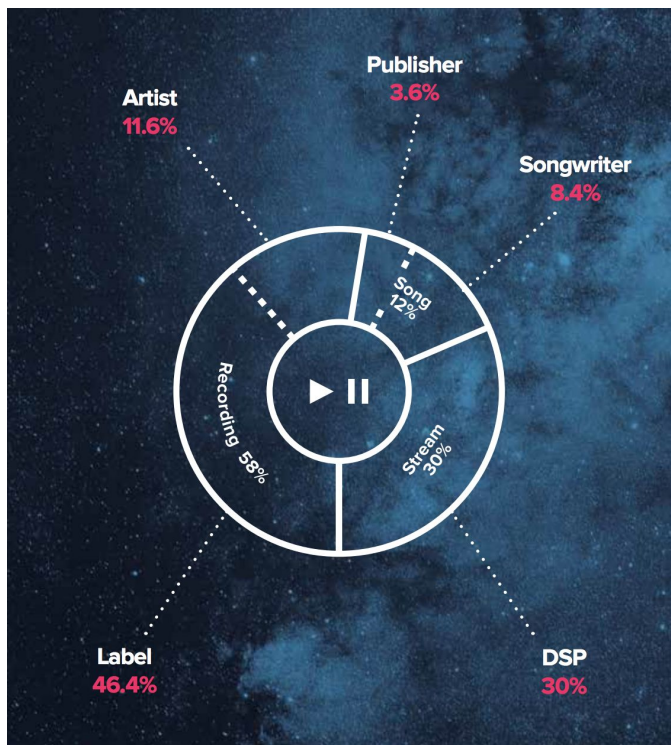
Satoshi Nakamoto wrote a paper in 2008 presenting and discussing the initial idea for blockchain technology. The report explored the possibility to allow payments 'to be conducted peer-to-peer, without the need for a third party to verify the authenticity of the transaction' (2016, pp 6-10). In 2009, Nakamoto took the next steps forward, actually executing the 'first blockchain as the public ledger for transactions made using bitcoin'. Later on in 2014, 'blockchain 2.0 was born', due to the exploration of financial transactions by separating blockchain technology 'from the currency', therefore leading to this new idea of blockchain (Icaew.com, 2020). When Nakamoto first introduced the concept, it was approached with caution and uncertainty due to its 'unknown effects and uses'. However, in recent years, more companies and industries are interested in its 'potential to affect

multiple industries in an innovative way' (GetSmarter.com., 2018). This demonstrates its increasing popularity in different sectors.

2.4 - Music blockchain stakeholders

Stakeholders involved in music blockchain are as follows: publishers, producers, labels, performing rights organisations, consumers, artists, songwriters and a few more. Each stakeholder is a part of the circuit from artist to consumer, not only 'adding on an extra step to the process', but also taking a 'share of the overall revenue before passing it on'. Blockchain works in the music industry as each song is given a 'unique and unalterable fingerprint', as soon as it is published on a platform by an artist. This is the block. It holds digital content of the song - for example, the lyrics, melody, licensing information etc. Many argue that introducing blockchain to the music industry allows the circuit between artist and consumer to be more direct, as all the digital content is already stored in the block. This, therefore, forces specific stakeholders to be unessential.

In the last several years, the digital world has developed massively with almost everyone using streaming platforms to access their music currently. The estimated value artists get per stream is \$0.000035, decreasing music sales impressively since the 1990s. Due to this decrease, it has caused problems between artists and stakeholders - the Spotify and Taylor Swift case in recent years, for example. Some professionals do suggest that blockchain technology may help these problems amongst the industry, creating a 'system that can further benefit all of the stakeholders involved by being more transparent, efficient and secure'. However, if this was to happen, and artists were to earn more for their music, it would result in the removal of particular stakeholders, like publishers. (Duguay, S and Estabrooks, M., 2017). It is important to note that whilst this may be an issue, publishing only accounts for 3.6% of how the digital dollar is shared between stakeholders - asking the question if it would impact the industry as dearly (Cooke, C., 2018, pp9). This will be discussed further in the essay.



2.5 - Impact on other entertainment industries

Whilst blockchain will affect the music industry; it is important to mention the other industries, like film. An organisation called 'FilmChain' has been created to 'collect, allocate and analyse revenue in film and TV'. The aim is to 'encourage transparency in the distribution process where stakeholders can be compensated with the need for a middleman' (Koffman, T., 2020). This is similar to the music industry, where blockchain aims for a more direct circuit between consumer and artist. This shows how other creative sectors are incorporating blockchain as well, demonstrating its arguable popularity amongst many industries currently.

2.6 - General opinions on blockchain

William Mougayar - Author of 'The Business Blockchain: Promise, Practice, and Application of the Next Internet Technology', described blockchain technology in 2016 as 'as important as the World Wide Web', and 'arguably might give us back the Internet, in the way it was supposed to be: more decentralised, more open, more secure, more private, more equitable, and more accessible' (Mougayar, W., 2016).

Bernard Marr - Enterprise technician, described in 'Forbes Magazine', that blockchain is not the 'cure-all panacea for the world's problems'. He continued by explaining that blockchain would, in fact, cause more damage than it's worth. He discussed the environmental issues using blockchain, as it 'relies on encryption to provide its security.. therefore requiring large amounts of computing power'. He also addresses the speed of blockchain - which has been deemed to be a huge advantage. He stated that in fact 'bitcoin transactions can take several hours to finalise', which is different from what blockchain has been marketed for (Marr, B., 2018).

2.7 - Beatdapp

As clearly described, blockchain technology is developing massively - which is why new organisations like Beatdapp have been introduced recently.

Beatdapp is a new app on the music industry scene, designed to 'help labels find missing royalties' and 'help DSPs fight streaming fraud and save money'. It was founded in 2018 by Andrew Batey and Morgan Hayduk. On it's LinkedIn page, the app states 'we help music labels, and artists track their songs to collect royalties. Beatdapp is a tracking system that authenticates, verifies, and validates media streamed in real-time'. With only eleven to 50 employees currently, it is impressive that the company has, in 2 years, managed to win seven awards for its success. It demonstrates how the app is making significant progress within the industry currently, and will predictably continue to do so (2020).

It has been announced in recent months that Bryan Turner, founder of 'Priority Records', has joined the advisory board of Beatdapp. Founding the record label in 1985, Turner has been a successful worker in the industry for a long time, with his record company selling over \$1.7b of recorded music. The recent information that he is joining the support in the blockchain is an important one to note when considering its legitimacy and value (Stassen, M, 2020).

Another supporter of the app is Priyanka Khimani. India's leading entertainment and music rights expert, known for her legal expertise in the Indian entertainment industry has announced her role as one of the board of advisers. Beatdapp has declared this to be a 'notable development' for the company (Beatdapp, 2020). It may not be unreasonable to

estimate that the increase in Beatdapp supporters (since these previously mentioned additions), may continue to rise.

3. Advantages and Disadvantages

There are both advantages and disadvantages of the blockchain, which will be discussed below. All following arguments have been sourced from a transcript written by a member at the Queen Mary University of London. The title: Music copyright management on blockchain (Tam, T., 2018, pp. 215-218).

3.1 - Advantages

Firstly, a big advantage that blockchain professionals are promoting is that blockchain could eventually become a 'reliable database of copyright and licencing information'. It could incorporate information such as the identity of songwriters, performers, producers, publishers, BTS (behind the scenes) assistance and copyright data. Professionals believe this would result in complete acknowledgement for all who worked on the project and to be 'publicly recognised for their creations'. It is arguable that many creators do not get the recognition they deserve in the music industry currently, which is why this advantage of blockchain is very appealing.

Another advantage worth addressing is the aim to 'reduce unlawful uses of content'. Currently, it is seemingly straightforward for some creators to steal and illegally use music already created, and change it to their specification to call their own. For example, remixes and mash-ups could incorporate pre-recorded music that may potentially never get picked up and sued. Blockchain could, in theory, allow right holders to 'be able to trace how their works are used', therefore stopping piracy from happening. It also would allow other creators who may wish to use pre-recorded music, using blockchain, to be able to 'locate and contact right holders to obtain licenses', enforcing the following of all laws and rights.

Another advantage is that rights holders would no longer need to depend on or negotiate prices or royalty distribution through the 'complex structure of the middlemen'. It would transfer royalties directionally and instantly to the specific rights holder, as their music is streamed, listened to, used, watched etc. Blockchain would also sort out the 'split of payment' between creators so that a 'certain percentage of royalties would be automatically

transferred to each contributor' so that all are equally included and gratified for their work. It would also allow right holders to personally decide the price, licensing and terms and conditions contained in each piece of work that they produce.

Finally, blockchain-based platforms could encourage and assist cultural diversity within the music industry. Right holders, or creators, whose audience only reaches a small group, could start to promote and share their music and creations on the 'worldwide blockchain network'. This would allow works from these creators to be recognised globally, encouraging many different genres to be played in more countries.

3.2 - Disadvantages

Although there are many advantages, listed above, to blockchain, there are also several disadvantages. The points discussed are, again, sourced from Music copyright management on blockchain (Tam, T., 2018, pp. 215-218).

An important disadvantage of blockchain is the 'cut out' of human interaction. The job that blockchain would take over is the publishing side, i.e. PRS - one of the collection societies. Whilst some may believe that publishers are not needed, some sceptics argue that blockchain is a technology, but 'ultimately requires human intervention'. Correct and accurate data *must* be added, and there are some that believe that this can only be done by relying on individuals to enter in the data - not to trust technology. An example is there may be a situation 'in which users of blockchain-based platforms upload an infringed piece of music'. This could then be falsely validated by the music infringer's family or friends, for example, allowing 'false ownership' over the creation. It is arguable that this couldn't happen if humans were overseeing the process.

Another disadvantage to discuss is the 'limited use of bespoke token'. Currently, a bank card is a very easily accessible and usable piece of equipment which can fund streaming services such as Spotify, Apple music, or it can easily download and buy music singles or CDs. Blockchain-based platforms would rely and depend on 'the exchange of digital currency', which therefore would potentially limit the 'consumption of basic internet use'. An add on from this point is that the 'cryptocurrency into the mainstream of finance' is not completely clear due to the many risks which are associated with it - for example, security, legal uncertainty, fraud and money laundering.

Whilst blockchain is considered valuable; it could arguably cause significant competition in the music industry. If blockchain takes off, what is to stop others creating blockchain-based platforms as well. This would still benefit rights holders and creators as they would be using blockchain, but the 'existence of different platforms may reduce the possibility of creating a unified global repertoire'. Whilst this arguably would not cause detrimental damage to the music industry, it is still a point to consider.

Continuing from the point above if blockchain continues to grow in popularity, it may cause problems or make things hard for the industry in the long run. If different organisations and groups of stakeholders 'wish to adopt different types of blockchain which best suits their interests', rights holders and creators would be offered both: 'public, permissionless blockchain' as well as 'private and permission blockchain'. Whilst it is arguable that most creators would choose to neglect the offer for blockchain-based platforms to have 'absolute control of the system', there are some that may want this. This would create an unclear and uncertain result as to what the 'standard practise to lead the music world' would be. If it forms a divide in the music industry, what would it mean for right holders and the industry itself?

4. Is blockchain relevant?

Looking at the points previously made in this essay, it is clear why blockchain has become popular amongst the industry. However, it is vital to question the relevance of it. Whilst previously mentioned above in section 3.1; blockchain would indeed be able to commend and acknowledge all those who participated in a musical creation automatically. This is a significant advantage for many creators who feel their work has not been appreciated or recognised in the music industry. However, it is crucial to consider that there are many creators who input data into collection societies, like PRS, incorrectly.

It is also essential to consider the benefit for the actual music creators themselves. Whilst explored above in 3.1; artists would be able to receive royalties off their music that is being used, or sampled, automatically. This is potentially more beneficial, however, to independent artists, rather than established and successful artists. It would be foolish for any creator to illegally use and release a song which has aspects of it taken from an established artist. Blockchain would, however, be arguably revolutionary to unsigned and

independent artists, who would not always know if their work is being illegally used. They would have the ability to check an app on their phones to see if their music is being used, and also the number of royalties they are receiving through radio plays, shows, etc. This is a big move forward for smaller artists, but it wouldn't make as big of a difference to more significant named artists potentially. Therefore the question remains: is it as relevant to the music industry as many believe?

5. Summary

In conclusion, blockchain technology gives both advantages and disadvantages to the music industry, arguably depending on the position. Whilst it would produce a more direct circuit from artist to consumer, it is essential to question whether it is worth removing an entire stakeholder just for that purpose, especially if this means the eventual removal of human involvement. It has been discussed above that it will arguably produce a more secure and safe system concerning copyright and infringement for the artist, but will it make the enormity of the change that some arguably believe? Whilst blockchain technology is an impressive concept and is arguably revolutionary to many organisations and industries, it is important to question its factual relevance to the music industry.

6. Bibliography

Anwar, H., 2018. *The Ultimate Blockchain Technology Guide: A Revolution To Change The World*. [image] Available at: <<https://101blockchains.com/ultimate-blockchain-technology-guide/>> [Accessed 12 November 2020].

Beatdapp, 2020. Leading Entertainment and Music Rights Expert Priyanka Khimani Joins Beatdapp Board of Advisors. Available at: <<https://blog.beatdapp.com/2020/06/priyanka-khimani/>> [Accessed 10 November 2020].

Conway, L., 2020. *Blockchain Explained*. [online] Investopedia. Available at: <<https://www.investopedia.com/terms/b/blockchain.asp>> [Accessed 19 November 2020].

Cooke, C., 2018. *DISSECTING THE DIGITAL DOLLAR Part Two*. [ebook] pp.9. Available at: <https://themmaf.net/site/wp-content/uploads/2015/09/MMF_DDD-Part-Two_Executive-Summary_Web.pdf> [Accessed 25 November 2020].

Duguay, S. and Estabrooks, M., 2017. *The Revolution Will Be Blockchained: Blockchains And The Future Of Digital Music*. [online] Gowling WLG. Available at: <<https://gowlingwlg.com/en/insights-resources/articles/2017/blockchains-and-the-future-of-digital-music/>> [Accessed 24 November 2020].

GetSmarter Blog. 2018. *What Stakeholders Are Involved In The Blockchain Strategy System?* / Getsmarter Blog. [online] Available at: <<https://www.getsmarter.com/blog/career-advice/what-stakeholders-are-involved-in-the-blockchain-strategy-system/>> [Accessed 20 November 2020].

Icaew.com. 2020. *History Of Blockchain*. [online] Available at: <<https://www.icaew.com/technical/technology/blockchain/blockchain-articles/what-is-blockchain/history>> [Accessed 13 November 2020].

Koffman, T., 2020. How Blockchain Will Transform Media & Entertainment. [online] Forbes. Available at: <<https://www.forbes.com/sites/tatianakoffman/2020/02/26/how-blockchain-will-transform-media--entertainment/?sh=3f6756091d1b>> [Accessed 24 November 2020].

Linkedin. 2020. *Beatdapp*. [online] Available at: <<https://www.linkedin.com/company/beatdapp/about/>> [Accessed 10 November 2020].

Marr, B., 2018. *The 5 Big Problems With Blockchain Everyone Should Be Aware Of*. [online] Forbes. Available at: <<https://www.forbes.com/sites/bernardmarr/2018/02/19/the-5-big-problems-with-blockchain-everyone-should-be-aware-of/>> [Accessed 20 November 2020].

Mougayar, W., Oneissi, M. and Buterin, V., 2016. *Business Blockchain*.

2016. *Music On The Blockchain*. [ebook] London: Middlesex University London, pp.6-10. Available at: <https://www.mdx.ac.uk/__data/assets/pdf_file/0026/230696/Music-On-The-Blockchain.pdf> [Accessed 12 November 2020].

Stassen, M., 2020. *Bryan Turner, Founder Of Priority Records, Joins Advisory Board Of Blockchain Music Startup, Beatdapp - Music Business Worldwide*. [online] Music Business Worldwide. Available at: <<https://www.musicbusinessworldwide.com/bryan-turner-founder-of-priority-records-joins-advisory-board-of-blockchain-music-startup-beatdapp/>> [Accessed 10 November 2020].

Reiff, N., 2020. *Blockchain Explained*. [online] Investopedia. Available at: <<https://www.investopedia.com/terms/b/blockchain.asp>> [Accessed 8 November 2020].

Tam, T. N. L., 2018. *MUSIC COPYRIGHT MANAGEMENT ON BLOCKCHAIN*. [ebook] Queen Mary University of London, pp.215-218. Available at: <<http://www.albanylawjournal.org/Documents/Articles/29.4.227%20-%20Tran.pdf>> [Accessed 11 November 2020].