

Explain the definition, commercial uses and legal implications of Blockchain on the music and entertainment industries

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Introduction

As the internet of things has opened up a multitude of opportunities for creators across all sectors, allowing vast swathes of data to be transferred online and in the process changing the way people consume music forever, the landscape of the music industry has changed immeasurably. With new technology vying to be heard among the masses of new companies and innovation, one technology in particular, blockchain, has established itself at the forefront of this technological revolution, and the systems created by the initial technology provide an open-source format that it is only limited by the developer's imagination.

The implications of this for the music and entertainment industry are far reaching, with a number of companies utilising the technology already to launch new revenue-generating platforms for artists and creatives, while the underlying technology has supporters of blockchain believing in a "future that is collaborative, transparent and frictionless" (Khan, 2018). Many people believe blockchain will lead to a reform in the way royalties are paid to artists, with many calling for the technology to be implemented to reduce the intermediaries paid within the current music industry model. This essay will define blockchain, explore the commercial uses and possibilities available to the music industry and artists moving forward and the legal implications relating to the technology.

Blockchain

Blockchain first emerged after a mysterious whitepaper was written in 2008 by Satoshi Nakamoto, titled "Bitcoin: A Peer-To-Peer Electronic Cash System". A year later Bitcoin was launched, utilising the blockchain technology to create the first cryptocurrency. This was happening against the backdrop of the financial crisis of 2008, when trust in the banks had completely eroded, and there were cries for a new, transparent system that was decentralised and not controlled by a central authority, vulnerable to external economic factors or government intervention (Baghla, 2017). Blockchain and Bitcoin are often used interchangeably and confused. Bitcoin is a cryptocurrency. Blockchain is the underlying technology behind all of these cryptocurrencies, and it is blockchain that is the most important innovation and provides the most potential for revolutionising the music industry.

Blockchain, as defined by Bashir (2018); "at its core is a peer-to-peer distributed ledger that is secure, append-only, immutable (extremely hard to change), and updateable only via consensus or agreement among peers. From a business point of view, a blockchain can be defined as a platform whereby peers can exchange values using transactions without the need for a centrally trusted arbitrator". One of the key points of interest for the music industry and entertainment space is the ability for transactions to take place without intermediaries, or third parties, validating transactions. To explore how this happens, it is important to first establish how blockchain works.

Blockchain technology has practical uses outside of acting as a secure ledger for transactions, and it is in these innovative practical applications that new opportunities have risen in the music space, due largely to smart contracts.

Smart contracts

The concept of smart contracts were initially hypothesized by Nick Szabo in 1994, 14 years before the Bitcoin white papers were written. They were first applied within blockchain with the introduction of Ethereum, which used Solidity, an “object-oriented, high-level language for implementing smart contracts” (Solidity, 2020).

“Smart contracts are programs stored on a blockchain that run when predetermined conditions are met.” (IBM, 2020) It follows that smart contracts aren’t necessarily actually contracts in a legal sense, but are systems put in place that can be added to blockchain to trigger the execution of an agreement if a pre-set value is reached. This technology has been vital in opening up real world functionality to blockchain, meaning that both financial and non-financial applications can be introduced, giving artists and music businesses new opportunities and possibility for efficiencies that can streamline the music industry, and save time and money spent on intermediaries. The promise of disintermediation, more transparency and more efficient processes for distribution and royalty payments all present a real possibility for artists finally being properly paid for their work and other creative endeavours (Rogers, 2016)

Streaming services

One of the most obvious starting points when exploring commercial uses for blockchain is streaming services. The remuneration of artists has long been argued, with artists challenging the major streaming services to pay more, and a UK Commons inquiry into the Economics of streaming is currently taking place. (UK Parliament, 2021). Artists also have to wait a long time to see any payment from streaming, sometimes waiting as long as two years (PwC, 2018). With increasing pressure on streaming services, many have called for blockchain technology to be implemented into the streaming services’ payment processes. This would make micropayments possible and give the ability to determine rights ownership information and royalty splits for each track by adding it to the database via a smart contract. This would make sure artists, and any other contributors and rights holders, are paid their agreed royalty as soon as a song is streamed.

While major streaming services have yet to fully embrace the blockchain technology into their model, Spotify recently announced their acquisition of blockchain start-up Mediachain Labs, a company formed to aid with the attribution of royalties to artists. Many considered this to be a direct result of their licensing dispute with the National Music Publishers Association, (NMPA) over unpaid royalties, with Spotify reportedly paying \$25 million in payments to publishers and fines (Perez, 2017). While Spotify looks to have protected itself from future issues with this acquisition, the self-interest also has the trickle-down effect of pushing the platform to fairer payments to artists in the future.

As the major streaming services are slower to adopt, standalone streaming services have launched directly as a result of the technology. Imogen Heap is a long-term supporter of such platforms. In 2015 she released her single ‘Tiny Human’ on the Ethereum blockchain via the Ujo streaming platform. Ujo is a service set up to directly pay producers, writers and engineers involved in a project. Heap sold 150 downloads of the song, priced at 1 Ether, which at the time was equivalent to around £150 of sales. As the value of Ethereum increased, however, the sale value rose to £150,000 at the time Heap cashed in (Hardaker, 2020).

Heap also launched her own blockchain application, Mycelia, and has invested the money made from the sale of ‘Tiny Human’ into research into the practical applications of blockchain. Mycelia launched the Creative Passport beta in December 2020, after five years of research into how music makers can have more control over their data. (Cooke, 2020). Further, a number of streaming services, including Spotify and YouTube, have

signed up to the Open Music Initiative (OMI) (Granados, 2018). Launched by Berklee College Of Music, the OMI utilises blockchain technology to identify rights holders and pay them fairly, “allowing them to build business models without risking intellectual property theft.” (Mathur, 2021). While this is indicative of a move towards more artist control and a higher proportion of revenue paid directly, the open-source nature of the technology results in endless possibilities for these rights management services and as a result, no clear uniform direction has been found at this point to make these visions of a central database for song information a reality, as companies vie to be the dominant service.

Tokenization

Gramatik became the first artist to embed his intellectual property rights, revenue and royalties into a digital token (Jones, 2017), and the Slovenian producer generated \$2.25 million in 24 hours. This opened up another interesting, and potentially lucrative revenue models for artists. Consumers who bought the token were buying a share of the artist’s future revenues. This gives artists previously unseen connection with their fans, who are more invested in an artists’ career as they are able to share in an artists’ future revenues. This also allows for high-net worth investors to treat artists as assets, potentially seeing the future value of a fledgling artist.

This concept has led to a new means of crowdfunding for an artist within blockchain, utilising a new method of funding called initial coin offerings (ICO’s). This could allow artists to exchange a set amount of tokens in return for initial investment into a new project. While this could be seen as a good opportunity for artists to raise funds for a new project, many ICO’s fail to succeed, so the likelihood of fans investing into a future project is likely to be less than when they were first offered. Dredge (2018) reported that 46% of ICO’s from 2017 were already defunct, meaning that the investors, fans or otherwise, had lost money.

ICO’s and tokens reach further than an artists’ musical endeavours and has further reaching possibilities for other creative works. The early part of 2021 has seen a huge rise in the popularity of non-fungible tokens (NFT’s). NFT’s are digital assets are “one-of-a-kind-assets” (BBC, 2021) that can be bought and sold, but aren’t tangible. Electronic producer 3LAU sold his collection for \$11.6 million, and it is estimated that over \$100 million of sales were generated in 30 days. (Stassen, 2021). While this is a huge number, it is expected that the inflated prices for NFT’s will likely reduce, with AWAL founder Kevin Bacon stating that the hyperinflation in prices will fall (Sparrow, 2021).

As NFT’s are only defined as digital assets, it leaves most conceivable content open to digitisation. An artist could digitise a ticket from a previous landmark show that may have sentimental value. This opens up new issues with copyright that must be taken into account. If a ticket to a previous show was sold, the graphic designer, promoter and venue could have all contributed design and intellectual property to that content. As a result, permission must be obtained from all parties, who are likely to want a share of any revenue generated. If brandmarks or logos within are trademarked, then it is likely that the associated intellectual property will need to be licensed-in in order to be used (UK Government, 2016), usually involving a fee. Artists continue to exploit this fairly new revenue stream, with musicians Big Zuu and Taylor Bennett both selling 75% of their rights to songs (Ingham, 2021), as artists monetize their copyright in innovative new ways.

Another legal consideration is the artists’ contracted terms with any label they are signed to. A label may have exclusive rights to exploit an artists’ recordings, and so by creating any new music to sell as part of an NFT could be in breach of the artists’ contract with the label. Artists signed to 360 deals may also find that labels demand that they are remunerated in the sales of any NFT’s. Labels have already began adapting to utilise the popularity of NFT’s. Dance music label Monstercat generated over \$180,000 on one release (Mapperson, 2021) via Nifty

Gateway, one of a number of centralised marketplaces that are providing platforms for NFT's to be sold and traded.

Platforms such as Nifty Gateway open this digital market to people who aren't accustomed to cryptocurrency, as purchases can be made via card (Klein, 2020). These platforms also operate a secondary marketplace, giving buyers an exclusive platform to resell any purchased NFT's. By keeping this centralised and under one platform allows for sales to be tracked, and as a result, the original sellers and rights holders are paid a percentage of any future sales of their work. This is a great opportunity, and offers solutions in other areas of the industry, such as ticketing.

YellowHeart was launched in 2020 as a decentralised ticket selling platform and allows artists to decide how tickets are sold and specify the shares in any ticket sales. They also give the option to set a maximum resale cap price, and the ability to earn a share of tickets resold on their secondary marketplace (Stassen, 2019). This presents the live industry with a method of tackling scalping, with ticket touts potentially unable to make the huge profits some make by reselling high value tickets, while also giving the option for promoters, artists and venues to generate revenue from any tickets that are resold. While this has yet to see widespread adoption, it is only a matter of time before there is a shift in the live events space to embracing blockchain technology more, and it is something that is likely to accelerate once shows begin after COVID-19 restrictions are eased.

Further legal implications

For blockchain to work in this context, it is imperative that the rights of a musical work are correctly apportioned to the rights holders involved in the creation of a musical work. The Copyright, Designs and Patents Act (1998) stipulates that there are two rights within a musical work, the master copyright and the song copyright. Within the song copyright there are music and lyrics. Given that there are usually a number of contributors to a piece of music, this is often registered incorrectly. Blockchain and smart contract technology allow for all these rights to be stored in one codex file stored on one central database, so that everything is registered seamlessly, and the percentage of royalties is split as agreed in the smart contract.

However, due to the immutable nature of blockchain, amending incorrect data is nearly impossible if it is stored on the blockchain. It is, however, possible to store a hash of that information on the blockchain and store the actual file "*on an off-chain file storage service such as the Interplanetary File System*" (Ledgerback, 2018a). This means that the file can then be edited, and any amendments to data, such as copyright, can be made as required. This method solves the inflexibility of data on the blockchain, but also increases the risk of the information being tampered with via the offline storage method, so copyright protection is potentially compromised.

The freely available data does pose legal questions regarding the compliance with data protection laws on two fronts. The European Union's General Data Protection Regulation (2018) stipulates that at least one natural or legal person is responsible for data being shared. Due to the decentralised nature of blockchain, that makes it difficult to allocate responsibility for any data protection infringements.

Following Brexit, the UK incorporated the provisions of the EU GDPR into their own Data Protection Act 2018 (DPA 2018) in the form of the UK GDPR, so those rules still apply within UK legislation (Information Commissioner's Office, 2021). It is important to consider that countries have their own legislation regarding data protection, so any information stored on the blockchain must take into account compliance with several

territory-specific data protection laws, which makes a one-size-fits all approach to registering music within a music codex difficult.

Conclusion

While blockchain provides countless promising opportunities for artists, the open nature of the technology has resulted in a gold rush of companies all piling in, hoping to gain early mover advantage in a rapidly evolving new technology. For blockchain to revolutionise the music industry as has been predicted, there needs to be a uniform adoption of these applications such as new file types.

The pressure continues to mount on the major music industry businesses to embrace blockchain as a means of providing artists with more transparency, greater control and fairer payment and this inevitably will result in a loss of earnings for those platforms such as labels and streaming services. While this is likely to see some initial resistance, the development of services giving independent artists and labels the platform to sell their music directly to fans could force major labels and the streaming services' hands. The flexibility of the technology and its widespread potential has resulted in these platforms already moving to integrate their own applications.

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