

Legal & Business Affairs

Blockchain Essay

Chiara Vahle (Student Number: 1803640)

Lecturer: Ian Penman/Robert Horsfall

Date: 7 January 2019

Tileyard Education

Word Count: 2,277

Nowadays, many industries suffer from additional costs spent on banks, data piracy, or trust issues within an organisation. With the use of a not so new technology named blockchain, many issues could be tackled by applying this system to their business strategies. This technology could be especially benefiting for the music industry and its many areas such as for the live sector, in copyright, or for the distribution of musical creations.

First and foremost, as stated by Tapscott (2016), “the blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value.” The technology was invented by Satoshi Nakamoto in 2008 by the creation of Bitcoin and was established to replace intermediaries, such as banks, in transactions. With the removal of intermediaries, it allows people to directly transact between each other without any third-party involved, which reduces the risk of piracy, according to Gates (2017, p.32). Therefore, the blockchain technology is trustworthy and transparent due to a shared ledger that is shown to everyone on the network and which transactions can not be changed or deleted. Another benefit of this technology is decentralisation, which implies that it limits the risk of hacking, server downtime and the loss of data. Furthermore, the use of this type of technology can reduce expenses by removing intermediaries and increase the speed of transactions that can benefit many industries. However, involved in the technology of blockchain are also several dangers and disadvantages such as the lack of privacy. Furthermore, there are concerns of security in terms of a chance of a 51% attack on a network. This attack can happen when so-called miners, users of a network, control 50% or more of the mining power and are able to control the confirmations of new transactions. This can lead to a double spent of tokens due to the reverse of confirmed transactions. In addition, blockchain technology has a huge impact on the environment due to an immense amount of computing power used. This is needed for the constant run of complex algorithms for the proof of a user’s permission to write to the chain, as stated by Marr (2018). According to Khatwani (2018), the blockchain technology can be distinguished between three different types, a public blockchain, a private blockchain, and a consortium or federated blockchain. The public blockchain is transparent to all participants of the network, also known as miners or nodes, and can be read and written on by anyone on the system at any given time. Therefore, it

is less secure and less private. An example of a public blockchain is the cryptocurrency Bitcoin. With the private blockchain, only a single organisation or an individual is able to access the transaction data. Therefore, this type is more secure and addresses the concern of privacy issues. A group of companies or individuals that decide together what is the best benefit for a network is called consortium or federated blockchain. (Khatwani, 2018)

Generally, the blockchain technology works in form of blocks put together to a chain, hence the name 'blockchain', as claimed by Hassel (2016). In a ledger of transactions, each page forms a block, which has an impact on the following one through the hashing of cryptography. This means once a block is completed a unique and secure code is created, which links to the next block or page. Used can the blockchain technology, first and foremost, in form of crypto assets such as cryptocurrencies, as mentioned above, and crypto tokens. A cryptocurrency is 'a digital currency that uses cryptography for security and for which transactions are typically recorded to a blockchain or other distributed ledger technology', as claimed by Gatto, Fohrman, and Bear (2018). One of the most known cryptocurrencies is Bitcoin. In the music industry, Musicoin is the most popular cryptocurrency for receiving and making digital payments. Crypto tokens can serve as the ownership of a digital item such as a copy of a musical work or a digital concert ticket. Another purpose enabled by blockchain is a so-called 'smart contract' which is 'a self-executing computer code that includes the operational terms of an agreement, between two or more parties, where the operational terms are written into and executed by the lines of code', as stated by Gatto, Fohrman, and Bear (2018). Those types of contracts and its codes are held on a distributed, decentralised blockchain network and operate under 'if-then' rules. This means 'if' specific conditions, which are programmed into the code, exist, 'then' the smart contract activates certain actions to appear. One of the most known blockchains that stores and runs smart contracts is Ethereum.

The music industry, in general, faces many issues in all of its departments. However, one of the main problems it has to tackle is the piracy of intellectual property. According to the World Intellectual Property Organisation (WIPO, n.d.), "intellectual property (IP) refers to the creation of the mind, such as inventions; literary and artistic

works; and symbols, names, and images used in commerce.” IP can be divided into three categories such as patents, trademarks, and copyright. Therefore, the intellectual property law deals with the legal protection of the ownership of these intangible assets. In the music industry, intellectual property refers to the music copyright, which is split into two different rights, the composition such as the lyrics and the melody, and the sound recording, which is the audio recording of a song, according to Wang (2018). These rights allow the copyright owner to reproduce, distribute and perform the music freely. Not only is the music, created by an artist, copyrighted but also their trade names and trademarks such as logos, etc. Nowadays, music creators monetise their work via third-party services such as the collection societies PRS and PPL in the UK. These societies collect the artist’s royalties from different streams such as radio plays, live performances, synchronisation, etc., which then will be paid out to the music creators. If an artist is signed to a record label and/or a music publisher, copyright is controlled by those parties and licensing fees are collected by them. The issue with these intermediaries is the fact that they are taking huge cuts of the money made which often leaves the artist with little to no royalty. Furthermore, in order for artists to release music, distribution services such as streaming platforms are needed to act as an intermediary between the creator and the listener. These services, for example Spotify, have been criticised to often underpay the artist. Therefore, the technology of blockchain can be used for a solution for royalty issues and underpayment. Due to the transparency of the blockchain music creators have the opportunity to make exchanges with their fans directly and receive payments instantly by bypassing intermediaries with the use of smart contracts. These contracts include a percentage, which will be transferred to the artist immediately once a piece of work has been streamed or purchased, as per Gatto, Fohrman, and Bear (2018). One blockchain based company that implements this system is Ujo Music which allows the creators to design licenses themselves and who can, therefore, have full control over their recordings and revenues through this platform. This also enables the artist to monetise their fan base and build close relationships with their peers through these interactions. According to Lee (2018), music creators have the opportunity to list a parameter in the smart contracts, which gives an overview of a percentage of the revenue generated by supporters who shared their music. After the artist has reached a certain level of promotion the sharing of revenues can be stopped and the

tokens acquired by the fans through this system can be redeemed towards concert tickets or merchandise. Therefore, blockchain technology enables fans to be turned into active promoters who can help an artist grow and benefit from it at the same time.

Copyright infringement through piracy is one of the biggest problems in the music industry. File sharing and distributing musical works to others cause a non-royalty payment to artists, which, therefore, has a massive impact on the creator's income. Furthermore, sampling a piece of music, which means using a part of a pre-existing sound recording, without the permission of the owner also infringes the copyright law. The obtainment of the rights holder's permission can often be very time-consuming and complicated, which leads to unauthorised use of musical creations. With the use of blockchain and smart contracts, ownership rights can easily be managed. Furthermore, with the adoption of smart contracts copyright and the licensing of musical works as well as sound recordings to other parties can be enforced and tracked. Metadata with information about copyright and terms of use is comprised of each musical creation, which facilitates the process of obtaining a license for ownership-protected music.

Another huge problem the music industry faces are concert ticketing issues. The purchasing of tickets in enormous amounts by computer bots and the sale of those tickets on secondary ticketing platforms such as Viagogo or StubHub for a higher price play a big part in the contribution of these issues. Other problems regarding the ticketing industry are counterfeiting, instant sell-outs, and overpriced ticket processing fees of concert passes. With the technology of blockchain and its numerous companies based on this concept, the matter of ticketing issues can easily be solved. An organisation that deals with these problems is EventChain, a blockchain built-on entity that uses crypto tokens and smart contracts to increase the accountability, transparency, and security to the ticketing industry. The theory behind the EventChain network is that each ticket is represented by a single, non-fungible token in a decentralised and distributed database. This database identifies the original ticket buyer and manages the resale as well as the venue admission process. The blockchain company solves the issue of ticket counterfeiting by using

cryptography which does not allow the token to be replicated but can be transferred to another individual without restraint. (EventChain, 2017)

However, with the many benefits and opportunities arising with the use of blockchain in the music industry legal implications of this type of technology have to be considered when adopting. According to Gatto, Fohrman, and Bear (2018), one major part that has to be looked at is the structure of the smart contracts to provide enforceability. Furthermore, the fact that they are not standard contracts and a code implements the logic of a contract another agreement separately from the smart contract has to be drawn up between the individual parties. Smart contracts are often more complex and sophisticated which means that with only a string of code it is difficult to include territory-based rights management and terms for royalty collections, royalty splits, and data sharing and further rights. With blockchain and smart contracts, jurisdictional issues may appear. Due to nodes located all around the world, it is difficult to identify the governing law of the contractual relationship. In addition, any blockchain system holding personal data has to comply with applicable data protection laws. However, due to the personal data stored on a blockchain from many different territories the issue is which data protection law may be applicable. Furthermore, due to the immutability of a blockchain, it is complicated to modify a system in the case of a change in regulation. This means if for instance, a blockchain carries personal data in a way that complies with the law at a certain date and the rules changes it would be difficult to alter the records regarding this data to adhere to the new law. Moreover, with the huge amount of existence in data on a blockchain a higher risk of a potential security breach remains. Therefore, cybersecurity has to be taken very seriously into account by blockchain operators in order to avoid regulatory action and reputational damage, according to Clarke (2017). With the blockchain and its various organisations, liability and responsibility issues may arise at certain points. Due to the operation of pre-programmed smart contracts without any human involvements, it is questionable what the legal status of a blockchain-enabled organisation is. In order to solve these legal issues, it is necessary to either adapt laws to the technology or form completely new regulations, which are primarily specialising in the blockchain technology.

Overall, the blockchain technology is a great invention, which can not only be beneficial and improve the entertainment industry but also other commercial enterprises. With the use of crypto assets such as cryptocurrencies and crypto tokens music creators can be paid royalties with digital currency and music enthusiasts are able to purchase concert tickets in form of a digital format. Smart contracts are useful to manage ownership rights correctly and protect an artist's musical creation. The technology is accessible for everyone on a network and can be controlled and altered by every participant. The limitation of costs spent on intermediaries can be beneficial for artists who are in the early stages in their career and in lack of money. However, with many advantages involved in this technology some downsides such as the high consumption of energy appear. The fact that people from all over the world can be on a blockchain and share personal data can evoke legal problems. Therefore, it is necessary to further look into these legal issues in the future to guarantee full security especially in terms of data protection and introduce new laws, which solely apply for the blockchain technology. Nevertheless, this type technology is seen as the future for all departments within the music industry.

Reference List

Clarke, O. (2017) An introduction to Blockchain: the key legal issues. Available at: <http://www.osborneclarke.com/insights/an-introduction-to-blockchain-the-key-legal-issues/> [Accessed: 4 January 2019].

EventChain (2018) EventChain – Fixing the Issues of the Event Ticketing Industry. Available at: <https://blog.eventchain.io/eventchain-fixing-the-issues-of-the-event-ticketing-industry-d2f90f44d438> [Accessed: 1 January 2019].

Gates, M. (2017) Blockchain. California: Wise Fox Publishing.

Gatto, J.G., Fohrman, S.S., Bear, A.L. (2018) How Blockchain Technology Can Improve the Music Industry. Available at: <https://www.lawoftheledger.com/wp-content/uploads/sites/777/2018/09/How-Blockchain-Technology-Can-Improve-the-Music-Industry-Article-0918.pdf> [Accessed: 28 December 2018].

Hassell, J. (2016) What is blockchain and how does it work? Available at: <https://www.cio.com/article/3055847/security/what-is-blockchain-and-how-does-it-work.html> [Accessed: 1 January 2019].

Khatwani, S. (2018) Different Types Of Blockchains In The Market And Why We Need Them. Available at: <https://coinsutra.com/different-types-blockchains/> [Accessed: 29 December 2018].

Lee, S. (2018) Embracing Blockchain Could Completely Change The Way Artists Sell Music And Interact With Fans. Available at: <https://www.forbes.com/sites/shermanlee/2018/04/25/embracing-blockchain-could-completely-change-the-way-artists-sell-music-and-interact-with-fans/#25b266901a25> [Accessed: 3 January 2019].

Marr, B. (2018) The 5 Big Problems With Blockchain Everyone Should Be Aware Of. Available at: <https://www.forbes.com/sites/bernardmarr/2018/02/19/the-5-big-problems-with-blockchain-everyone-should-be-aware-of/#292ae78a1670> [Accessed: 31 December 2018].

Tapscott, D. (2018) Blockchain Revolution. Available at: <https://www.insightinvestment.com/globalassets/documents/recent-thinking/uk-blockchain-revolution.pdf> [Accessed: 28 December 2018].

Wang, A. (2018) How Musicians Make Money – Or Don't at All – in 2018. Available at: <https://www.rollingstone.com/music/music-features/how-musicians-make-money-or-dont-at-all-in-2018-706745/> [Accessed: 1 January 2019].

World Intellectual Property Organisation (n.d.) What is Intellectual Property? Available at: <https://www.wipo.int/about-ip/en/> [Accessed: 20 December 2018].